A Complete Bibliography of Publications in *ACM Computing Surveys*

Nelson H. F. Beebe
University of Utah
Department of Mathematics, 110 LCB
155 S 1400 E RM 233
Salt Lake City, UT 84112-0090
USA

Tel: +1 801 581 5254

E-mail: `beebe@math.utah.edu`, `beebe@acm.org`, `beebe@computer.org` (Internet)
WWW URL: `https://www.math.utah.edu/~beebe/`

02 October 2025
Version 1.188

Title word cross-reference

2 [1274, 2510, 2890, 3379]. 3 [994, 1172, 1247, 1371, 1417, 1519, 1529, 1530, 1715, 2084, 2498, 2510, 2634, 2806, 2829, 2842, 2889, 2890, 3072]. 360 [2798]. 360° [1995]. 5 [2144]. ° [2498]. F [2825]. k [1283, 1946, 2204, 2315]. L_p [1940].

***droid** [1674].

-Degree [2798]. **-Enabled** [1852]. **-long** [2204]. **-Measure** [2825]. **-Nearest** [2315].

//www.acm.org [1008]. **/Edge** [3342].

19 [2345, 2571, 2690, 2741, 3081]. **1998** [1011]. **1998-30-3es** [1008].

3.0 [2999]. **360** [15]. **360-Degree** [3290, 3327]. **370** [160]. **3es/=** [1008].

4.0 [2375, 2750, 2989]. **4.2BSD** [370]. **4.3BSD** [370].

50th [648, 745]. **50th-Anniversary** [648]. **5G** [2373, 2652, 3156].

68 [102]. **6G** [2665, 3018, 3134, 3156].

7 [1222].

80/pubs/citations/journals/surveys/1998 [1008].
80/pubs/citations/journals/surveys/1998-30-3es/= [1008].

= [1008].

A.I. [3212]. **Abduction** [606]. **Abstract** [727, 729, 929, 1016, 1080, 1918, 3236]. **Abstraction** [372, 1330, 1745, 2536]. **Abstractions** [917, 1026, 1649, 2269, 2423]. **Abstractive** [2819, 3131]. **Abuse** [1687]. **Academic** [2036]. **accelerated** [2181]. **Accelerating** [2773]. **Acceleration** [1753, 2057, 2125, 2366, 3162]. **Accelerator** [3292]. **Accelerators** [1924, 2378, 2513, 2772, 3027, 3068, 3357]. **Access** [133, 229, 246, 317, 334, 354, 638, 643, 672, 703, 869, 895, 1006, 1050, 1238, 1282, 1333, 1390, 1684, 1799, 2135, 2248, 2325, 2529, 2543, 2553, 2798, 2802, 3173]. **Access-control** [2553]. **Accessibility** [2573]. **Accountability** [1544, 3207]. **Accounting** [1544]. **Accuracy** [3211]. **Accurate** [3021]. **Achievements** [1018, 2883]. **achieving** [1313]. **ACM** [571, 648, 745]. **Acoustic** [1723, 2187]. **Acquaintance** [3281]. **Acquisition** [1930, 1995]. **Across** [1059, 1685, 2111, 2735]. **Action** [2702, 3080, 3256]. **Actionable** [3110]. **Actions** [1800]. **Activation** [2787]. **Active** [1046, 1771, 2080, 2367, 2408, 2710]. **activities** [1062]. **Activity** [1337, 1471, 1589, 1864, 2264, 2364, 2653, 2935, 3177, 3276]. **Actuators** [2947]. **Acyclicity** [1673]. **Ad** [1242, 1261, 1505, 1563, 1904, 3060]. **Ad-hoc** [3060]. **Adaptation** [928, 973, 1419, 2424, 3007, 3069]. **Adaptations** [2951]. **Adapting** [3000]. **Adaptive** [517, 625, 898, 1104, 1171, 1251, 1379, 1380, 1494, 1675, 1854, 1893, 1932, 2004, 2026, 3242, 3323]. **Address** [1474, 1547]. **addressing** [1179, 1387]. **Adequacy** [598, 995]. **Adequately** [3201]. **Adopting** [2323]. **Adoption** [2658]. **Advanced** [486, 681, 908, 2535, 3133]. **Advancement** [1560, 2976]. **Advancements** [1723, 1826, 2888, 3117, 3154, 3329]. **Advances** [698, 1225, 1371, 1626, 1694, 1715, 1792, 1871, 1931, 2214, 2399, 2510, 2595, 2683, 2696, 2717, 2782, 2897, 3013, 3045, 3046, 3048, 3101, 3182, 3222, 3229, 3249, 3340, 3361, 3370]. **Advancing** [2616]. **Adversarial** [1934, 1969, 2002, 2118, 2222, 2224, 2250, 2295, 2319, 2344, 2346, 2438, 2445, 2460, 2524, 2526, 2542, 2593, 2629, 2751, 2843, 2890, 2899, 2926, 2963, 3091, 3150, 3178, 3194, 3213, 3263, 3281, 3340, 3352]. **Adversary** [2385]. **Adverse** [1541]. **Advertisement** [3221]. **Advertising** [2251]. **Advice** [1714]. **Aerial** [2664, 2765, 3048]. **AES** [3300]. **Aesthetic** [3253]. **Affect**

[1345, 1528, 2324]. **Affecting** [2743]. **Affective** [1743, 2324, 3039, 3227]. **Affinity** [1683]. **Affinity-Based** [1683]. **Affordance** [2234]. **Against** [1374, 1422, 1432, 1687, 1745, 1958, 2345, 2890, 3149, 3340]. **Age** [873, 1277, 1632, 2766]. **Ageing** [3095]. **agendas** [904]. **Agent** [1152, 1154, 1231, 1391, 1779, 1924, 2268, 3194]. **Agent-based** [1391, 1924]. **agent-oriented** [1152]. **Agents** [817, 1153, 1760, 2639, 2641, 3143, 3164, 3252, 3277]. **Aggregated** [1478]. **Aggregation** [1267, 2053, 3078]. **Aggression** [2188, 3241]. **Agile** [3021]. **Aging** [2797]. **agora** [763]. **Agreement** [1536, 1981]. **Agriculture** [2870]. **Agrifood** [3120]. **Ahead** [90, 2869]. **AI** [588, 594, 597, 599, 601, 604, 620, 772, 777, 2071, 2219, 2227, 2494, 2602, 2607, 2624, 2667, 2715, 2730, 2738, 2760, 2915, 2917, 2922, 2925, 2936, 3038, 3039, 3041, 3066, 3121, 3123, 3144, 3154, 3155, 3158, 3167, 3178, 3185, 3195, 3206, 3214, 3219, 3221, 3228, 3239, 3252, 3265, 3289, 3290, 3292, 3299, 3314, 3347, 3355, 3375, 3386]. **AI-Based** [2071, 2667, 3039, 3185]. **AI-Driven** [3144]. **AI-Empowered** [2715, 3221]. **AI-enabled** [2730]. **AI-Generated** [3195, 3314]. **AI-guided** [3178]. **AI-powered** [3167]. **AI-XR** [2922]. **AIaaS** [3282]. **Aided** [1348, 1947, 2284, 3134]. **AIGC** [3153, 3195, 3314, 3330]. **AIOps** [2836]. **Air** [2354, 2365, 2775]. **Aircraft** [2820, 2848]. **aka** [2560, 2605]. **Alarms** [2478]. **Alert** [1848, 3113, 3295]. **Algebra** [1308, 2773]. **Algebraic** [984, 1082, 1702]. **algebraically** [1079]. **Algebras** [495]. **Algol** [102, 131]. **Algorithm** [614, 622, 657, 830, 1075, 1290, 1628, 2685]. **Algorithmic** [822, 1020, 1211, 1231, 1485, 1755, 1906, 1935, 2517, 2525, 2916, 2965, 3064]. **algorithmics** [1188]. **Algorithms** [62, 66, 135, 191, 346, 376, 388, 487, 494, 505, 517, 537, 600, 647, 651–653, 655, 662, 782, 784, 799, 974, 1026, 1041, 1076, 1092, 1191, 1228, 1235, 1236, 1241, 1249, 1264, 1265, 1274, 1296, 1322, 1324, 1336, 1359, 1388, 1399, 1402, 1407, 1418, 1433, 1475, 1507, 1534, 1563, 1566, 1568, 1618, 1625, 1666, 1675, 1714, 1729, 1774, 1813, 1834, 1885, 1888, 1926, 1996, 2021, 2028, 2080, 2081, 2126, 2132, 2138, 2145, 2149, 2187, 2215, 2269, 2306, 2314, 2378, 2381, 2673, 2759, 2792, 2793, 2821, 2886, 3072, 3092, 3098, 3137, 3180, 3216, 3321, 3342]. **All-Inclusive** [2938]. **allocating** [1092]. **Allocation** [1566, 1719, 1805, 1986, 2332, 2420, 2660, 3139]. **alphabet** [1325]. **alternative** [1106]. **Alternatives** [1951, 2825]. **Alzheimer** [2473]. **Ambient** [1357, 2260]. **Ambiguous** [2559]. **AMM** [2668]. **among** [2322, 2528]. **Amplification** [120]. **Analyses** [221, 2301]. **Analysing** [2966]. **Analysis** [21, 24, 63, 106, 141, 156, 163, 287, 391, 396, 570, 726, 730, 731, 733, 1472, 1495, 1528, 1648, 1649, 1666, 1717, 1749, 1751, 1761, 1809, 1819, 1862, 1868, 1888, 1910, 1914, 1938, 1943, 1949, 1954, 1968, 1969, 1984, 1989, 1998, 2012, 2013, 2019, 2033, 2038, 2046, 2053, 2074, 2096, 2164, 2195, 2236, 2239, 2244, 2255, 2257, 2286, 2305, 2310, 2317, 2321, 2336, 2421, 2478, 2526, 2538, 2552, 2553, 2589, 2611, 2657, 2700, 2741, 2755, 2767, 2783, 2792, 2803, 2840, 2861, 2872, 2919, 2972, 2988, 3002, 3077, 3150, 3186, 3187, 3198, 3222, 3241, 3285, 3317, 3364, 3371, 3381]. **Analysis** [134, 135, 164, 388, 414, 613, 643, 647, 809, 821, 880, 929, 931, 932, 938, 941, 1004, 1056, 1077, 1078, 1105, 1145, 1222, 1245, 1267, 1291, 1317, 1327, 1337, 1363, 1367, 1385, 1403, 1414, 1425, 1465, 1502, 1521, 1523, 1586, 1619, 1624, 1635, 1674, 1695, 1720, 1747, 1754, 1795, 1818, 1848, 1860, 1903, 1956, 2049, 2186, 2192, 2214, 2274, 2451, 2489, 2578, 2598, 2685, 2699, 2714, 2757, 2797, 2852, 2875, 2929, 2944, 2965, 2979, 3066, 3152, 3230, 3231]. **Analytical** [8, 947, 2098]. **Analytics** [1653, 1803, 1846, 1867, 1896, 2023, 2165, 2226, 2338, 2354, 2406, 2534, 3080, 3267, 3302]. **Analyze** [2448]. **Analyzing** [158, 505, 1189, 1432, 1504, 1971, 2433]. **Anatomical** [3125]. **Android** [1543, 1657, 1674, 1695, 1945, 2170, 2179, 2534, 2583, 2617, 3200, 3263]. **Animal** [1705]. **Animation** [622, 683]. **Anniversary** [648, 745]. **Annotated** [732]. **Annotation** [1990]. **Announced** [2647]. **Anomaly** [1299, 1559, 1962, 2172, 2225, 2243, 2293, 2328, 2489, 2578, 2941, 3086, 3298, 3341]. **Anonymisation** [1845]. **anonymity** [1311]. **Anonymization** [3343]. **Anonymous** [1311, 1844]. **ANSI** [25]. **Answering** [2465, 2627, 2991, 3261, 3320]. **Ante** [3333]. **Ante-Hoc** [3333]. **Anticipatory** [1532]. **Antispoofing** [1513]. **AOHR** [1728]. **Aortic** [3309]. **API** [2358, 2534, 2638]. **APIs** [3374]. **Appearance** [2881]. **Applicability** [2704, 3294]. **Application** [211, 444, 830, 851, 1134, 1142, 1153, 1154, 1161, 1174, 1278, 1326, 1398, 1419, 1611, 1674, 1762, 1793, 1795, 1880, 1965, 2139, 2140, 2247, 2273, 2308, 2377, 2518, 2611, 2944, 3013, 3247]. **Application-based** [1795]. **application-layer** [1326, 1419]. **Application-Level** [1278, 1793]. **Application-oriented** [851]. **Application-Specific** [3247]. **Applications** [110, 126, 335, 406, 438, 460, 486, 599, 640, 796, 1500, 1522, 1565, 1628, 1631, 1664, 1694, 1699, 1710, 1732, 1781, 1793, 1796, 1801, 1817, 1838, 1855, 1865, 1866, 1885, 1932, 1940, 1948, 1998, 2003, 2042, 2067, 2069, 2072, 2103, 2114, 2124, 2134, 2137, 2146, 2154, 2170, 2215, 2236, 2262, 2269, 2310, 2319, 2344, 2345, 2353, 2372, 2395, 2415, 2426, 2489, 2491, 2492, 2520, 2582, 2598, 2605, 2635, 2663, 2672, 2677, 2701, 2744, 2745, 2786, 2793, 2798, 2804, 2817, 2857, 2862, 2877, 2885, 2888, 2937, 2953, 2972, 3003, 3005, 3108, 3115, 3156, 3185, 3228, 3247, 3249, 3266, 3296, 3302, 3310, 3327, 3354, 3368]. **Applications** [849, 931, 966, 991, 1033, 1071, 1100, 1132, 1170, 1171, 1279, 1326, 1394, 1465, 1521, 1758, 2098, 3170, 3237, 3280, 3301]. **Applied** [247, 1743, 2077, 2695, 2810, 3054]. **Applying** [1095, 2321, 3009]. **Appreciation** [50]. **Approach** [86, 133, 229, 246, 340, 469, 608, 780, 1146, 1397, 1586, 1694, 1932, 2257, 2262, 2455, 2559, 2990, 3191]. **Approaches** [87, 100, 278, 984, 1071, 1231, 1328, 1362, 1366, 1368, 1393, 1401, 1402, 1548, 1555, 1558, 1560, 1565, 1614, 1664, 1690, 1744, 1785, 1793, 1883, 1900, 1904, 1917, 1918, 1967, 1974, 1990, 2034, 2109, 2150, 2290, 2311, 2377, 2449, 2465, 2471, 2475, 2478, 2538, 2559, 2581, 2608, 2620, 2714, 2734, 2814, 2819, 2828, 2895, 2905, 2939, 2954, 3021, 3046, 3053, 3104, 3122, 3147, 3187, 3284, 3332]. **Approximate** [158, 242, 1078, 1187, 1617, 1794, 2513, 3247, 3255]. **Approximately** [988]. **Approximation** [1236, 1964, 2682, 3247, 3255]. **Apps** [1808, 2401]. **Arabic** [1406, 1728]. **Archetypes** [2491]. **Architect** [2826]. **Architecting** [1600]. **Architectural** [1412, 1609, 2794, 3247]. **Architecture** [104, 113, 115, 176, 280, 392, 575, 752, 797, 800, 801, 919, 1064, 1151, 1159, 1354, 1773, 1832, 2042, 2069, 2263, 2370, 2407, 2434, 2484, 2508, 2554, 2790, 2815, 3022, 3100, 3138, 3183, 3228].

Architectures [360, 659, 915, 920, 1424, 1431, 1444, 1447, 1544, 1586, 1672, 1756, 1784, 1865, 1907, 2021, 2269, 2423, 2497, 2560, 2589, 2605, 2612, 3078, 3232]. **Area** [483, 743, 1291, 1626, 1698, 3300]. **Areas** [1080, 3372]. **argument** [1183]. **Arguments** [1741]. **Arising** [2658]. **Arithmetic** [475, 491, 511, 512, 2706]. **Arithmetic-** [2706]. **Arm** [1923]. **Arms** [2445]. **Array** [1264, 2772]. **Array-based** [2772]. **Arrays** [1352, 1774]. **Arrhythmia** [1947]. **Art** [162, 749, 1185, 1196, 1203, 1314, 1340, 1342, 1426, 1490, 1532, 1621, 1627, 1655, 1676, 1747, 1750, 1793, 1811, 1862, 1868, 1879, 2012, 2086, 2088, 2099, 2136, 2147, 2198, 2207, 2231, 2294, 2375, 2424, 2497, 2522, 2612, 2652, 2679, 2705, 2764, 2809, 2821, 2831, 2851, 2907, 3083, 3099, 3135, 3188, 3254, 3259, 3282, 3311, 3319, 3339]. **Articles** [2847]. **Articular** [1890]. **Artificial** [70, 359, 608, 637, 751, 770, 775, 776, 780, 1767, 2345, 2450, 2469, 2507, 2614, 2644, 2680, 2810, 2834, 2900, 2914, 2922, 2928, 2999, 3120, 3127, 3135, 3142, 3165, 3199, 3205, 3215, 3217, 3282, 3336]. **Arts** [23]. **Artwork** [3142]. **ASIC** [1783, 3317]. **Aspect** [918, 1175, 1349, 1525, 2495, 2562]. **Aspect-Based** [2495]. **Aspect-oriented** [918, 1175, 1349]. **Aspects** [59, 236, 249, 790, 1083, 1772, 2244, 2756]. **Assembler** [15, 31, 32]. **Assembler-Language** [15, 31, 32]. **Assembly** [1807]. **Assertion** [2412]. **Assertion-based** [2412]. **Assertional** [528]. **Assessing** [1551, 1599, 2272, 2848, 2860, 3093, 3395]. **Assessment** [49, 200, 248, 1300, 1596, 1674, 1800, 1804, 1808, 1879, 2025, 2276, 2374, 2397, 2474, 2530, 2561, 2594, 2703, 2781, 2847, 2893, 2957, 3127, 3253, 3270, 3337]. **Assessments** [2916]. **Asset** [2574]. **Assets** [2652, 3188]. **Assignment** [289, 308, 309, 535, 1634, 2479]. **Assistant** [2514]. **Assistants** [1414, 2169, 2183, 3234]. **Assisted** [2815, 2938, 3003]. **Assisting** [1739]. **Assistive** [1382]. **Association** [1252, 1493, 2121]. **Associative** [92, 113, 1401]. **Assurance** [1362, 1557, 1800, 2025, 3103]. **Assurances** [1906]. **assure** [1906]. **Assuring** [2298]. **Asymmetric** [209, 1600]. **asynchronous** [1044, 1061, 1062]. **At-Runtime** [3000]. **ATT&CK** [3083]. **attached** [971]. **Attack** [1307, 1703, 1863, 1869, 1879, 1999, 2077, 2222, 2794, 2843, 2849, 3096, 3150, 3270]. **Attack/Defense** [2222]. **Attackers** [2671]. **Attacks** [1334, 1374, 1422, 1592, 1601, 2002, 2119, 2241, 2273, 2288, 2295, 2309, 2326, 2360, 2422, 2474, 2488, 2514, 2516, 2564, 2569, 2572, 2593, 2596, 2622, 2626, 2645, 2794, 2826, 2844, 2853, 2887, 2890, 2927, 2930, 2963, 3074, 3091, 3145, 3149, 3158, 3160, 3174, 3194, 3240, 3287, 3301, 3308, 3315, 3340, 3353]. **Attempts** [2649]. **Attestation** [1670]. **Attractor** [2987]. **Attribute** [574, 1684, 2135]. **Attribute-Based** [1684, 2135]. **Attributed** [3233]. **Attributes** [1800]. **Attribution** [1927]. **AUC** [2602]. **Auctioning** [3221]. **Auctions** [1331]. **Audio** [1462, 1607, 1987, 3370]. **Audio-Visual** [3370]. **audit** [703]. **Auditing** [1550]. **auditory** [1457]. **Augmentation** [273, 274, 1585, 1806, 1900, 2576, 3108, 3345]. **Augmented** [2101, 2307, 2352, 2371, 2546, 2619, 3373]. **Augmented/Mixed** [2101]. **Authenticated** [1783]. **Authentication** [703, 1333, 1581, 1680, 1977, 2004, 2385, 2552, 2599, 2766, 2896, 2938, 3186, 3187, 3198, 3364]. **Author** [145, 147, 164, 644, 765, 997, 998]. **Authoring** [1268, 2337]. **authorities** [1097].

Authorization [1281, 1333]. **Authors** [337, 343, 348, 352, 357, 364, 369, 374, 380, 386, 390, 394, 398, 405, 409, 413, 417, 422, 426, 430, 434, 441, 447, 452, 456, 463, 468, 474, 480, 485, 493, 497, 502, 508, 514, 519, 523, 527, 533, 545, 551]. **Authorship** [1927, 2964]. **Auto** [1866]. **Auto-Scaling** [1866]. **Autoencoders** [3020]. **Automata** [55, 814, 1133, 1477, 1737, 2557]. **Automated** [664, 1198, 1214, 1304, 1363, 1511, 1644, 1682, 1757, 1880, 2020, 2221, 2230, 2317, 2359, 2421, 2668, 2707, 2716, 2833, 3058, 3107, 3126, 3279, 3355]. **Automatic** [1029, 1109, 1114, 1119, 1358, 1595, 1768, 1810, 1861, 1878, 2095, 2212, 2290, 2390, 2561, 2846, 2847, 2996, 3029]. **Automatically** [516, 1814]. **automating** [1196, 2671]. **Automation** [383, 2239, 2809, 3022, 3101]. **AutoML** [2362]. **Automotive** [2324, 2887]. **Autonomic** [1279, 1597]. **Autonomous** [464, 466, 1268, 1352, 1987, 2015, 2024, 2029, 2064, 2206, 2271, 2320, 2368, 2405, 2457, 2730, 2850, 2909, 3091, 3203, 3271, 3305, 3334]. **Autonomy** [1906, 2916, 2936]. **Autoscaling** [1854]. **Autotuning** [1889]. **Availability** [427]. **Available** [335]. **AVB** [2461]. **Avoid** [2321]. **Avoiding** [2400]. **Award** [555]. **Aware** [1515, 1524, 1597, 1629, 1854, 1859, 2008, 2072, 2261, 2842, 3014, 3265]. **Awareness** [1361, 2199, 2507, 2537, 2645, 3085].

B [194]. **B-Tree** [194]. **B5G** [3018]. **B5G/6G** [3018]. **Back** [614, 1377, 3301]. **Back-Propagation** [614]. **Backdoor** [3149, 3158]. **Backend** [219]. **Backscatter** [3296]. **Bad** [914]. **Baggage** [2595]. **Balancing** [1827, 1913]. **Band** [1643]. **Bandits** [3377]. **Banking** [1680, 3390]. **Bark** [2849]. **Barriers** [1240, 2976]. **Base** [95–100]. **Based** [349, 378, 420, 437, 520, 643, 1388, 1491, 1505, 1520, 1522, 1533, 1535, 1536, 1549, 1558, 1565, 1573, 1576, 1630, 1631, 1677, 1683, 1684, 1762, 1775, 1792, 1808, 1811, 1812, 1838, 1841, 1846, 1857, 1869, 1881, 1891, 1900, 1921, 1922, 1929, 1930, 1941, 1955, 1959, 2020, 2062, 2068, 2071, 2073, 2079, 2096, 2139, 2159, 2193, 2291, 2410, 2427, 2444, 2462, 2464, 2489, 2495, 2509, 2521, 2548, 2575, 2601, 2621, 2630, 2666, 2673, 2690, 2692, 2695, 2709, 2723, 2762, 2764, 2796, 2818, 2855, 2879, 2910, 2959, 3001, 3027, 3039, 3040, 3124, 3203, 3232, 3243, 3253, 3276, 3288, 3300, 3308, 3339, 3380]. **based** [477, 779, 830, 831, 833, 928, 1002, 1015, 1029, 1039, 1060, 1136, 1156, 1160, 1176, 1230, 1247, 1263, 1327, 1343, 1349, 1369, 1391, 1394, 1410, 1432, 1436, 1466, 1795, 1924, 1952, 1957, 1999, 2002, 2043, 2049, 2081, 2134, 2135, 2145, 2163, 2173, 2189, 2191, 2196, 2249, 2264, 2271, 2279, 2284, 2293, 2304, 2305, 2320, 2326, 2341, 2356, 2366, 2368, 2412, 2433, 2443, 2473, 2540, 2599, 2612, 2626, 2653, 2657, 2691, 2714, 2735, 2744, 2754, 2772, 2811, 2816, 2872, 2874, 2903, 2909, 2955, 2988, 2996, 3004, 3055, 3065, 3067, 3091, 3105, 3108, 3111, 3142, 3182, 3185, 3312, 3321, 3335, 3367]. **based** [2404, 2565, 2667, 2763, 2951]. **Based-Fault** [3027]. **Bases** [2902]. **Basic** [647, 1573]. **Basics** [2851]. **Basis** [565, 731]. **Batteries** [2267]. **Battle** [2370]. **Bayesian** [1937, 2160, 2380, 2549, 2717]. **be** [558, 1906, 3201, 3368]. **Because** [604]. **become** [562]. **Been** [1103, 1964]. **Beetle** [2849]. **Behavior** [592, 767, 1147, 1480, 1814, 2741]. **Behavioral** [249, 1373, 1712, 2906, 3241, 3343]. **Behaviors** [2988]. **Behaviour** [2705].

Behavioural [1623, 2173]. **Benchmark** [2374, 3061, 3070, 3391].
Benchmarking [2253, 2329, 3216, 3387]. **Benchmarks**
[1475, 2833, 3238, 3279]. **Benefit** [141, 2566]. **Benefits** [930, 1686, 2733, 3164].
BERT [2937]. **Best** [801, 2925, 3164, 3393]. **Best-Effort** [3393]. **Better**
[2689, 3289]. **Between**
[726, 798, 808, 1064, 1118, 1164, 2094, 2325, 2455, 2878, 3123, 3211]. **Beyond**
[916, 936, 963, 981, 1033, 1490, 1571, 1928, 1949, 1999, 2203, 2337, 2362, 2374,
2391, 2652, 2797, 2940]. **Beyond-binary** [2203]. **BFT** [1616, 2396, 2886]. **Bias**
[1564, 2302, 2517, 2694, 2804, 3023, 3176, 3210, 3362]. **Bibliography**
[1810, 2777]. **Bibliometric** [3152]. **Biclustering** [2821, 3065].
Biclustering-based [3065]. **Bidding** [1331, 3221]. **Bidirectional**
[1401, 2285]. **Big** [1632, 1653, 1803, 1813, 1874, 1978, 2019, 2023, 2095, 2098,
2145, 2162, 2180, 2184, 2197, 2255, 2281, 2300, 2338, 2602, 2777, 3267, 3268].
Binaries [2964, 3178]. **Binary**
[72, 510, 1442, 1862, 1973, 2057, 2128, 2203, 2238, 2449]. **Binary-code** [1442].
Binary-Decision [510]. **binding** [1122]. **Bio** [1560, 1947, 2353, 3179].
Bio-Inspired [1560, 2353]. **Bio-Nano** [3179]. **Bio-signal** [1947].
Bioinformatics [1229, 2022, 2122, 2598]. **Biological** [1618, 3258]. **Biology**
[668, 1501]. **Biomedical** [2465, 2807, 2901]. **Biometric**
[1644, 1662, 1963, 2026, 2137, 2766, 3062, 3343]. **Biometrics**
[1371, 1405, 1858, 1905, 2167, 2173, 2906]. **Bisimulation** [584]. **Black**
[1886, 3216]. **Blind** [2301]. **Blindfolded** [2382]. **Bloc** [150]. **Blockchain**
[1975, 2060, 2069, 2079, 2141, 2175, 2245, 2247, 2294, 2347, 2355, 2427, 2462, 2500,
2540, 2566, 2621, 2638, 2670, 2681, 2691, 2708, 2815, 2915, 2931, 2938, 2994, 3050,
3144, 3189, 3232, 3266]. **Blockchain-Assisted** [2815, 2938].
Blockchain-Based [2079, 2427, 2540, 2621]. **Blockchain-Empowered**
[2245, 2670, 3266]. **Blockchain-enabled** [2500]. **Blockchained** [3010].
Blockchains [2113, 2231, 2322, 2396, 2720, 2891, 3244]. **Blocking** [458, 2083].
Blocks [2462]. **Blood** [2421]. **Body** [1471, 1698, 2550]. **body-worn** [1471].
Boolean [510, 2476]. **Boot** [1636]. **Bootstrapping** [1130]. **Border** [1644].
borders [777]. **Both** [720, 1095]. **Botnet** [1428, 2649]. **Bots** [3164].
Bottleneck [1559]. **Bottlenecks** [1794]. **Bound** [1625, 2415]. **Bounded**
[728, 781, 3358]. **Bounding** [1887]. **Box** [759, 1886, 3216]. **Brain**
[1905, 1944, 2068, 2198, 2274, 2889, 3007, 3227]. **Brain-Computer**
[1944, 2198, 3227]. **Branch** [3353]. **Branches** [216]. **Brave** [2880]. **breaking**
[759]. **Breast** [1671, 2949]. **Bridging** [970, 1742, 2878]. **Brief**
[1133, 1215, 2486, 3177]. **Bring** [597]. **Bringing** [3372]. **Broadcast**
[1235, 1563]. **Broadening** [916, 942]. **Brokerage** [1912]. **Brownout** [1932].
browser [1057]. **Bucket** [825]. **Bug** [258, 259, 3367]. **Building**
[959, 1199, 1653, 1948, 1982, 2462, 2989, 3263]. **Buildings** [1498, 2714]. **Built**
[1140, 2714, 3298]. **built-in** [1140]. **Business**
[63, 580, 859, 1158, 1317, 1325, 1689, 1697, 1747, 1801, 1863, 2649, 2799, 3151].
Business-Domain [3151]. **Byzantine** [2211, 2886, 2921].

C [279, 646, 1374]. **C&C** [1678]. **C3I** [2622]. **Cache** [297, 530, 985, 1223, 1415, 1587, 1722, 2070, 2555]. **Cache-related** [2555]. **Caches** [1654]. **Caching** [1793, 2795, 3184]. **CAD** [783, 991]. **CAD/CAM** [783]. **Calculational** [1021, 2105]. **Calculi** [1360, 1443, 1702]. **Calculus** [1341, 3213]. **calibration** [2275]. **call** [907]. **Calling** [865]. **Calls** [1891]. **CAM** [783]. **Camera** [1626, 2606]. **Can** [48, 558, 637, 720, 1624, 1906, 2566, 3201]. **Cancer** [1671, 2692, 2949]. **Candidate** [2205]. **candidates** [789]. **Cannot** [48, 3368]. **Canonical** [1790]. **Capabilities** [120, 2555]. **Capsule** [3043]. **CAPTCHA** [2379, 2626]. **Captioning** [1911, 2814, 3225]. **Capture** [1509]. **Capturing** [878, 1059, 2452]. **Car** [1665, 2324]. **Carbon** [3338]. **Carbon-Efficient** [3338]. **card** [1197]. **Cardiac** [2428]. **Cardiovascular** [3309]. **Care** [2797]. **Carpooling** [2405]. **Cartesian** [1915]. **Cartilage** [1890]. **Cascade** [2214]. **Case** [383, 777, 1099, 1462, 1520, 1709, 1724, 1880, 1906, 1938, 2025, 2062, 2262, 2544, 2852, 3307]. **Case-Based** [1520]. **Cases** [2373, 2396]. **catalog** [1481]. **Catalogue** [2925]. **Categorical** [1962]. **Categories** [314]. **Categorization** [1198, 1535, 2856, 3187]. **Category** [2562, 2875]. **Causal** [815, 2512, 2879, 2988, 3114, 3171, 3363, 3390]. **Causality** [2127, 2163, 3217, 3377]. **Causality-based** [2163]. **Causally** [3311]. **Cause** [2489, 3396]. **CB** [1838]. **CB-MIR** [1838]. **CDM** [2028]. **Cell** [482]. **Cellular** [1133, 2800]. **Center** [1416, 2110]. **Centered** [910, 1275, 1799, 3044, 3212, 3329]. **Centers** [1524, 1566, 1636, 1925, 2283]. **Centrality** [1895]. **Centralized** [327, 2060, 2325, 3229]. **Centred** [3246]. **Centres** [3113, 3295]. **Centric** [1276, 1580, 1968, 2728, 3043, 3154, 3199, 3216]. **Century** [2413]. **Certification** [2168]. **Chain** [2894, 3277, 3384]. **Chain-of-Thought** [3277]. **Chains** [2739, 2784]. **Challenge** [595, 960, 1631, 1812, 1958, 2154, 2271, 3004]. **Challenge-based** [3004]. **Challenges** [788, 933, 1608, 1611, 1630, 1655, 1676, 1686, 1723, 1770, 1792, 1797, 1801, 1853, 1901, 1904, 1909, 1913, 1927, 1994, 1998, 2003, 2019, 2023, 2042, 2047, 2054, 2060, 2088, 2114, 2136, 2137, 2184, 2188, 2197, 2198, 2255, 2264, 2294, 2298, 2312, 2352, 2383, 2384, 2434, 2447, 2465, 2494, 2520, 2521, 2535, 2559, 2568, 2605, 2612, 2655, 2676, 2681, 2700, 2733, 2734, 2739, 2759, 2766, 2836, 2851, 2863, 2883, 2903, 2948, 2961, 2964, 2967, 2971, 2978, 2995, 3003, 3016, 3039, 3073, 3078, 3107, 3120, 3138, 3144, 3147, 3150, 3155, 3164, 3175, 3177, 3179, 3186, 3196, 3223, 3252, 3254, 3266, 3268, 3284, 3293, 3319, 3320]. **Challenges** [588, 776, 787, 801, 802, 828, 872, 930, 943, 1347, 1368, 1490, 1492, 1532, 1543, 1664, 1735, 1750, 1754, 1773, 1871, 1917, 2032, 2067, 2097, 2192, 2250, 2263, 2333, 2347, 2362, 2375, 2426, 2427, 2463, 2477, 2522, 2544, 2635, 2651, 2652, 2658, 2665, 2670, 2701, 2790, 2831, 2923, 2937, 2942, 3008, 3115, 3133, 3140, 3165, 3169, 3184, 3202, 3212, 3217, 3231, 3246, 3257, 3295, 3306, 3330, 3370, 3384, 3389]. **challenging** [778]. **Change** [1179, 1412, 2066, 2472, 3034, 3052, 3275]. **Changes** [1713]. **Changing** [849, 1795, 2671, 3208]. **Channel** [1463, 1535, 1970, 2309, 2646, 2657, 2661, 2930, 3335, 3353]. **Channels** [1643, 1701]. **Character** [2013]. **Characterising** [2927]. **Characteristics**

[91, 1917, 1963, 2094, 2139, 2463, 3267]. **Characterization** [66, 1603, 2728, 3200]. **Charge** [2936]. **Charging** [193]. **Chasm** [1742]. **Chatbots** [2827]. **ChatGPT** [3395]. **Cheat** [2646]. **checker** [1431]. **Checking** [478, 884, 946, 1255, 1305, 1712]. **Checkpoint** [1816]. **Chemical** [3125, 3258]. **Chemoinformatics** [1292]. **Chip** [453, 1248, 1421, 1424, 1446, 1614, 1784, 1908, 1966, 2284, 2288]. **Chip-level** [1966]. **Choices** [1739]. **Choosing** [366, 1150, 1616]. **CIM** [1169]. **Cinematography** [2029]. **Circuit** [314, 2872]. **Circuits** [237, 271, 1404, 1459, 2103]. **Circumvent** [1614]. **Citation** [2552]. **citations** [1008]. **Cities** [1727, 1773, 1978]. **Citizens** [1713]. **City** [1896, 1965, 2352]. **Clarification** [1994]. **Class** [1448, 1713, 3087, 3278]. **Class-Imbalanced** [3278]. **Classes** [3125]. **Classification** [314, 569, 992, 1244, 1296, 1413, 1472, 1496, 1523, 1534, 1618, 1718, 1734, 1745, 1748, 1757, 1795, 1994, 2007, 2031, 2080, 2100, 2107, 2128, 2132, 2144, 2249, 2334, 2380, 2438, 2495, 2576, 2580, 2695, 2735, 2779, 2788, 2794, 2818, 2837, 2905, 2969, 3091, 3184, 3272]. **Classification-based** [3091]. **Classifications** [1269, 1507, 1692]. **Classifiers** [660, 2315, 3208, 3263]. **classify** [1397]. **Classifying** [2597]. **Classroom** [2050]. **Classrooms** [2050]. **Cleaving** [770]. **Clever** [604]. **Client** [718, 1002, 1049, 1064, 1616, 2193, 2381]. **Client-Based** [2193]. **Client-Server** [718, 1049]. **Client-Side** [1616]. **client/server** [1002]. **Climate** [2472]. **Clinical** [2331]. **Close** [1584]. **Closed** [458]. **Closer** [1615]. **Cloth** [2687]. **Cloud** [1450, 1492, 1518, 1526, 1536, 1548–1550, 1553, 1557, 1566, 1577, 1597, 1598, 1627, 1633, 1668, 1689, 1693, 1721, 1786, 1801, 1806, 1815, 1852, 1854, 1897, 1898, 1904, 1909, 1912, 1913, 1926, 1932, 1935, 1943, 1992, 2008, 2017–2019, 2028, 2032, 2045, 2077, 2078, 2090, 2111, 2135, 2141, 2152, 2181, 2261, 2262, 2283, 2347, 2480, 2489, 2491, 2672, 2696, 2711, 2808, 2815, 3008, 3185, 3243, 3269, 3282, 3311, 3342]. **Cloud-Based** [1536, 1549, 3243]. **Cloud-Fog** [3342]. **Cloud-influenced** [2672]. **Cloudlet** [1900, 2045]. **Cloudlet-Based** [1900]. **Clouds** [1744, 1866, 2098, 2658]. **CLP** [835]. **Clustering** [1072, 1301, 1346, 1451, 1546, 2052, 2145, 2466, 2475, 2939, 3119, 3140, 3233]. **CNC** [1156]. **Co** [1842, 2861, 3119]. **Co-clustering** [3119]. **Co-Located** [2861]. **Co-Simulation** [1842]. **Coarse** [1530, 2042]. **Coarse-Grained** [2042]. **CODASYL** [98, 100]. **Code** [301, 321–324, 989, 1022, 1219, 1374, 1442, 1624, 1874, 1927, 2067, 2114, 2238, 2383, 2449, 2617, 2650, 2777, 2789, 2858, 3061, 3288, 3395]. **code-size** [1219]. **Coded** [2891]. **Codes** [2891]. **Coding** [963, 983, 1350, 1422, 2009, 2062, 2418, 2675, 2977, 3058]. **Coexistence** [1698]. **Cognition** [2413]. **Cognitive** [2183, 2605, 2713, 2805, 3381]. **cognitively** [2767]. **Coherence** [530, 985, 2101]. **Cold** [3136]. **Collaboration** [1052, 1054, 1055, 1062, 1063, 1746, 2546]. **Collaborative** [907, 1053, 1056, 1065, 1067, 1238, 1365, 1490, 1540, 1556, 1656, 1799, 2275, 2802, 2850, 3065, 3159, 3166]. **collaborator** [1058]. **Collecting** [1013, 1971]. **Collection** [263, 1013, 1813, 2868, 2925]. **Collections** [428, 2213, 2216]. **Collective**

[1130, 2065]. **college** [865]. **Colorblind** [1996]. **Colors** [1485]. **Combinatorial** [438, 460, 656, 840, 1220, 1332, 1986, 2822]. **Combining** [1166, 2736]. **come** [801]. **Command** [2895]. **Comments** [1297]. **commerce** [763, 875, 876, 1335]. **commercial** [966]. **Commodity** [1998]. **Common** [602, 1567, 2321, 2581]. **Commonsense** [2833]. **communicating** [1059]. **Communication** [54, 87, 161, 334, 718, 786, 970, 1061, 1080, 1166, 1195, 1221, 1311, 1551, 1604, 1794, 1844, 1909, 1919, 1959, 2174, 2485, 2519, 2615, 2623, 2752, 2812, 2978, 2997]. **Communications** [1680, 2189]. **Communities** [1097, 1514]. **Community** [1295, 1426, 1455, 1749, 1799, 1828, 2235, 2792, 2907]. **Community-Centered** [1799]. **Compact** [3262]. **Compaction** [235]. **Comparative** [287, 289, 391, 448, 1254, 1259, 1274, 1312, 1354, 1359, 1426, 1574, 1634, 1635, 1719, 1987, 2164, 2545, 2695, 2757, 2872, 2920, 3186, 3190, 3210, 3231, 3387]. **Comparing** [2073]. **Comparison** [100, 279, 1050, 1220, 1343, 1388, 1618, 1972, 2864, 2941, 3321]. **comparison-based** [1343]. **Comparisons** [530, 1529, 1792, 2244, 2475]. **Compatibility** [792, 3026]. **Compensation** [2430]. **Competence** [3085]. **Competency** [2916]. **Competitive** [1003]. **Compilation** [1918]. **Compiler** [5, 301, 552, 925, 1889, 2055]. **Compiler/Interpreter** [5]. **Compilers** [708, 799, 1409, 2856, 3308]. **Compiling** [730, 1319]. **Completeness** [2902]. **Complex** [717, 845, 871, 1355, 1372, 1527, 1688, 1733, 1766, 2031, 2091, 2177, 2645, 2875, 3059]. **Complexity** [555, 568, 584, 654, 1080, 1194, 1210, 1308, 1551, 2031, 2609, 2664]. **compliance** [2966]. **Component** [1002, 1156, 2257, 2754]. **Component-based** [1002, 1156, 2754]. **Components** [955, 1158, 1936, 2594]. **composability** [958]. **Composition** [76, 361, 576, 912, 1017, 1149, 1351, 1588]. **Compositional** [838]. **compound** [1167]. **Comprehension** [1031, 2627, 2858]. **Comprehensive** [1585, 1626, 1703, 1730, 1738, 1793, 1805, 1820, 1836, 1888, 1911, 1923, 1938, 1960, 1965, 1991, 2028, 2030, 2033, 2052, 2081, 2118, 2145, 2189, 2191, 2193, 2248, 2249, 2255, 2263, 2296, 2318, 2322, 2340, 2366, 2384, 2421, 2439, 2453, 2454, 2459, 2473, 2511, 2550, 2563, 2578, 2595, 2596, 2621, 2630, 2641, 2679, 2701, 2703, 2709, 2721, 2749, 2802, 2823, 2838, 2846, 2848, 2857, 2872, 2886, 2917, 2931, 2952, 2973, 2999, 3010, 3014, 3031, 3045, 3050, 3065–3067, 3069, 3079, 3110, 3125, 3129, 3141, 3146, 3158, 3187, 3224, 3226, 3238, 3242, 3248, 3267, 3269, 3272, 3284, 3287, 3299, 3305, 3308, 3330, 3346, 3362, 3390]. **Comprehensive** [1195, 2186, 3140]. **Compressed** [623, 1262, 2040, 2213]. **Compressing** [3324]. **Compression** [407, 449, 652, 1529, 2178, 2628, 2882, 3358]. **Computation** [529, 611, 716, 775, 786, 927, 970, 1005, 1069, 1070, 1073, 1456, 1824, 2085, 2132, 2389, 2769, 2795, 2872, 3071, 3271, 3318, 3360]. **Computation-Driven** [2389]. **Computational** [278, 300, 498, 555, 568, 584, 650, 654, 667, 668, 718, 720, 747, 762, 776, 788, 790, 906, 937, 978, 1027, 1087, 1622, 1632, 1702, 1821, 1846, 1894, 1933, 1944, 1949, 2011, 2043, 2076, 2153, 2306, 2734, 2873, 2949, 2993, 3325, 3356, 3369]. **Compute**

[24, 3042]. **computed** [1168]. **Computer** [12, 23, 28, 34, 36, 44, 53, 64, 67, 83–85, 87, 91, 104, 126, 155, 157, 161, 210, 220, 250, 252, 255, 261, 280, 285, 356, 360–362, 411, 420, 431, 438, 460, 475, 491, 494, 511, 512, 546, 555, 559–561, 563, 565, 568, 636, 648, 679, 681, 683, 857, 900, 1047, 1048, 1229, 1292, 1348, 1551, 1567, 1576, 1663, 1690, 1715, 1798, 1873, 1921, 1944, 1947, 2001, 2068, 2084, 2137, 2198, 2224, 2252, 2259, 2284, 2368, 2379, 2430, 2484, 2501, 2698, 2713, 2714, 2826, 2870, 2924, 3023, 3088, 3210, 3227, 3246, 3397]. **computer** [562, 687, 752, 761, 764, 797, 861, 864, 866–868, 909, 993, 1051, 1061, 1080, 1085, 1088, 1309, 1331, 1382]. **Computer-aided** [1348, 1947, 2284]. **Computer-Based** [420, 1921]. **Computer-Generated** [2084]. **Computer-Music** [362]. **Computer-Supported** [1047, 1048, 1051]. **Computers** [3, 7, 150, 344, 2329]. **Computing** [151, 158, 178, 193, 221, 383, 442, 525, 536, 552, 582, 583, 615, 736, 745, 1073, 1492, 1518, 1519, 1532, 1550, 1554, 1562, 1577, 1597, 1610, 1617, 1668, 1682, 1705, 1727, 1740, 1787, 1816, 1832, 1852, 1856, 1897, 1898, 1904, 1909, 1913, 1916, 1919, 1935, 1941, 1983, 2014, 2016, 2018, 2021, 2045, 2090, 2110, 2117, 2132, 2140, 2181, 2209, 2261, 2375, 2378, 2382, 2407, 2409, 2420, 2423, 2426, 2434, 2454, 2459, 2520, 2528, 2529, 2560, 2582, 2588, 2605, 2614, 2673, 2682, 2711, 2744, 2765, 2775, 2808, 2981, 3027, 3033, 3087, 3136, 3152, 3162, 3202, 3247, 3255, 3269, 3342, 3376, 3382]. **Computing** [62, 327, 566, 702, 716, 744, 746, 760, 787, 790, 794, 815, 817, 838, 865, 943, 947, 952, 954, 977, 979, 980, 1002, 1008, 1044, 1049, 1069, 1086, 1089, 1093, 1134, 1155, 1182, 1201, 1279, 1312, 1319, 1437, 1470, 1548, 1806, 1932, 2111, 2135, 2142, 2347, 2604, 2693, 2721, 2830, 2997, 3014, 3397]. **Computing-Oriented** [1610]. **Concept** [848, 1933, 2376, 2598, 3078, 3087]. **Conception** [444, 1892]. **Concepts** [16, 33, 65, 296, 306, 331, 431, 470, 818, 1172, 1340, 1573, 1773, 1791, 1901, 2047, 2051, 2060, 2067, 2215, 2477, 2705, 3349, 3354]. **Conceptual** [104, 1220, 1403, 1933, 2740, 2764, 3188]. **Conceptualization** [1586]. **concern** [1149]. **concern-specific** [1149]. **concerning** [804]. **Concerns** [912, 967, 1434, 1936]. **Concurrency** [256, 486, 582, 748, 804, 805, 807, 809, 814, 816, 818, 819, 821, 1004, 1012, 1166, 1989]. **Concurrent** [65, 306, 329–331, 445, 450, 528, 720, 811, 820, 1025, 1036, 1132, 1189]. **Confidential** [1323, 3033]. **Confidentiality** [1647]. **Confidentiality-Preserving** [1647]. **configurable** [1066]. **Configuration** [1007, 1555, 1782, 2809]. **Configurations** [24]. **Conflict** [2874, 3122]. **Conflict-free** [3122]. **conflicts** [1232]. **Connect** [2638]. **Connected** [1014, 1665, 1744, 2154, 2405, 3271]. **Connecting** [3102]. **Connection** [1162, 1163]. **Connections** [1809]. **Consensus** [525, 2069, 2708, 2886]. **Consequential** [2525]. **Considerations** [87, 327, 954, 2664]. **Consistency** [367, 1063, 1110, 1639, 1712]. **Consistent** [1168, 3311]. **Consolidation** [2363]. **Constant** [1981]. **Constrained** [334, 3019]. **Constraint** [707, 755, 823, 826, 828–831, 833, 834, 836, 840, 871, 1025, 1029, 1146, 1259, 1351, 2388, 2446]. **Constraint-based** [830, 831, 833, 1029]. **Constraints**

[824, 825, 837, 839, 3331]. **constructed** [1288]. **Constructing** [2666]. **Construction** [1110, 1114, 1264, 2846, 3227, 3355]. **Constructive** [2492]. **constructs** [1141]. **Consumer** [944, 1335, 2262]. **Consumer-oriented** [2262]. **Consumption** [1594, 2057, 2448]. **Contact** [2433]. **Contactless** [2978]. **Container** [2811, 3168, 3240]. **Container-based** [2811]. **Containers** [2056, 2404, 2945]. **Contemporary** [16, 33, 1350, 2201, 2389]. **Content** [643, 1105, 1125, 1234, 1544, 1591, 1596, 1631, 1838, 1968, 2086, 2158, 2374, 2394, 2735, 2824, 2950, 3192, 3195, 3241, 3314]. **Content-Based** [643, 1838, 2735]. **Content-Delivery-Based** [1631]. **Contention** [3352]. **Contents** [644, 645, 1008, 1048, 1070]. **Contested** [3306]. **Context** [1286, 1361, 1381, 1410, 1514, 1871, 1988, 2072, 2104, 2130, 2244, 2294, 2301, 2741, 3032, 3215]. **Context-Aware** [2072]. **Context-Awareness** [1361]. **Context-Sensitive** [2130, 2301]. **contexts** [685]. **Contextual** [1871]. **Continual** [3182]. **Continuous** [1857, 1977, 1991, 2552, 2702]. **Contract** [2190, 2297, 2335, 2894, 3050]. **Contracts** [1168, 1623, 2749, 3103]. **Contrastive** [2525, 2633]. **contributions** [1080]. **Control** [29, 54, 250, 256, 436, 448, 486, 535, 703, 1004, 1159, 1170, 1238, 1242, 1282, 1333, 1367, 1390, 1644, 1675, 1684, 1711, 1729, 1799, 1800, 1812, 2135, 2248, 2325, 2474, 2553, 2620, 2876, 2895, 2947, 3173]. **Control-Based** [1812]. **Control-Flow** [1367, 1711]. **Controllable** [2816, 2980]. **Controlled** [2326, 2870]. **Controlled-environment** [2870]. **Controllers** [2186]. **Conventional** [2962, 3189]. **Conversational** [1200, 2292, 2559, 2639, 3164]. **Convolutional** [1849, 2400, 2636, 2706, 3272]. **Cookbook** [2197]. **Cooperative** [178, 420, 1047, 1048, 1051, 1779, 1953, 2372, 2755]. **Coordination** [82, 94, 538, 719, 2206]. **cope** [1380]. **coprocessor** [1424]. **Copyright** [83]. **Core** [167–169, 1719, 1901, 1980, 2060, 2131, 2624]. **Corporate** [580]. **Correcting** [516]. **Correction** [2128, 2891]. **Corrections** [1737]. **Correctness** [49, 107, 287]. **Correlation** [1790, 3370]. **Corresponding** [2149]. **Corrigenda** [131, 136, 176, 205, 246, 331, 472]. **Corrigendum** [79, 94, 123, 403, 491]. **Corruption** [2780]. **Cost** [141, 877, 1399, 1622, 2696]. **Cost-Benefit** [141]. **cost-sensitive** [1399]. **Costs** [144, 145, 183, 184]. **counterevasion** [1310]. **Counterexamples** [78]. **Counterfactual** [2923, 2971, 3064, 3216]. **countering** [1263]. **Countermeasures** [1374, 1619, 1701, 1954, 1958, 2175, 2208, 2288, 2310, 2313, 2373, 2450, 2451, 2514, 2596, 2622, 2726, 2739, 2887, 2904, 2930, 3074, 3091, 3133, 3145, 3174, 3251, 3315]. **Counting** [2215]. **coupled** [908, 1139]. **Course** [583]. **Courses** [617, 861, 863, 2109]. **Covariates** [1949]. **Coverage** [995, 1353]. **Covering** [988]. **Covert** [1535, 1643, 3364]. **COVID** [2345, 2571, 2690, 2741, 3081]. **COVID-19** [2345, 2571, 2690, 2741, 3081]. **CPS** [2750]. **CPU** [1554, 2073, 2441, 2930]. **CPU-Based** [2073]. **CPU/GPU** [2441]. **CPUs** [2488]. **craniofacial** [1348]. **Creation** [1056, 1933, 2194, 3339]. **Creativity** [1821, 3035]. **Crisis** [868, 993]. **Criteria** [3113]. **Critical** [966, 1212, 1438, 1834, 1881, 2091, 2131, 2492, 2577, 2590, 2928, 2938]. **Criticality** [1777]. **Criticism** [121, 122, 2825]. **Critique** [162]. **Cross** [1290, 1384, 1707, 1731, 1901, 1931, 1943, 2519, 2661, 2832, 2835, 2894, 2929, 3286]. **Cross-Chain** [2894]. **Cross-Cloud** [1943]. **Cross-Dataset** [1931]. **Cross-Disciplinary** [1290, 1707]. **Cross-Domain** [2661, 3286]. **cross-language** [1384]. **Cross-Lingual** [2929]. **Cross-modality** [2832]. **Cross-Platform** [1901]. **Cross-reality** [2835]. **Cross-Technology** [2519]. **Crossbar** [1774]. **Crossover** [1691]. **crossroads** [842]. **Crowd** [1562, 1814]. **Crowdsourcing** [1800, 2479]. **crypto** [1424]. **Cryptocurrency** [2756]. **Cryptographic** [1422, 2267, 2462, 3335]. **Cryptography** [211, 1210, 1266, 1922, 2309, 2676, 3317]. **Cryptology** [208]. **Cryptosystems** [2516]. **CSE** [789]. **CSI** [1463]. **CT** [2949]. **cube** [1272]. **Cubic** [612]. **Cues** [2861]. **Curb** [2011]. **Curiosity** [1456]. **Current** [1347, 1417, 1427, 1453, 1465, 1684, 1720, 1839, 1862, 1945, 2184, 2352, 2405, 2518, 2552, 2580, 2592, 2714, 2877, 2967, 2969, 3000, 3012, 3101, 3144, 3219, 3246, 3268]. **Curricula** [582, 617]. **curriculum** [858, 862]. **Custom** [271, 1964, 2581]. **customizability** [1208]. **Customizing** [638]. **Cutting** [2652, 2979]. **Cutting-Edge** [2652, 2979]. **CVSS** [2096]. **CXL** [3042]. **Cyber** [1487, 1725, 1772, 1829, 1863, 1869, 2068, 2071, 2188, 2293, 2295, 2326, 2416, 2537, 2645, 2725, 2909, 2948, 2954, 2963, 3005, 3124, 3270, 3293]. **Cyber-aggression** [2188]. **Cyber-grooming** [2188]. **Cyber-Physical** [1487, 1869, 2293, 2416, 2645, 2725, 2909, 2954, 2963, 3293]. **Cyber-Resilience** [2954]. **Cyber-security** [3005]. **Cyberattacks** [2208]. **Cyberbullying** [2188]. **Cybercrime** [1687, 2907]. **Cybersecurity** [2006, 2035, 2168, 2199, 2244, 2327, 2416, 2593, 2613, 3155, 3288, 3293]. **cybersickness** [3036]. **Cyberthreat** [2671]. **Cycle** [1295, 1428, 3167, 3315]. **Cytology** [2239].

D [994, 1172, 1247, 1274, 1371, 1417, 1519, 1529, 1530, 1715, 2084, 2498, 2510, 2634, 2806, 2829, 2842, 2889, 2890, 3072, 3379]. **D-aware** [2842]. **DAG** [2691]. **DAG-based** [2691]. **DAGs** [2512]. **Dance** [217, 1974]. **Darkweb** [2649]. **Data** [9, 96, 97, 106, 199, 207, 213, 263, 276, 372, 487, 488, 1072, 1285, 1510, 1524, 1541, 1570, 1579, 1593, 1632, 1653, 1677, 1683, 1715, 1718, 1738, 1751, 1785, 1813, 1864, 1876, 1888, 1965, 1976, 2003, 2019, 2023, 2028, 2048, 2059, 2074, 2095, 2110, 2121, 2127, 2137, 2145, 2162, 2180, 2184, 2204, 2243, 2257, 2283, 2286, 2300, 2369, 2382, 2395, 2406, 2424, 2470, 2475, 2505, 2560, 2563, 2569, 2576, 2642, 2726, 2750, 2783, 2800, 2817, 2834, 2845, 2879, 2927, 2931, 2953, 2988, 2995, 3015, 3082, 3108, 3122, 3161, 3171, 3187, 3219, 3262, 3268, 3281, 3290, 3314, 3332, 3343]. **Data** [36, 54, 95, 98–100, 195, 275, 280, 341, 388, 407, 423, 607, 631, 642, 649, 669, 1178, 1451, 1550, 1566, 1633, 1636, 1693, 1696, 1700, 1736, 1740, 1786, 1789, 1803, 1834, 1860, 1871, 1877, 1896, 1925, 1941, 1962, 1978, 1979, 2022, 2027, 2098, 2197, 2226, 2227, 2237, 2245, 2248, 2255, 2269, 2274, 2303, 2321, 2338, 2354, 2394, 2408, 2463, 2473, 2487, 2530, 2531, 2534, 2571, 2602, 2620, 2648, 2656, 2746, 2762, 2768, 2770, 2802, 2815, 2875, 2917, 2926, 2932, 2961, 2968, 2980, 2986, 3007, 3018, 3023, 3059, 3079, 3087, 3089, 3090, 3153, 3199, 3230, 3246, 3266, 3267, 3302, 3345, 3368, 3378]. **data** [991, 1050, 1071, 1165, 1191, 1237, 1241, 1250, 1256, 1272, 1300, 1320, 1323, 1346, 1372, 1381, 1395, 1414, 1416, 1449, 1453, 1469, 2281]. **Data-access** [2802]. **Data-Base** [95–100]. **data-center** [1416]. **Data-centric** [3199]. **Data-Driven** [280, 1593, 1696, 1740, 1785, 2074, 2245, 2369, 2530, 2534, 2571, 2834, 2879, 3187]. **Data-Flow** [1700]. **Data-Intensive** [1071, 2768]. **Data-Mining** [1751]. **Database** [152, 197, 198, 212, 219, 229, 246, 248, 256, 257, 307, 326, 335, 339, 366, 391, 396, 400, 406, 424, 464, 465, 486, 629, 631, 632, 639, 670, 674, 675, 759, 841, 842, 844, 846–852, 854, 871, 872, 901, 1045, 1046, 1207, 1222, 1257, 1273, 1283, 1805, 2233, 2541, 3029]. **Databases** [340, 384, 410, 448, 462, 464, 466, 471, 495, 499, 524, 671, 676, 677, 823, 837, 855, 895, 969, 1193, 1247, 1298, 1322, 1763, 1979, 2303, 2655, 2783, 3037]. **Datacenters** [1515, 2898]. **Dataflow** [392, 1225, 2386]. **Dataflows** [1733]. **Dataset** [1931, 2627, 2854, 2924]. **Datasets** [1658, 2039, 2550, 2556, 2584, 2868, 2924, 2964, 3225, 3269, 3320, 3358]. **Date** [2362]. **Dave** [1906]. **day** [2788]. **DBMS** [845]. **DDB** [1586]. **DDoS** [1263, 1952]. **Deadlock** [53, 410]. **Deadlocks** [39]. **dealing** [1179, 1191]. **death** [1344]. **Debugging** [271, 450, 478, 1594, 1755, 2502]. **Decade** [1438, 1898, 2428]. **Decades** [2806, 3355]. **Decalogue** [3135]. **Deceived** [3002]. **Decentralised** [1904, 2202, 2950]. **Decentralized** [255, 327, 794, 1282, 1437, 2053, 2668, 3012, 3167]. **Deception** [1873, 1969, 2006, 2256]. **Deceptive** [3002]. **Decision** [69, 79, 302, 420, 510, 660, 665, 1354, 1399, 2007, 2205, 2388, 2467, 2710, 3024, 3170, 3259, 3306]. **Decision-Making** [1354, 2467, 3259]. **Decision-theoretic** [2710]. **Decisions** [1142, 2261, 2655, 2680, 2789]. **declarative** [930]. **declare** [990]. **Decoding** [3239]. **Decomposition** [192]. **deduction** [1018, 1030, 1304]. **Deductive** [340, 1045, 2105]. **Deduplication** [1496, 1693]. **Deep** [1715, 1858, 1885, 1911, 1967, 1989, 1997, 2054, 2062, 2106, 2112, 2114, 2136, 2179, 2197, 2217, 2219, 2225, 2249, 2264, 2271, 2293, 2320, 2328, 2356, 2364, 2367, 2380, 2390, 2391, 2395, 2399, 2408, 2437, 2443, 2510, 2511, 2513, 2520, 2532, 2533, 2551, 2583, 2589, 2642, 2657, 2663, 2687, 2689, 2690, 2709, 2751, 2753, 2759, 2771, 2788, 2793, 2814, 2818, 2837, 2855, 2865, 2868, 2877, 2890, 2893, 2897, 2904, 2910, 2933, 2941, 2963, 2969, 2975, 2985, 3000, 3001, 3019, 3023, 3057, 3058, 3067, 3086, 3091, 3128, 3146, 3148, 3162, 3163, 3193, 3209, 3211, 3222, 3226, 3229, 3236, 3243, 3253, 3307, 3315, 3319, 3333, 3357, 3367, 3392]. **Deep** [1125, 1929, 1964, 2160, 2221, 2346, 2393, 2464, 2522, 2593, 2758, 2763, 2842, 2898, 2905, 2968, 2980, 3061, 3069, 3100, 3134, 3140, 3197, 3257, 3286, 3331, 3334, 3370]. **Deep-learning** [3148]. **Deepfake** [3129, 3235]. **Deepfakes** [2194]. **default** [1090]. **Defect** [2631, 2856, 3346]. **Defence** [1592, 2927]. **Defences** [1422, 2747, 3194]. **Defender** [2438]. **defending** [1432]. **Defense** [953, 1263, 1307, 1952, 2222, 2273, 2295, 2346, 2425, 2726, 2843, 3150, 3189]. **Defenses** [2119, 2309, 2564, 2583, 2593, 2844, 3158, 3160, 3240, 3287, 3301, 3308]. **Defensive** [1787, 2006]. **Deferring** [1142]. **Defined** [1512, 1733, 1820, 1852, 1952, 2100, 2308]. **Definition** [46, 1443, 1686, 1906, 3257, 3259]. **Definitions** [103, 123, 2923]. **Degree**

[1897, 2798, 3290, 3327]. **degrees** [1279]. **Dehazing** [2709]. **Dehumanization** [273, 274]. **Dekel** [2075]. **Delay** [2343, 3271]. **Delayed** [1122, 2505]. **deletion** [1323]. **Deliberation** [603]. **Delivery** [1631, 2086, 2785]. **Demand** [280, 1059]. **Demand-Driven** [280]. **Democratizing** [3168]. **demonstrating** [950]. **Demystified** [2990]. **Demystify** [2823]. **Demystifying** [1923, 1989, 2783]. **Denial** [2273]. **Denial-of-Service** [2273]. **Dense** [520, 3225]. **Dense-Range** [520]. **Densest** [2960]. **Density** [1143, 2145]. **Density-based** [2145]. **Department** [953]. **Dependability** [1385, 1599]. **Dependencies** [401, 402]. **dependent** [1318, 2738]. **Deploying** [2544]. **Deployment** [2202, 2491, 2529]. **Deployments** [2677]. **Depth** [1989, 2526, 2724, 2797, 3067, 3198, 3230]. **Describing** [1189, 1284]. **Description** [809, 937, 1149, 1439, 2039]. **Descriptions** [1222, 1637]. **Desiderata** [2298]. **Design** [151, 169, 229, 246, 384, 534, 613, 641, 647, 657, 712, 724, 729, 806, 812, 830, 831, 881, 926, 972, 1074, 1121, 1140–1142, 1149, 1190, 1326, 1349, 1354, 1397, 1509, 1514, 1614, 1641, 1676, 1762, 1795, 1805, 1819, 1832, 1935, 1965, 1972, 2042, 2077, 2187, 2221, 2284, 2289, 2320, 2323, 2372, 2407, 2461, 2492, 2493, 2536, 2655, 2772, 2789, 2962, 3002, 3022, 3029, 3100, 3231, 3280, 3338]. **Design-Pattern** [1641]. **design-time** [1397]. **Designed** [2959]. **Designer** [1783]. **Designing** [1175, 2858]. **Designs** [438, 460, 859, 1735, 2783, 2872, 3028, 3077]. **Desktop** [2897]. **destination** [3075]. **detail** [1286]. **Detecting** [1579, 2237, 2741, 2742, 2824, 2897, 3374]. **Detection** [410, 589, 742, 1413, 1528, 1540, 1541, 1559, 1567, 1613, 1678, 1703, 1757, 1768, 1802, 1841, 1848, 1869, 1870, 1878, 1879, 1881, 1883, 1891, 1955, 1962, 2002, 2036, 2048, 2063, 2066, 2107, 2120, 2128, 2172, 2179, 2194, 2212, 2217, 2225, 2235, 2243, 2256, 2293, 2304, 2320, 2328, 2369, 2421, 2429, 2445, 2473, 2489, 2511, 2562, 2595, 2617, 2630, 2653, 2667, 2694, 2755, 2788, 2792, 2849, 2865, 2874, 2900, 2941, 2995, 3009, 3013, 3030, 3048, 3057, 3078, 3086, 3094–3096, 3104, 3126, 3129, 3147, 3148, 3159, 3167, 3178, 3235, 3241, 3259, 3298, 3340, 3341, 3346, 3380, 3394]. **Detection** [1299, 1426, 1440, 1448, 1458, 1487, 1736, 1825, 1860, 2161, 2377, 2436, 2565, 2586, 3133]. **detector** [1330]. **Determining** [238, 239]. **Determinism** [2640]. **Deterministic** [125, 191, 453, 1572]. **Develop** [1246, 2817]. **Developer** [2289, 3084]. **Developing** [784, 1071, 1100, 1144, 1173]. **Development** [95, 141, 198, 314, 431, 534, 624, 685, 691, 926, 1015, 1082, 1136, 1174, 1275, 1345, 1364, 1494, 1831, 1901, 2005, 2134, 2592, 2743, 2915, 3338, 3395]. **Developments** [353, 849, 1320, 1571, 1915]. **Deviation** [1870]. **Device** [642, 1087, 1493, 1621, 1645, 1839, 2104, 2123, 2385, 2411, 2518, 2725, 3299]. **Device-free** [2123, 2518]. **Devices** [154, 687, 688, 902, 1389, 1585, 1594, 1667, 1788, 1982, 2090, 2131, 2136, 2137, 2143, 2173, 2212, 2577, 2588, 2737, 2786, 2953, 3365]. **Devising** [154]. **DevOps** [2047, 2983]. **DEX** [2668]. **DHT** [1329, 1505]. **DHT-Based** [1505]. **Diagnoses** [2978]. **Diagnosis** [539, 1343, 1802, 1947, 2170, 2690, 2692, 2762, 3185]. **diagram** [1434]. **Diagrams** [302, 488, 510]. **Dialects** [3220]. **Dialog** [3329]. **Dialogue**

[1200, 2521, 2819]. **dichotomies** [805]. **Dictionary** [288]. **Dictionary/Directory** [288]. **differences** [1118]. **Different** [395, 1401, 1936, 3109]. **Differentiable** [3022]. **Differential** [2007, 2323, 2394, 2590, 2828, 2951, 3229, 3387]. **Differentiated** [2812]. **Difficulty** [2608]. **Diffusion** [2452, 2857, 3112, 3287, 3339, 3369]. **Diffusion-Based** [3339]. **Digital** [29, 179, 270, 643, 763, 869, 872, 874, 877, 1347, 1459, 1488, 1533, 1585, 1745, 2427, 2477, 2536, 2739, 2813, 2866, 2883, 3077, 3143, 3228, 3234, 3310, 3325, 3394]. **Digitalization** [2813]. **Digitally** [2611]. **Digitization** [2813]. **Digits** [1585]. **Dilemma** [2379]. **Dimension** [495]. **Dimensional** [228, 270, 355, 494, 679, 893, 1117, 1193, 1214, 1888, 2342, 2561]. **Dimensionality** [2274]. **dimensions** [1084, 1365]. **Directed** [1092, 1491, 2730, 2884]. **Directions** [162, 536, 549, 575, 576, 745, 746, 748–754, 756, 757, 759–761, 763, 804, 819, 841, 850, 866, 896, 921, 934, 935, 976, 1078, 1573, 1627, 1786, 1806, 1849, 1897, 1898, 1932, 2008, 2019, 2060, 2061, 2102, 2125, 2136, 2140, 2183, 2184, 2250, 2255, 2261, 2275, 2318, 2356, 2384, 2404, 2405, 2409, 2420, 2439, 2503, 2538, 2540, 2569, 2580, 2582, 2636, 2658, 2670, 2676, 2680, 2681, 2711, 2722, 2744, 2790, 2819, 2863, 2883, 2948, 2974, 3003, 3012, 3041, 3055, 3073, 3078, 3085, 3087, 3092, 3101, 3136, 3140, 3155, 3177, 3202, 3219, 3222, 3268, 3316]. **directions** [744, 747, 755, 758, 764, 779, 892, 909, 1094]. **Directive** [192]. **Directly** [1014]. **Directory** [288]. **Dirichlet** [2332]. **disambiguation** [1294]. **Disappearance** [556]. **Disaster** [1646, 1696, 2647]. **DISCIPLE** [1054]. **Disciplinary** [1290, 1707]. **Discipline** [560, 813]. **disciplines** [1096]. **Discourse** [2688]. **Discovery** [1058, 1109, 1437, 1751, 1822, 1828, 2049, 2436, 2512, 2854, 3171, 3226, 3373]. **Discrete** [135, 377, 1327]. **Discrete-Event** [377]. **Discretely** [163, 164]. **Discussion** [5, 1466, 2334]. **Disease** [2473, 2905, 3283, 3285]. **Diseases** [2978, 3309]. **Disguise** [1861]. **Disinformation** [2436]. **Disjoint** [487]. **disk** [1344]. **Disorders** [2639, 2762]. **Disparate** [2322, 3372]. **Dispatch** [1497]. **Display** [344, 1995, 3028]. **Displays** [1531, 1611, 2307, 3379]. **Disruptions** [3251]. **Distance** [1274, 1646, 1887, 2177, 2958]. **Distance-Bounding** [1887]. **distances** [1461]. **Distant** [1899]. **Distillation** [3260]. **distortion** [1350]. **Distresses** [2741]. **Distributed** [256, 349, 350, 371, 377, 410, 442, 464, 465, 470, 476, 477, 537, 578, 625, 674, 699–701, 717, 794, 917, 945, 1013, 1044, 1063, 1066, 1155, 1170, 1185, 1203, 1250, 1282, 1437, 1444, 1452, 1469, 1482, 1580, 1625, 1639, 1640, 1656, 1805, 1875, 1989, 2054, 2061, 2082, 2094, 2102, 2223, 2325, 2338, 2386, 2754, 2758, 2768, 2796, 2852, 2943, 3098, 3162, 3163, 3166, 3202, 3214, 3306, 3371]. **Distribution** [1012, 1234, 1381, 1484, 1544, 1591, 2148, 2896, 3281, 3328]. **Dive** [2985]. **Diversity** [1190, 1571]. **Divide** [743]. **DIY** [1982]. **DNA** [2022, 2204, 2859]. **DNN** [2772]. **DNS** [1860, 2592]. **Do** [48, 965, 1364]. **Document** [296, 1043, 1179, 1317, 1485, 2033, 2232, 2532, 2584, 2757, 2781, 3131]. **Document-level** [2232]. **documentation** [1148, 1168]. **Documenting** [74, 1147]. **Documents** [1110, 1125, 1167, 2779]. **Does** [597, 1969]. **Doing**

[2671]. **Domain** [623, 729, 959, 1138, 1144, 1145, 1150, 1246, 1499, 1525, 1731, 1994, 2035, 2040, 2111, 2139, 2295, 2661, 2697, 2807, 3007, 3069, 3151, 3158, 3286, 3356]. **Domain-Based** [2139]. **Domain-driven** [1138]. **Domain-Specific** [959, 1246, 1525]. **Domains** [778, 1355, 1611, 1651, 1860, 2878, 2928, 3109, 3165, 3258]. **Done** [163, 164]. **Don't** [605]. **Doomed** [2728]. **Down** [2482, 2742, 2990]. **Down-to-top** [2482]. **Downtimes** [2834]. **Downtown** [2154]. **Drawing** [67, 785, 1227, 1928]. **Drift** [2376, 3087]. **Drive** [1820]. **Driven** [280, 987, 1138, 1494, 1593, 1696, 1740, 1785, 2074, 2245, 2352, 2369, 2389, 2408, 2530, 2534, 2571, 2604, 2641, 2722, 2834, 2879, 3144, 3187, 3346]. **Driver** [1881, 2116, 2324]. **drives** [1344]. **Driving** [790, 2457, 3091, 3203, 3334, 3365]. **Driving-Are** [2457]. **Drone** [3038]. **Drones** [2677]. **Dropout** [2109]. **Drug** [1541, 2910, 3373]. **Drug-Drug** [2910]. **Drugs** [3125]. **Drum** [45]. **Dumb** [604]. **duplicate** [1427]. **Duty** [3250]. **D'ya** [2512]. **Dynamic** [250, 419, 631, 1037, 1058, 1107, 1363, 1475, 1558, 1628, 1719, 1761, 1828, 1830, 1865, 2012, 2046, 2059, 2401, 2440, 2447, 2453, 2506, 2579, 2730, 3306]. **Dynamical** [2666]. **Dynamically** [2314]. **Dynamicity** [1871]. **Dynamics** [1380, 1455, 2173, 2452, 2906, 3354].

e-commerce [1335]. **E-recruitment** [3004]. **Each** [2566]. **eager** [855]. **Ear** [1371, 1405, 2634]. **ear-** [1371]. **Early** [2473, 2520, 2849, 3146]. **Early-Exit** [3146]. **easy** [895]. **eBPF** [2067]. **Eco** [3092]. **Eco-Friendly** [3092]. **Economic** [608, 780, 1212, 2851]. **economics** [777]. **Ecosystem** [1657]. **Ecosystems** [1653, 2077, 2883]. **Edge** [1832, 1904, 1926, 2014, 2018, 2021, 2045, 2090, 2117, 2132, 2253, 2278, 2312, 2338, 2357, 2434, 2529, 2582, 2588, 2604, 2612, 2614, 2652, 2682, 2693, 2711, 2712, 2721, 2748, 2765, 2795, 2818, 2830, 2979, 2986, 3008, 3014, 3037, 3079, 3184, 3202, 3280, 3282, 3299, 3342, 3382]. **Edge-based** [2612]. **Edge-Cloud** [2018]. **Edge-computing-driven** [2604]. **Edge-Oriented** [1832]. **Edge-powered** [2986]. **Editing** [41, 174, 175, 294, 295, 3130]. **editor** [2, 6, 10, 13, 14, 18, 22, 26, 30–32, 73, 80, 89, 93, 95, 155, 207, 247, 356, 440, 1161]. **Editorial** [1, 57, 88, 101, 105, 108, 112, 118, 149, 190, 226, 254, 284, 313, 338, 358, 381, 399, 418, 435, 457, 481, 500, 549, 744, 982, 1009, 1010, 1089, 1093]. **Editors** [249]. **Education** [640, 764, 856, 857, 864, 866, 868, 993, 1128, 2199, 2778]. **educational** [943]. **EEG** [2068, 2509, 3040, 3381]. **EEG-Based** [2068, 3040]. **Effect** [383, 732, 2104, 2349, 2879]. **Effective** [559, 1199, 1724, 2447, 3060]. **Effectively** [144, 145]. **Effectiveness** [2377, 3294, 3395]. **Effects** [1027, 1522, 2926, 3090]. **Efficiency** [45, 1482, 1498, 1504, 1518, 1577, 1591, 2005, 2103, 2154, 2377, 3292]. **Efficient** [376, 600, 974, 1032, 1041, 1186, 1199, 1549, 2423, 2539, 2541, 2689, 2706, 2933, 3022, 3128, 3180, 3324, 3338, 3375]. **Effort** [2240, 3021, 3393]. **Efforts** [166, 992, 2035, 2824]. **egocentric** [1461]. **EHRs** [1780]. **Elaborate** [1973]. **elastic** [908]. **Elasticity** [1960]. **Electric** [2734, 3155]. **Electrical** [2488].

Electrical-Level [2488]. **Electroencephalogram** [3388]. **electromagnetics** [667]. **Electromigration** [1315]. **Electron** [237]. **Electronic** [3, 621, 763, 871, 875, 876, 878, 1008, 1047, 1048, 1051, 1069, 1073, 1089, 1093, 1134, 1179, 1245, 1311, 1317, 1780, 2463, 2597, 2899, 2956]. **Elementary** [5]. **Elements** [9, 2399]. **Elephant** [2301]. **Elicitation** [2880]. **Eliezer** [2075]. **Elimination** [388, 825]. **Embedded** [694, 758, 795, 831, 959, 1587, 2057, 2136, 2212, 2567, 3095]. **Embeddedness** [2504]. **Embedding** [1444, 2077, 2440, 2468, 2882, 2911]. **Embodied** [3256]. **Emergency** [1391, 1552, 1808]. **Emerging** [601, 1366, 1529, 1562, 1944, 1992, 2197, 2262, 2552, 2895, 3011, 3156, 3279]. **emission** [1336]. **Emotion** [1720, 2116, 2324, 2509, 2611, 3040]. **Empathic** [2866]. **Empathy** [2866]. **Empire** [2886]. **Empirical** [221, 565, 1212, 2553, 2584, 2939, 3321]. **Employing** [2644]. **Empowered** [2245, 2670, 2715, 3221, 3228, 3266]. **Empowering** [3120, 3299]. **Emulation** [16, 33, 2192]. **enable** [1036]. **Enabled** [1852, 2144, 2219, 2373, 2432, 2500, 2535, 2730, 2830, 3319, 3344]. **Enablers** [2802]. **enables** [1095]. **Enabling** [1052, 1200, 2338, 3076]. **Encoding** [1741, 2859]. **Encrypted** [2310, 2382]. **Encryption** [207, 209, 210, 1486, 1503, 1735, 1778, 1783, 1872, 2122, 2135, 2592, 2871, 3068]. **End** [536, 634, 899, 1342, 1847, 2045, 2090, 2180, 2351, 2399, 2699, 2786, 3251, 3393]. **End-Edge-Cloud** [2045]. **End-System** [1847]. **End-to-End** [634, 2180, 2399, 2699, 2786, 3251, 3393]. **end-to-me** [2699]. **End-User** [536, 1342, 2351]. **Endeavor** [2985]. **ENDEMIC** [3251]. **Energy** [1415, 1482, 1498, 1504, 1515, 1518, 1549, 1577, 1591, 1594, 1622, 1732, 2005, 2057, 2090, 2143, 2170, 2423, 2541, 2753]. **Energy-Efficient** [1549, 2541]. **Enforceable** [2297]. **Enforcement** [1570, 2388]. **Engagement** [1892]. **Engine** [1638]. **Engineering** [153, 471, 560, 756, 762, 820, 830, 892, 914, 931, 954, 964, 992, 1034, 1075, 1112, 1188, 1342, 1394, 1441, 1573, 1592, 1593, 1595, 1657, 1742, 1778, 2162, 2242, 2265, 2282, 2317, 2393, 2413, 2496, 2540, 2549, 2686, 2925, 3164, 3319, 3326, 3359, 3381]. **engineers** [567]. **engines** [1199, 1253, 1301, 1424]. **Enhanced** [735, 1189, 1611, 2414, 2507, 3084, 3168, 3347]. **Enhancement** [1564, 2000, 2356]. **Enhancements** [1326, 1479, 2538]. **Enhancing** [887, 3060, 3062, 3242]. **enriched** [2735]. **Ensemble** [1393, 1718, 2692]. **Ensuring** [1633]. **Enterprise** [1137, 1438, 3183]. **Entities** [2093]. **Entity** [384, 1491, 1581, 1734, 2083, 2180, 2207, 2779]. **Entity-Relation** [1491]. **Entity-Relationship** [384]. **Environment** [142, 898, 1161, 1175, 1982, 1992, 2123, 2610, 2664, 2818, 2840, 2870]. **Environmental** [1987, 2496]. **Environments** [581, 714, 974, 1044, 1049, 1054, 1056, 1058, 1118, 1240, 1437, 1450, 1461, 1492, 1549, 1550, 1589, 1786, 1813, 1830, 1893, 2092, 2140, 2202, 2314, 2350, 2409, 2420, 2582, 2597, 2714, 2866, 3008, 3019, 3028, 3037, 3156, 3208, 3298, 3306]. **ePassport** [1602]. **Epidemic** [2043, 2955]. **Epidemics** [1591].

Epistemological [598]. **Equations** [504, 1016]. **Equipping** [783]. **Era** [1561, 2012, 2203, 2281, 2384, 2451, 2488, 2602, 2822, 2956, 3089, 3118, 3265, 3319]. **Errata** [996]. **Erratum** [33]. **Error** [128–130, 281, 282, 614, 742, 1379, 1951, 2128, 2891, 3358]. **Error-Bounded** [3358]. **Errors** [1555, 1676, 1745, 2103]. **Essays** [568]. **Establishment** [1509]. **Estimation** [424, 1379, 2143, 2240, 2380, 2498, 2510, 2550, 2608, 2763, 2786, 2879, 3067, 3307]. **Estimations** [3021]. **Ethereum** [2119]. **Ethernet** [2461, 2887]. **Ethical** [3154]. **Ethics** [1610, 2185, 3041, 3207]. **Euclid** [1227]. **Euclidean** [1274, 3193]. **Evaluate** [1079, 1734]. **Evaluating** [427, 903, 1008, 1151, 1567, 1821, 1994, 2164, 2600, 2613, 3289]. **Evaluation** [40, 140, 495, 524, 728, 741, 802, 903, 940, 1011, 1016, 1025, 1027, 1031, 1034–1036, 1038, 1065, 1067, 1196, 1365, 1421, 1590, 1630, 1674, 1699, 1762, 1767, 1871, 1943, 1950, 1963, 1976, 2039, 2110, 2159, 2186, 2205, 2232, 2431, 2456, 2497, 2523, 2703, 2848, 2862, 2909, 2923, 2939, 3142, 3157, 3183, 3225, 3298, 3320, 3321]. **Evaluations** [2163, 2759]. **evaluators** [1029]. **Evasion** [1310, 2046, 3178]. **Even** [1236]. **Event** [377, 1171, 1372, 1613, 1766, 1826, 1987, 2281, 2723, 2941, 3141, 3372]. **Event-Based** [2723]. **events** [1184]. **ever** [1125]. **Every** [475, 491, 511, 512]. **Everything** [2325, 2420]. **evidence** [1118, 1212]. **Evolution** [63, 96, 444, 619, 962, 1101, 1466, 1601, 1695, 2228, 2358, 2402, 2425, 2701, 2758, 3366]. **Evolutionary** [1418, 1495, 1546, 1548, 1568, 1675, 2081, 2348, 2361, 2506, 2793, 3318, 3360]. **Evolutions** [1565]. **Evolving** [1050, 1864, 3107]. **Exact** [808, 1396, 2558]. **Examining** [2552, 3089, 3251]. **Example** [2368]. **Examples** [78, 91, 370, 470, 1472, 2115, 2118, 2751, 3281]. **Exascale** [2074, 2147]. **Exception** [1162, 1163]. **Exchanges** [2668]. **Executables** [1620]. **Execution** [1030, 1231, 1843, 2241, 2826, 3063, 3280]. **exercise** [823]. **Exfiltration** [2237, 2726, 3089]. **Exhaustive** [1936]. **exile** [899]. **Existing** [1486, 1657, 2569]. **Exit** [3146]. **Exiting** [1804, 2520]. **Exotic** [2681]. **Expansion** [1358]. **Expected** [228]. **Expenditure** [2143]. **Experience** [142, 227, 878, 1059, 1172, 1303, 1788, 3084]. **Experience-on-Demand** [1059]. **Experiences** [143, 1059, 1136, 1169, 1170, 2545]. **experiment** [1068]. **Experimental** [163, 164, 275, 276, 561, 2410, 2475, 2626]. **Experimentation** [1723]. **Experiments** [1511, 1846, 2858]. **Expert** [1516, 3385]. **Expertise** [2020]. **Experts** [3151]. **Explainability** [2390, 2533, 2877, 3015, 3108, 3215]. **Explainable** [2522, 2624, 2636, 2641, 2837, 2920, 2984, 3026, 3066, 3121, 3165, 3219, 3239, 3336]. **Explained** [3201]. **Explainers** [3190]. **Explaining** [1886, 3190]. **Explanation** [437, 2940]. **Explanation-Based** [437]. **Explanation-Guided** [2940]. **Explanations** [2525, 2923, 2971, 3064]. **explicit** [1213]. **Explicitly** [2287]. **Exploit** [2308]. **Exploitability** [2957]. **Exploitation** [1418, 2487]. **Exploiting** [620, 2103, 2642, 2915]. **Exploits** [3240]. **Exploration** [1382, 1418, 2257, 2454, 2854]. **Exploratory** [2286, 2963]. **Exploring** [623, 2673, 2699, 2720, 2994, 3254]. **Explosion** [2627].

Exponential [2455]. **Expose** [3279]. **Exposition** [1787]. **Express** [3042]. **Expressing** [2557, 2611]. **Expression** [1371, 1818, 3285]. **expression-invariant** [1371]. **Expressions** [1917]. **expressive** [1194, 1309]. **Extended** [384, 1972, 2483, 2866, 2922, 2989, 3002]. **Extending** [1029, 1030, 1084]. **extensible** [955]. **Extensions** [2745, 2805]. **Extensive** [2480]. **External** [1191]. **Extracting** [1184]. **Extraction** [1145, 1228, 1251, 1899, 2013, 2207, 2331, 2442, 2468, 2671, 2723, 2910, 2913, 3045, 3114]. **Extreme** [2712]. **Extremism** [2742]. **Extrinsic** [2969]. **Eye** [1798, 2483, 2517, 2588]. **Eye-Tracking** [1798, 2588].

Fabius [1037]. **Fabrication** [3355]. **Face** [1224, 1371, 1560, 1703, 2397, 2399, 2443, 2524, 2687, 2716, 2806, 2829, 3176, 3218]. **faces** [1216]. **Facets** [1210, 1571, 2665]. **Facial** [1818, 1917, 3285]. **Facilitate** [3077]. **Fact** [2442]. **Factor** [3198, 3364]. **factorization** [1388]. **Factors** [248, 691, 1345, 1438, 2360, 2743, 3084]. **Factory** [2543]. **Failure** [1316, 1330, 2489]. **failures** [1334]. **Fairness** [1993, 2302, 2481, 2547, 2548, 2791, 2918, 2965, 3207–3209, 3211, 3292]. **FairSNA** [2965]. **Fake** [2161, 3148, 3239]. **False** [2120, 2637]. **families** [3200]. **Family** [445, 1449]. **Far** [2869]. **Fashion** [2259, 2839, 2873, 2892, 3026]. **Fast** [2067]. **Faster** [2689, 2727]. **Fatigue** [2973, 3295]. **Fault** [109, 110, 454, 469, 489, 490, 525, 1044, 1231, 1278, 1352, 1446, 1483, 1599, 1625, 1698, 1774, 1802, 1951, 2147, 2211, 2516, 2729, 3027]. **Fault-Tolerance** [1774]. **Fault-Tolerant** [110, 469, 525, 1044, 1231, 1483, 1625, 2211]. **Faults** [1614]. **Feature** [1247, 1434, 1789, 2163, 2468, 3070]. **Feature-based** [1247]. **Features** [1281, 1296, 2449, 2964]. **Federated** [464, 1333, 2202, 2282, 2318, 2490, 2500, 2621, 2670, 2791, 2831, 2885, 2992, 3010, 3014, 3071, 3073, 3078, 3117, 3159, 3160, 3189, 3265, 3294, 3301, 3312, 3316, 3323, 3362, 3380]. **Federation** [1943, 3301]. **Feedback** [1667, 2946]. **feeling** [3036]. **Feelings** [2611]. **Feet** [1576]. **Few** [2115, 2429, 2701, 3046, 3286]. **Few-Shot** [2115, 2429, 2701, 3046, 3286]. **Fi** [3177]. **Fictional** [2013]. **FIDO** [2966]. **Field** [1352, 2279, 3246]. **Field-based** [2279]. **Fight** [1687]. **Fighting** [2345, 2637]. **Figurative** [2996]. **Figures** [3013]. **File** [72, 289, 308, 309, 349, 470, 700, 969, 1282, 1591, 2538]. **files** [1253]. **filesystems** [697]. **Filling** [2586]. **Filtering** [1171, 1366, 1490, 1656, 2083, 3065]. **Finalists** [3317]. **Finance** [2494, 3167, 3318, 3366, 3390]. **Financial** [1003, 1710, 2444, 2972, 3291, 3336]. **Finding** [376, 2650]. **Findings** [581]. **Fine** [23]. **Finger** [1585]. **Fingerprint** [1513, 3383]. **Fingerprinting** [2449, 2725]. **Fire** [1699]. **Firewall** [1782]. **Firm** [949]. **Firmware** [2192, 2212, 2365]. **First** [34, 861, 863, 1376, 1491, 1713, 3032]. **First-Class** [1713]. **First-Order** [1491]. **Fish** [2517]. **Fish-eye** [2517]. **Fittest** [619]. **Five** [1174, 1210, 2665]. **five-lecture** [1210]. **five-module** [1174]. **flash** [1241, 1474]. **Flaws** [546]. **flexibility** [969]. **Flexible** [718, 874, 1099, 1173, 1424, 3259]. **Flight** [2368]. **Floating** [475, 491, 511, 512, 743]. **Floating-Point** [475, 491, 511, 512, 743]. **Flooding** [2569]. **Floor** [3076]. **Flow**

[106, 388, 611, 730, 1360, 1362, 1367, 1700, 1711, 2270, 2284, 2447]. **Flow-based** [2284]. **Flowcharting** [25]. **Flows** [666, 1372, 2784, 3075]. **fly** [884]. **Flying** [3155]. **focal** [844]. **focus** [1286]. **focused** [1862, 2757]. **Fog** [1727, 1909, 2014, 2021, 2045, 2117, 2140, 2420, 2432, 2459, 2480, 2582, 2744, 3037, 3087, 3152, 3282, 3342, 3376]. **Fog-Enabled** [2432]. **Fog/Edge** [2021]. **fold** [1020]. **Food** [2016, 3077]. **Foot** [1576]. **Foot-Based** [1576]. **force** [790]. **Forecasting** [2444, 2551, 3105, 3336, 3392]. **Forensic** [1348]. **Forensics** [1347, 1467, 1627, 1839, 2829, 2883, 3310]. **Forest** [1841, 2818]. **Forgeries** [3394]. **Forgotten** [137, 138]. **Fork** [1502]. **Fork/Join** [1502]. **Form** [21, 531, 1021, 1172]. **Formal** [103, 123, 261, 387, 403, 726, 749, 879, 882, 883, 885–887, 890, 891, 939, 946, 1082, 1084, 1293, 1303, 1328, 1918, 1939, 1999, 2024, 2041, 2335, 2499, 2598]. **Formalism** [2280, 2557]. **formalisms** [1421]. **Formality** [771, 881]. **Formalized** [2029]. **Formalizing** [1197, 2707]. **Formally** [478]. **Formation** [2340, 3385]. **Formatting** [296]. **Forum** [120–122, 128–130, 137, 138, 144–147, 154, 163, 164, 171–175, 181–188, 201–204, 214–217, 222–224, 231, 232, 238, 239, 258, 259, 264–267, 273–276, 281, 282, 290–292, 303, 304, 308–311, 321–324, 329, 330, 401, 402, 460, 478, 489, 490, 511, 512, 586]. **Forward** [1328, 3083]. **Forwarding** [2156]. **Foundation** [3172, 3180–3182, 3259, 3349]. **Foundational** [1083]. **Foundations** [812, 923, 1027, 1281, 1623, 1627, 1763, 1871, 2124, 2261, 2540, 3016, 3391]. **FPGA** [1865, 2149, 2181, 2366, 3051, 3317]. **FPGA-accelerated** [2181]. **FPGA-inspired** [3051]. **FPGA/GPU** [2366]. **FPGA/GPU-based** [2366]. **FPGAs** [1522, 1849, 2488, 2536, 2655]. **Fragmentation** [1805]. **Framelets** [1139]. **Framework** [104, 366, 471, 825, 830, 858, 1015, 1016, 1054, 1104, 1136, 1138, 1140–1142, 1145–1151, 1153, 1155–1157, 1159, 1160, 1162–1165, 1167–1171, 1174, 1175, 1236, 1523, 1534, 1640, 1734, 1808, 2059, 2145, 2164, 2359, 2433, 2537, 2600, 2611, 2841, 2878, 3133, 3188, 3297, 3391]. **framework-based** [1136]. **Frameworks** [1002, 1134, 1135, 1137, 1139, 1144, 1152, 1154, 1161, 1166, 1173, 1276, 1580, 1853, 2028, 2065, 2619, 2764, 3148, 3298, 3331, 3384]. **Francisco** [1158]. **Fraud** [3167]. **free** [1087, 1364, 2123, 2518, 3122]. **Free/** [1364]. **Frequent** [2366]. **Friendly** [3092]. **Fringe** [570]. **Frontiers** [3045]. **Fulfilling** [2415]. **full** [1262]. **full-text** [1262]. **Fully** [1778, 1918, 3068, 3161]. **Function** [56, 2234, 3249]. **Functional** [19, 167, 287, 317, 444, 453, 705, 721, 723, 730, 738, 1023, 1027, 1108, 1258, 1367, 1459, 1745, 1756, 1764, 2401, 3007, 3238, 3313]. **Functionalities** [623]. **functionality** [956, 1124]. **Functionally** [3391]. **Functionally-Grounded** [3391]. **Functions** [1284, 1733, 2651, 2737, 2787]. **Fundamental** [488, 583, 591, 1340, 2161]. **Fundamentals** [863, 1044, 3079, 3266]. **Funding** [566]. **Fusion** [1269, 1285, 1625, 2543, 2968]. **Future** [162, 749, 779, 804, 805, 836, 849, 902, 909, 934, 935, 976, 1344, 1417, 1490, 1627, 1655, 1665, 1734, 1786, 1806, 1839, 1849, 1891, 1897, 1898, 1932, 2008, 2019, 2060, 2061, 2080, 2086, 2102, 2120, 2125, 2136, 2137, 2140, 2183, 2184, 2198, 2250, 2261, 2275, 2318, 2352, 2355, 2356, 2384, 2404, 2405, 2409, 2420, 2427, 2439, 2497, 2503, 2540, 2569, 2571, 2580, 2582, 2636, 2651, 2658, 2670, 2680, 2722, 2729, 2744, 2764, 2790, 2819, 2821, 2863, 2883, 2948, 2967, 3003, 3012, 3055, 3073, 3078, 3079, 3085, 3087, 3092, 3101, 3136, 3140, 3155, 3168, 3175, 3202, 3219, 3222, 3231, 3237, 3252, 3268, 3316]. **future** [682, 852, 864, 875, 938, 964, 1172, 1377, 1427, 1453]. **Fuzzers** [2974]. **Fuzzing** [2417, 2567, 2823, 3106]. **Fuzzy** [597, 1775, 2106, 2255, 2579, 2805].

G [2144]. **G-enabled** [2144]. **GA** [1176]. **GA-based** [1176]. **Gait** [1882, 1957, 2010, 2464, 2550]. **Gait-based** [1957]. **Game** [299, 1032, 1408, 1725, 1785, 1883, 2006, 2323, 3188]. **Game-Theoretic** [1883, 2006, 2323]. **Games** [436, 1077, 1447, 1508, 2176, 2430]. **Gamified** [2733]. **Gamma** [2515]. **GANs** [2250, 2662]. **Gap** [1634, 2370, 2451, 2878, 3123]. **Gaps** [1699, 2455]. **Garbage** [263, 1013, 1813]. **gate** [1352]. **Gathering** [2710]. **gauntlet** [1088]. **Gaussian** [1271, 1672]. **Gaze** [2483, 2786, 3379]. **Gender** [3210]. **General** [639, 795, 2049, 2674]. **general-purpose** [795]. **Generalization** [1232, 3007, 3356]. **Generalized** [71, 2941]. **Generalizing** [2115]. **Generated** [1596, 2084, 3195, 3314]. **Generating** [266, 267]. **Generation** [44, 119, 136–138, 301, 878, 911, 913, 983, 1022, 1039, 1119, 1511, 1672, 1761, 1764, 1834, 1880, 1898, 2099, 2114, 2201, 2290, 2299, 2359, 2390, 2414, 2458, 2524, 2603, 2678, 2687, 2715, 2759, 2775, 2816, 2872, 2881, 2884, 2938, 2980, 2982, 2996, 3031, 3039, 3100, 3173, 3188, 3245]. **Generative** [1934, 2222, 2224, 2250, 2286, 2319, 2344, 2460, 2524, 2526, 2629, 2827, 2842, 2843, 2845, 2889, 2899, 3009, 3153, 3161, 3226, 3228, 3287, 3386]. **Generator** [211]. **Generators** [321–324, 1249, 1271, 2088, 2515, 3274]. **Generic** [2059, 3304]. **Genetic** [662, 1834, 1915, 2138]. **Genomic** [1561]. **Geographic** [195]. **geolocation** [1310]. **Geomagnetism** [1792]. **Geometric** [170, 205, 396, 488, 553, 680, 782–784, 786, 1041, 1350, 3193, 3331]. **geometrical** [1284]. **geometrical-topological** [1284]. **Geometry** [650, 747, 2498]. **Geospatial** [1658]. **GeoStreams** [1837]. **GES** [2880]. **Gesture** [2342, 2880]. **Gestures** [2880]. **get** [890]. **Getting** [968, 3230]. **GII** [870]. **GIS** [1823]. **Global** [927, 1397, 1547]. **Glossary** [167]. **Glucose** [3179]. **glut** [911]. **GNP** [870]. **GNSS** [1619]. **Go** [77, 1032, 2824]. **Goal** [2641]. **Goal-driven** [2641]. **goals** [856, 882]. **Going** [1906, 1964, 2940]. **Gotta** [2379]. **Governance** [2925, 3214]. **Government** [566]. **GPGPU** [1615]. **GPS** [1455, 1752]. **GPU** [1504, 1554, 1660, 1730, 2073, 2441, 2577, 2669, 2898]. **GPU-Based** [2073, 2366]. **GPUs** [1776, 2488]. **grail** [827]. **Grained** [2042]. **Grammar** [574]. **Grammars** [21, 1464]. **Grand** [588]. **Graph** [346, 653, 785, 1081, 1204, 1249, 1273, 1533, 1580, 1630, 1763, 1776, 1853, 1855, 1928, 1930, 2051, 2088, 2223, 2378, 2392, 2527, 2648, 2656, 2683, 2758, 2783, 2796, 2846, 2878, 2911, 2923, 2943, 3017, 3030, 3098, 3099, 3105, 3111, 3190, 3201, 3272, 3373, 3392]. **Graph-Based** [1533, 1630, 1930, 2796]. **Graph-level** [3099]. **graphic** [908]. **Graphical** [35, 1081, 1376, 1501, 2879, 3188]. **Graphics** [36, 166, 168, 169, 679, 681]. **Graphlets** [2215]. **GraphQL** [2632]. **Graphs** [376, 612, 1092, 1288, 1460, 2223, 2258, 2440, 2570, 2908, 3025, 3098, 3233, 3260, 3278, 3345]. **Gray** [3082]. **Great** [3038]. **Green** [1515, 1524, 3135, 3265]. **Green-Energy-Aware** [1515]. **Grid** [1039, 1333, 2645, 2959]. **Grid-Based** [2959]. **Grids** [1250, 1420, 1622]. **grooming** [2188]. **Gross** [509, 870]. **ground** [2775]. **Grounded** [3391]. **Group** [420, 1161, 1195, 1221, 1403, 1870, 1981, 3224]. **groupware** [1161]. **Growth** [11, 2455]. **Guarantees** [634, 3208]. **Guard** [2745]. **Guest** [73, 89, 95, 105, 108, 112, 155, 247, 356, 440]. **Guidance** [1593]. **Guide** [443, 926, 1331, 2554, 3277]. **Guided** [1187, 2724, 2881, 2940, 3178]. **Guideline** [2299]. **Guidelines** [1137, 2320, 2372, 2493, 3356].

Hack [1973]. **Half** [2413]. **Half-Century** [2413]. **Hallucination** [2678, 3259]. **Handcrafted** [1967]. **Handheld** [2786]. **Handle** [1979]. **Handling** [621, 1636, 2386, 2694, 3087]. **Handover** [1692]. **Hands** [1254, 3382]. **Hands-on** [1254]. **Handwriting** [1728]. **Handwritten** [1406, 1910]. **Haptic** [1667, 2371, 2561, 2946]. **Hard** [171–173, 825, 1356, 1719, 2210]. **Hardware** [798, 1423, 1424, 1497, 1672, 1753, 1924, 1964, 1976, 2142, 2270, 2412, 2508, 2513, 2555, 2673, 2682, 2884, 2893, 3027, 3063, 3255, 3300, 3357]. **Hardware-Based** [3300]. **Hardwired** [535]. **Harmful** [2824]. **Harnessing** [3375]. **Hash** [81, 2149]. **Hashing** [419, 1706]. **Hate** [1878, 2742, 3239]. **HCI** [911, 1892]. **HCIS** [910]. **Head** [228, 2307, 2483]. **Head-mounted** [2307]. **Head-worn** [2483]. **Headed** [618]. **heading** [1318]. **Heads** [201, 202]. **Headsets** [2352, 3169]. **Health** [1632, 1780, 2137, 2182, 2463, 2899, 2901, 2942, 2956]. **Healthcare** [1245, 1386, 1835, 2079, 2183, 2300, 2435, 2490, 2679, 2804, 3156, 3170, 3234, 3365]. **Heap** [1649]. **Hearsay** [230]. **Hearsay-II** [230]. **Heart** [2167, 2889]. **helps** [771]. **Here** [1103, 2936]. **Herring** [640]. **Heterogeneity** [2349]. **Heterogeneous** [462, 464, 465, 702, 855, 1054, 1554, 1953, 2441, 2488, 2543, 2572, 2831, 3027, 3357]. **Heuristic** [598]. **Heuristics** [905, 2730, 3204]. **Hidden** [66]. **Hidden-Surface** [66]. **Hiding** [2932]. **Hierarchical** [99, 341, 428, 613, 2090, 2296]. **hierarchies** [1084, 1232]. **hierarchy** [796]. **High** [236, 315, 483, 542, 552, 574, 586, 671, 698, 795, 1173, 1180, 1193, 1816, 1847, 1919, 2817, 2933, 3173]. **high-dimensional** [1193]. **High-Level** [236, 315, 574, 3173]. **High-Performance** [542, 552, 586, 795, 1173, 1816, 1919, 2817]. **High-Resolution** [2933]. **High-Speed** [483, 698, 1847]. **Higher** [1084, 1745, 3114]. **higher-level** [3114]. **Highly** [335, 2213, 2216]. **Hint** [2359]. **HINTS** [2359]. **Historical** [3, 314, 2779]. **History** [1127, 1133, 1215, 2056, 2825]. **Hitchhiker** [3277]. **Hoc** [1242, 1261, 1505, 1563, 1904, 2585, 3060, 3333]. **Hole** [2742]. **Holistic** [2409]. **Holograms** [2084]. **holy** [827]. **Home** [1589, 2169, 2610, 3124]. **Homeostasis** [3206]. **Homes** [1770, 2797, 2874]. **homogeneous** [1483]. **Homomorphic** [1778, 1872, 2122, 3068]. **Homomorphically** [2382]. **Honeyword** [2599]. **Honeyword-based** [2599]. **Hop** [2888]. **Horizontal** [1470, 2992]. **Host** [1891, 2048]. **Host-Based** [1891]. **Hosting** [1233, 2192]. **HotDoc** [1167]. **Hotel** [2803]. **Hotspots** [2466]. **Householder** [504]. **HPC** [1732, 1801, 2798, 3327, 3357]. **HPCs** [2073]. **Hubs** [1097]. **Huffman** [2009].

Human [179, 248, 250, 344, 431, 687, 691, 761, 900, 909, 910, 1337, 1382, 1457, 1471, 1480, 1562, 1576, 1593, 1707, 1906, 2001, 2246, 2264, 2268, 2352, 2360, 2364, 2379, 2437, 2510, 2518, 2550, 2556, 2702, 2713, 2726, 2763, 2861, 2881, 2916, 2988, 3031, 3077, 3154, 3177, 3206, 3212, 3246, 3276, 3329, 3344]. **Human-Agent** [2268]. **Human-Autonomy** [2916]. **Human-Centered** [910, 3212, 3329]. **Human-Centric** [3154]. **Human-City** [2352]. **Human-Computer** [250, 431, 687, 761, 900, 909, 1382, 2713, 3246]. **Human-Food** [3077]. **Human-Human** [2861]. **Human-Machine** [1457, 1707, 2702]. **Human-or-computer** [2379]. **Human-Powered** [1562]. **Humanities** [23]. **Humans** [2471, 3085]. **Hunting** [3066]. **Hybrid** [889, 1558, 2658, 2977, 3024, 3308]. **Hybrid-Optimization** [2977]. **Hybrids** [3318]. **Hydra** [120]. **Hyper** [2683]. **Hyperdimensional** [2560, 2605]. **Hypergraph** [1673, 2776, 3274]. **Hypermedia** [630, 637, 1089, 1093–1096, 1098, 1100, 1104, 1105, 1112, 1115, 1116, 1118, 1121, 1123]. **hyperstructure** [1122]. **Hypertext** [1089, 1093, 1095, 1099, 1101, 1103, 1106–1108, 1110, 1111, 1114, 1120, 1124, 1127, 1268]. **Hypervideos** [1704]. **Hypervisor** [1565]. **Hypervisor-Based** [1565]. **Hypervolume** [2306]. **Hypothesis** [2549].

I/O [760, 970, 972–974, 1816, 2798, 3327]. **I/O-efficient** [974]. **IBM** [15, 31, 32]. **Ideal** [2056]. **Idealized** [24]. **Ideas** [583, 1277, 2624]. **Identification** [1348, 1389, 1559, 1809, 1957, 2550, 2653, 2905, 3055, 3076, 3110, 3224]. **Identifier** [71]. **Identifying** [1946, 2729, 2964, 3291]. **Identity** [2256, 2813, 3050]. **Idiomatic** [303, 304]. **IDSs** [2092]. **Igniting** [3277]. **II** [230, 295, 2213, 2547, 2605, 3205, 3247]. **IIoT** [2096, 2439, 2802]. **Illumination** [2101]. **Illusions** [2946]. **Illustrated** [2549]. **Image** [269, 278, 310, 311, 515, 589, 623, 983, 1226, 1230, 1265, 1277, 1347, 1521, 1634, 1694, 1699, 1911, 1997, 2080, 2239, 2356, 2397, 2418, 2431, 2438, 2526, 2591, 2709, 2781, 2814, 2837, 2842, 2855, 2868, 2892, 2949, 3001, 3031, 3067, 3091, 3104, 3150, 3181, 3197, 3253, 3394]. **image-based** [1230]. **Image-level** [3181]. **Image/Video** [623]. **Imagery** [2498]. **Images** [67, 270, 520, 1464, 1890, 2300, 2390, 2421, 2578, 2905, 2932]. **Imaging** [494, 2084, 2254, 2274, 2690, 2917, 3023]. **Imagistic** [609]. **Imbalanced** [1651, 2003, 3087, 3278]. **Imitation** [1716]. **Immersion** [3002]. **Immersive** [2545, 2989]. **Impact** [975, 1334, 1560, 1564, 2329, 2545, 2555, 2799, 3015]. **IMPACTS** [3206]. **Impairments** [2573]. **Imperative** [723, 990, 1409]. **Implementation** [574, 720, 1391, 1608, 1819, 1872, 1935, 2142, 2431, 2638, 2706, 2743, 3143]. **Implementation-Level** [2706]. **Implementations** [743, 808, 1272, 1845, 1922, 2185, 2339, 3317]. **Implementing** [469, 1257, 1339, 2726]. **Implications** [383, 534, 893, 911, 1829, 2488]. **Implicit** [1545, 2688]. **Importance** [772, 792, 802, 803, 3070, 3165]. **Impossibility** [2760]. **Improve** [637, 965, 3080]. **Improved** [1988]. **Improvement** [1074, 1300, 3238]. **Improvements** [1652, 3063]. **Improving**

[852, 1193, 1205, 1482, 1504, 1827, 2057, 2860]. **Imputation** [2563]. **In-Depth** [1989, 2526, 2797, 3198, 3230]. **In-Network** [1578]. **In-Vehicle** [2208, 2667]. **Incentive** [2566, 2731]. **Inclusive** [2938]. **Incomputability** [52]. **Incorporating** [495]. **Increases** [1539]. **Incremental** [793, 889]. **Independence** [642]. **Independent** [1985]. **Index** [632, 644, 645, 765, 766, 997–999, 1193, 1388, 2178]. **index-based** [1388]. **indexed** [1096]. **Indexes** [1262, 2213]. **Indexing** [61, 1822, 2213, 2216, 2558]. **Indicator** [2081, 2306]. **Indicator-based** [2081]. **Indicators** [3273]. **Indistinguishable** [2307]. **Indoor** [1463, 1539, 1575, 1645, 1792, 1959, 1985, 1988, 2123, 3055]. **Indoors** [1608]. **Induced** [1523, 2014]. **Induction** [1399, 2205, 2246]. **Inductive** [319]. **Industrial** [29, 787, 789, 797, 1172, 2416, 2811, 2834, 2883, 2928, 3101, 3243]. **Industry** [556, 846, 1838, 2375, 2750, 2976, 2989]. **inefficiency** [853]. **Inertial** [1471, 1539]. **Infectious** [3283]. **Inference** [319, 737, 1620, 1817, 2422, 2592, 2844, 2869, 3160, 3261, 3363, 3390]. **Influence** [2058, 3084]. **influenced** [2672]. **influences** [1277]. **Influential** [1809, 2955]. **Informatics** [1632]. **Information** [17, 134, 141, 220, 222–224, 395, 534, 558, 577, 580, 618, 624, 630, 638, 676, 785, 843, 873, 897, 910, 911, 1043, 1058, 1060, 1096, 1098, 1177, 1184, 1212, 1251, 1269, 1358, 1372, 1384, 1478, 1500, 1508, 1696, 1746, 1772, 1838, 1871, 1939, 1968, 1970, 2120, 2150, 2214, 2220, 2270, 2326, 2333, 2391, 2447, 2452, 2555, 2637, 2661, 2710, 2784, 2828, 2859, 2937, 3054, 3114, 3132, 3196, 3207, 3245, 3250, 3297, 3367]. **Information-Centric** [1968]. **Information-Theoretic** [2828]. **Informed** [3088]. **Informedia** [1059]. **infrared** [2953]. **Infrastructure** [877, 979, 1094, 1158, 1553, 1827, 1985, 2021, 3325]. **Infrastructure-as-a-Service** [1553]. **Infrastructure-Independent** [1985]. **Infrastructures** [2054]. **Ingredient** [3077]. **Inheritance** [740, 1232]. **Inherited** [1019]. **initiative** [1306]. **Injection** [1374, 1599, 2913]. **Injections** [1579]. **Ink** [621]. **Inner** [1686, 2799]. **innovation** [1095]. **Input** [24, 687, 902, 1470]. **Insider** [1954]. **Insiders** [1954]. **Insight** [1954]. **Insights** [2537, 3391]. **inspection** [1214]. **Inspired** [1560, 2150, 2209, 2353, 2767, 3051, 3137]. **Instability** [1564]. **Instance** [2685, 2695, 2919, 3216]. **Instance-Centric** [3216]. **Instance-Level** [2919]. **Instant** [3310]. **Instruction** [1986]. **Instructional** [637]. **Instrumental** [3363]. **Instrumentation** [2277, 3178]. **Insulin** [3179]. **Insurance** [3390]. **integer** [656]. **Integrated** [237, 271, 288, 718, 773, 1907, 2041, 2347, 2775, 2867, 3342]. **Integrating** [230, 768, 855, 1059, 1105, 2496, 3059]. **Integration** [391, 721, 722, 772, 796, 922, 930, 962, 1062, 1291, 1909, 2027, 2961, 2997]. **Integrative** [2985]. **Integrators** [719]. **Integrity** [1120, 1711, 2059, 2220, 3079]. **Intel** [2745, 2990]. **intellectual** [823]. **Intelligence** [70, 359, 608, 637, 751, 770, 775, 776, 780, 783, 1130, 1357, 1944, 2043, 2065, 2260, 2278, 2345, 2450, 2469, 2507, 2591, 2614, 2619, 2644, 2671, 2680, 2712, 2810, 2834, 2900, 2914, 2922, 2928, 2999, 3061, 3120, 3127, 3135, 3142, 3165, 3199, 3205, 3215, 3217, 3256, 3277, 3282, 3299, 3336]. **Intelligence-extended** [2922]. **Intelligent** [781, 831, 1153, 1414, 1498, 1640, 2116, 2154, 2236, 2312, 2503, 2755, 2850, 2942, 2986, 3134, 3188, 3268, 3386, 3396]. **intelligently** [1053]. **Intellimedia** [620]. **Intended** [1570]. **Intensive** [1058, 1071, 2768]. **Intent** [1655, 2586, 2722]. **Intent-Driven** [2722]. **Intentions** [3052]. **Inter** [1110, 1604, 1744]. **Inter-Connected** [1744]. **Inter-linker** [1110]. **Inter-Virtual-Machine** [1604]. **Interaction** [250, 476, 565, 687, 761, 900, 909, 1217, 1493, 1531, 1569, 1576, 1974, 2001, 2268, 2352, 2483, 2702, 2713, 2861, 2910, 3246, 3344]. **Interactions** [1322, 2171, 3379]. **Interactive** [35, 142, 294, 295, 689, 867, 961, 1470, 1542, 1704, 1974, 2052, 2272, 2321, 2561, 2786, 2946, 2991]. **Interception** [2699]. **Interconnect** [3042]. **Interconnected** [1492, 2322]. **Interconnection** [91, 1663]. **Interconnects** [1908]. **Interdependent** [1508, 2044]. **Interdisciplinary** [538, 616, 1821, 2032, 2556, 2784, 3075]. **interdomain** [1383]. **Interest** [11, 2410, 2569]. **Interestingness** [1256, 1949]. **Interface** [431, 690, 898, 904, 1061, 1184, 1200, 1373, 1494, 1944, 2308, 3077, 3227]. **Interfaces** [362, 619, 886, 893, 901, 905, 907, 908, 1196, 1258, 1286, 1457, 1516, 1795, 2068, 2198, 2324, 2619]. **Interfaces-Reviewing** [2324]. **Interference** [2684]. **Intermediary** [1064]. **Intermediate** [1409, 2287]. **International** [686]. **Internet** [906, 977, 1013, 1174, 1310, 1689, 1822, 1867, 1909, 1920, 1977, 2087, 2156, 2168, 2201, 2289, 2420, 2432, 2487, 2519, 2563, 2604, 2612, 2621, 2672, 2677, 2765, 2778, 2883, 2912, 3010, 3102, 3138, 3179, 3248, 3323, 3332]. **Internet-of-Drones** [2677]. **Interoperability** [466, 578, 579, 715, 919, 1313, 1744, 2322, 2355, 2439, 2720, 3006]. **interpolation** [1039]. **Interposing** [1064]. **Interpretability** [2585]. **Interpretable** [3333]. **Interpretation** [727, 929, 991, 1016]. **Interpretations** [231, 232, 2984]. **Interpreter** [5]. **Interpreting** [275, 276, 2751]. **intersection** [1341]. **intervals** [835]. **Intervention** [1808]. **Interventions** [2639, 3044]. **intractability** [774]. **intriguing** [1135]. **Introduction** [28, 95, 107, 247, 356, 440, 462, 528, 741, 1047, 1051, 1134, 1182, 1229, 1292, 1793, 2265, 2531, 2549, 2914, 3042, 3205]. **introductory** [867]. **Intrusion** [1487, 1540, 1567, 1841, 1848, 1883, 1891, 2048, 2369, 2565, 2667, 3009, 3078, 3159, 3380]. **invariant** [1265, 1371]. **invariants** [1472]. **invasive** [2973]. **Inventing** [594]. **Inverted** [1253, 2178]. **Investigating** [3381]. **Investigation** [2203, 2626]. **Invisible** [2038]. **Invocations** [2894]. **Involvement** [2726]. **IoT** [1822, 1998, 2069, 2077, 2134, 2139, 2175, 2184, 2262, 2299, 2325, 2334, 2365, 2415, 2482, 2535, 2582, 2663, 2737, 2744, 2750, 2766, 2796, 2863, 2874, 2938, 3003, 3008, 3151, 3186, 3284, 3347, 3365, 3375]. **IoT-based** [2874]. **IP** [1692]. **IPC** [695]. **IPv6** [2728, 3351]. **Iris** [1161, 1879, 2975]. **irrelevant** [562]. **Isolating** [1162, 1163]. **Isolation** [1669]. **ISP** [3197, 3248]. **Issue** [117, 124, 132, 139, 148, 165, 177, 189, 196, 206, 218, 225, 233, 240, 253, 260, 268, 277, 283, 293, 298, 305, 312, 316, 325, 332, 336, 342, 347, 351, 356, 363, 368, 373, 379, 385, 389, 393, 397, 404, 408, 412, 416, 421, 425, 429, 433, 439, 440, 446, 451, 455, 461, 462, 467, 473, 479, 484, 492, 496, 501, 507, 513, 518, 522, 526, 532, 540, 541, 544, 550, 554, 572, 587, 745, 986, 1001, 1040, 1302, 2914, 3205]. **Issues** [42, 151, 169, 178, 296, 320, 406, 530, 578, 624, 628, 635, 639, 641, 760, 786, 804, 811, 900, 961, 972, 979, 1030, 1061, 1169, 1211, 1226, 1314, 1400, 1423, 1550, 1602, 1659, 1665, 1809, 1913, 1926, 2020, 2097, 2333, 2427, 2518, 2535, 2568, 2569, 2615, 2677, 2679, 2793, 2888, 2904, 3251, 3316]. **Item** [1490]. **Items** [2901]. **Itemsets** [2366]. **Iterations** [2386].

Java [1180, 1197]. **JavaScript** [1754, 1761]. **JIT** [3308]. **JITs** [3308]. **Job** [1836]. **John** [3397]. **Join** [499, 1502]. **Joint** [1382, 2586, 2836]. **journals** [1008, 1095]. **Journey** [1708, 1979, 2112, 2869]. **Judge** [1796]. **Just** [823, 1215, 2631]. **Just-in-Time** [1215, 2631]. **Justness** [1993].

Kanellakis [646]. **Keep** [1624]. **Keeping** [1440]. **Kernel** [1819, 1942]. **Key** [973, 1221, 1261, 1424, 1509, 1981, 2148, 2196, 2201, 2516, 2896, 2938, 2948, 2989, 3252, 3328]. **Key-sharing** [2196]. **Keys** [2382]. **Keystroke** [3354]. **Keyword** [2815]. **Kind** [594]. **Knee** [1890]. **Know** [475, 491, 511, 512, 1364, 2747]. **Knowledge** [230, 617, 779, 1699, 2089, 2258, 2414, 2496, 2570, 2654, 2735, 2796, 2846, 2902, 2908, 2911, 2913, 3025, 3033, 3059, 3124, 3130, 3260, 3373]. **Knowledge-augmented** [3373]. **Knowledge-based** [779, 3124]. **Knowledge-enhanced** [2414]. **Knowledge-enriched** [2735]. **KPIs** [2983]. **Kubernetes** [2568, 2581].

Lab [2284]. **Lab-on-a-chip** [2284]. **Label** [1533, 2080]. **Labelled** [2505, 3090]. **Labels** [2470, 3181]. **laboratories** [1254]. **Lambda** [1341]. **Landing** [2368]. **Landscape** [1485, 2071, 2074, 2580, 2671, 2817, 3044, 3301]. **lane** [1440]. **Language** [15, 31, 32, 46, 366, 440, 574, 593, 627, 678, 710, 775, 954, 957, 960, 1084, 1141, 1258, 1384, 1637, 1690, 2242, 2391, 2533, 2586, 2603, 2625, 2633, 2678, 2764, 2782, 2807, 2816, 2982, 2984, 2993, 2996, 3034, 3047, 3056, 3118, 3130, 3154, 3173, 3182, 3209, 3210, 3220, 3223, 3245, 3258, 3261, 3264, 3277, 3280, 3303, 3324, 3348]. **Language-Based** [2764]. **Languages** [42, 70, 241, 248, 279, 361, 375, 400, 442, 444, 445, 704, 705, 716, 719, 724, 730, 750, 756, 821, 896, 913–915, 925, 940, 956, 958, 959, 964, 989, 1005, 1024, 1025, 1045, 1132, 1135, 1207, 1225, 1240, 1246, 1325, 1339, 1373, 1434, 1491, 1525, 1547, 1641, 1763, 1771, 1815, 2037, 2176, 2190, 2297, 2454, 2659]. **Large** [524, 530, 578, 624, 760, 786, 787, 945, 969, 1138, 1391, 1449, 1482, 1505, 1531, 1580, 1626, 1794, 1822, 1868, 1875, 1893, 2023, 2027, 2361, 2482, 2663, 2782, 2996, 3034, 3118, 3128, 3130, 3223, 3258, 3264, 3280, 3324, 3348]. **Large-Scale** [530, 578, 624, 760, 786, 945, 969, 1391, 1449, 1482, 1505, 1580, 1794, 1822, 1868, 1893, 2023, 2027, 2361, 2482, 3128]. **Large-scope** [787]. **Large-Size** [2663]. **Last** [1438, 2747]. **Latency** [2418, 2430, 3136]. **Latent** [2332]. **Lattice** [1922, 2196]. **Lattice-Based** [1922, 2196]. **Law** [1334, 1570]. **Laws** [1249, 1466, 2289]. **Layer** [1091, 1326, 1389, 1419, 1968, 2273, 3187, 3242]. **Layered** [2212]. **layering** [1138]. **Layers** [1745]. **Layout** [657, 1204, 2033].

Lazy [725, 855, 1258]. **Leaf** [2905]. **Leakages** [3218]. **Leap** [1227, 2528]. **Learn** [252]. **Learned** [2002, 2633]. **learners** [1118]. **Learning** [437, 593, 596, 1537, 1671, 1678, 1715, 1716, 1718, 1751, 1769, 1874, 1889, 1895, 1911, 1948, 1974, 1989, 1997, 2018, 2121, 2127, 2136, 2193, 2202, 2217, 2264, 2271, 2286, 2298, 2320, 2328, 2364, 2391, 2395, 2422, 2505, 2511, 2535, 2551, 2574, 2575, 2589, 2590, 2613, 2614, 2621, 2642, 2677, 2690, 2709, 2730, 2736, 2751, 2771, 2776, 2788, 2791, 2814, 2817, 2850, 2865, 2877, 2885, 2903, 2910, 2918, 2921, 2933, 2940, 2969, 2971, 3009, 3030, 3035, 3047, 3071, 3086, 3091, 3110, 3117, 3126, 3160, 3163, 3189, 3191, 3193, 3222, 3229, 3253, 3276, 3288, 3319, 3323, 3346, 3350, 3362, 3380, 3382, 3392]. **Learning** [614, 636, 637, 660, 1635, 1885, 1930, 2003, 2054, 2062, 2109, 2114, 2134, 2197, 2218, 2225, 2237, 2249, 2266, 2282, 2293, 2295, 2296, 2302, 2314, 2321, 2326, 2357, 2367, 2380, 2390, 2408, 2437, 2438, 2443, 2472, 2473, 2481, 2490, 2500, 2501, 2510, 2520, 2532, 2544, 2579, 2583, 2587, 2635, 2657, 2686, 2689, 2718, 2747, 2753, 2759, 2765, 2770, 2793, 2804, 2818, 2837, 2849, 2853, 2867, 2868, 2890, 2897, 2904, 2920, 2967, 2975, 2976, 3001, 3005, 3010, 3016, 3019, 3023, 3033, 3043, 3057, 3058, 3067, 3078, 3090, 3128, 3162, 3166, 3172, 3209, 3236, 3243, 3256, 3278, 3283, 3285, 3312, 3327, 3357, 3366, 3367, 3378, 3389]. **Learning** [769, 978, 1118, 1198, 1290, 1376, 1377, 1465, 1729, 1858, 1903, 1929, 1931, 1937, 2035, 2080, 2082, 2092, 2115, 2122, 2159, 2160, 2175, 2226, 2246, 2316, 2318, 2338, 2348, 2393, 2404, 2435, 2464, 2468, 2484, 2496, 2512, 2522, 2547, 2564, 2593, 2596, 2670, 2692, 2701, 2758, 2763, 2769, 2831, 2855, 2898, 2905, 2908, 2980, 3000, 3014, 3046, 3061, 3064, 3069, 3099, 3100, 3114, 3134, 3142, 3148, 3159, 3170, 3182, 3194, 3197, 3202, 3237, 3249, 3257, 3264, 3265, 3286, 3291, 3294, 3301, 3316, 3318, 3331, 3334, 3363, 3370, 3373, 3387, 3388]. **Learning-Based** [2062, 2134, 2271, 2293, 2320, 2326, 2404, 2443, 2473, 2657, 2763, 2903, 3001, 3067, 3142, 3288]. **Learning-Enabled** [2535]. **Learning-to-Rank** [2547]. **leashed** [1287]. **Leave** [605, 1969]. **Lecture** [555, 1210]. **LED** [1575]. **Ledger** [2094, 2796]. **Left** [2428]. **Legally** [2297]. **Lempel** [1388]. **Lens** [2994]. **Lessons** [1164, 2002, 2633]. **Let** [1079]. **Letter** [31, 32]. **Leukemia** [2421]. **Level** [236, 315, 574, 589, 972, 1278, 1343, 1536, 1598, 1642, 1793, 1966, 2202, 2232, 2457, 2488, 2536, 2706, 2716, 2919, 3099, 3114, 3173, 3181]. **Level-5** [2457]. **Levels** [1479, 1881]. **Leveraging** [1941, 1977, 2048, 2158, 3307]. **Lexical** [1114, 2609, 3034]. **libraries** [763, 869, 872, 874, 877]. **Library** [878, 3257]. **Libre** [1364]. **LiDAR** [3203]. **LiDAR-Based** [3203]. **Life** [820, 1295, 1428, 2901, 3167, 3315]. **Life-Cycle** [1295, 1428, 3315]. **Lifecycle** [2005, 2134, 2298, 2915]. **Lifelong** [3264]. **Lifetime** [1564, 2000]. **Light** [885, 1470, 1959]. **Lighter** [2727]. **Lights** [1575]. **Lightweight** [1581, 2663, 3019, 3317]. **Like** [19, 1580, 1648, 2512]. **Limitations** [1628, 3219]. **Limited** [3090]. **limits** [1019]. **Line** [41, 67, 1076, 1227]. **Line-Drawing** [67]. **Lineage** [1237]. **Linear** [365, 504, 2105, 2773]. **Linearisability** [1574]. **Lines** [1709]. **Lingual** [2929]. **Linguistic** [717, 1278, 1479, 2486]. **Linguistics** [2043, 3325]. **Link** [1101, 1108, 1115, 1119, 1120, 1122, 1126, 1688, 2841, 3042]. **Linked** [263, 1920, 2027]. **linker** [1110]. **Linkers** [51]. **Linking** [1096, 1102, 1107, 1113, 1328]. **links** [1106, 1125, 1168]. **Linux** [1819, 1942].

Lipschitz [3213]. **Lisp** [142, 174, 175]. **List** [21]. **Literate** [3398]. **Literature** [11, 1224, 1254, 1466, 1476, 1549, 1610, 1675, 1724, 1731, 1767, 1782, 1785, 1831, 1907, 1949, 1955, 2034, 2036, 2049, 2064, 2065, 2074, 2113, 2141, 2240, 2282, 2297, 2327, 2358, 2360, 2363, 2397, 2448, 2457, 2551, 2583, 2601, 2617, 2629, 2644, 2682, 2697, 2704, 2731, 2738, 2756, 2803, 2845, 2847, 2856, 2880, 2893, 2894, 2900, 2913, 2945, 2983, 2985, 2986, 2991, 2995, 3021, 3029, 3036, 3044, 3082, 3084, 3092, 3096, 3116, 3126, 3127, 3131, 3139, 3148, 3164, 3183, 3310, 3316, 3324, 3332, 3337, 3338, 3383, 3391, 3395]. **Literature-based** [2049]. **Literature-dependent** [2738]. **Live** [1646, 2389, 2704, 2808, 3168]. **Load** [1827, 1913]. **Load-Balancing** [1827]. **Loaders** [51]. **Local** [235, 333, 483, 1236, 1407, 2984]. **Locality** [1748]. **Localizability** [1539]. **Localization** [1336, 1463, 1539, 1608, 1645, 1792, 1985, 1988, 2123, 2155, 2275, 2618, 2653, 3055, 3367, 3394, 3396]. **locally** [1203]. **Located** [2861]. **Location** [1318, 1811, 1941, 2191, 2410, 2812, 2864, 3231, 3275]. **Location-Based** [1811, 1941, 2191, 2410]. **Location-dependent** [1318]. **Locomotion** [2762]. **Log** [1627, 2277, 2317]. **Logger** [1067]. **Logic** [340, 445, 547, 548, 597, 602, 707, 720, 721, 738, 1023, 1024, 1194, 1255, 1308, 1360, 1558, 1775, 1939, 2105, 2203, 2255]. **Logic-Based** [1558, 1775]. **Logical** [229, 237, 246, 384, 812, 1015, 1183]. **Logics** [814, 1090, 1131, 1297]. **Long** [211, 1411, 1646, 2204, 2482, 2584]. **Long-Distance** [1646]. **Long-Period** [211]. **long-running** [1411]. **Long-term** [2482]. **Look** [90, 1377, 1615]. **Look-Ahead** [90]. **Lookup** [38, 1462]. **Loop** [1472]. **loosely** [1139]. **LoRa** [2482, 2888]. **Lose** [201, 202]. **Lossy** [3351, 3358]. **Low** [589, 1521, 2174, 2418, 2659, 2865, 3174, 3351]. **Low-Level** [589]. **Low-Power** [2174, 3351]. **Low-Rank** [1521]. **Low-rate** [3174]. **Low-resource** [2659]. **Low-shot** [2865]. **Lowering** [1240]. **LR** [68]. **LZ77** [1388].

Machine [114, 392, 469, 594, 596, 769, 991, 1198, 1338, 1604, 1671, 1678, 1707, 1751, 1874, 1889, 1895, 1903, 1948, 2003, 2018, 2082, 2109, 2121, 2122, 2134, 2151, 2159, 2175, 2185, 2193, 2218, 2232, 2237, 2246, 2282, 2283, 2295, 2298, 2302, 2316, 2321, 2326, 2348, 2357, 2363, 2422, 2438, 2472, 2473, 2481, 2484, 2496, 2501, 2535, 2544, 2564, 2574, 2579, 2587, 2590, 2596, 2613, 2614, 2635, 2659, 2677, 2686, 2736, 2747, 2765, 2770, 2817, 2849, 2853, 2867, 2903, 2908, 2918, 2921, 2967, 2976, 3009, 3016, 3033, 3035, 3064, 3110, 3126, 3166, 3191, 3194, 3202, 3283, 3285, 3288, 3327, 3346, 3382, 3389]. **Machine** [1197, 1280, 1457, 1479, 2211, 2404, 2702, 2761, 3170, 3291, 3363, 3373]. **Machine-Learning** [1751]. **Machines** [48, 529, 1156, 1468, 1566, 1668, 1916, 2056, 2684, 2707, 3085]. **Macro** [3041]. **Macroprogramming** [15, 31, 32, 2705]. **Macroscopic** [2705]. **Made** [1527, 2699]. **Magnification** [2038]. **Main** [2233, 3119]. **Maintainability** [3389]. **Maintenance** [320, 2697, 2834, 2945, 3008]. **Major** [169, 805]. **Make** [2915]. **Maker** [2668]. **Making** [420, 620, 665, 894, 1118, 1354, 2467, 2689, 3024, 3170, 3259, 3268, 3306]. **Malicious** [1579, 1860, 2964]. **Malware**

[1363, 1432, 1678, 1695, 1736, 2002, 2012, 2046, 2179, 2445, 2538, 2583, 2592, 2788, 2792, 2897, 2900, 3030, 3066, 3178, 3263]. **malware-analysis** [1363]. **Malwares** [3200]. **Management** [9, 96–100, 178, 198, 327, 431, 536, 629, 631, 870, 1007, 1060, 1063, 1105, 1160, 1162, 1163, 1171, 1217, 1221, 1222, 1250, 1261, 1281, 1370, 1403, 1450, 1469, 1498, 1515, 1536, 1587, 1597, 1598, 1689, 1696, 1709, 1740, 1786, 1820, 1832, 1875, 1925, 1932, 1978, 2008, 2021, 2053, 2098, 2102, 2140, 2144, 2147, 2226, 2409, 2434, 2487, 2571, 2574, 2672, 2721, 2722, 2790, 2808, 2820, 2830, 3012, 3206, 3328, 3375]. **Manager** [257]. **Managers** [3198]. **Managing** [464, 843, 971, 1600, 1609, 1971]. **Manifesto** [1306, 1898]. **Manifold** [3193]. **Manipulating** [3074]. **Manipulation** [510, 3169, 3394]. **manual** [1110]. **Manufacturing** [991, 2730]. **Many** [1216, 1568, 1719, 2966]. **Many-Core** [1719]. **Many-Objective** [1568]. **Map** [1068, 1488, 2724]. **Mapping** [529, 994, 1420, 1506, 1519, 1586, 1668, 1683, 1834, 1848, 1849, 1851, 1972, 2155, 2176, 2190, 2242, 2303, 2401, 2428, 2466, 2499, 2632, 2648, 2736, 2822, 2858, 2909, 2934, 2949, 2981, 3009, 3137, 3381]. **MapReduce** [1449, 1469, 1534, 2145]. **Maps** [1445, 2805]. **Market** [85, 2649, 2668, 3105]. **Marketplace** [3284]. **MASH** [1052]. **Mass** [228, 1552]. **Massive** [1191, 2223, 3098]. **massively** [1447]. **Matching** [242, 376, 652, 1187, 1396, 1658, 1868, 2223, 2988]. **Matching-based** [2988]. **Matchmaking** [3284]. **Material** [3346]. **Materials** [2962]. **Mathematical** [62, 192, 832, 1421, 1699, 3132]. **Mathematics** [35, 531]. **Matrices** [61, 3236]. **Matrix** [1490, 2674]. **Matter** [2962]. **matters** [965]. **Maximization** [2602]. **Maximizing** [870]. **Maximum** [376]. **Maze** [1804]. **me** [2699]. **Mean** [2455]. **Mean-Variance** [2455]. **meaning** [891]. **Means** [3023]. **Measure** [2096, 2825]. **Measurement** [157, 1350, 1892, 2343, 2606]. **Measurements** [200, 1881, 3169]. **Measures** [1256, 1658, 1895, 2205, 2216, 2523, 3313]. **Measuring** [1638, 1851, 1921, 2031, 2350, 2713]. **MEC** [2373]. **MEC-enabled** [2373]. **Mechanics** [2733]. **Mechanism** [2323]. **Mechanisms** [71, 315, 1178, 1263, 1419, 1437, 1468, 1587, 1592, 1952, 2191, 2248, 2273, 2304, 2334, 2467, 2566, 2699, 2731]. **Media** [1035, 1222, 1533, 1552, 1661, 1762, 1825, 2011, 2120, 2182, 2256, 2504, 2651, 2866, 3241]. **Mediation** [577]. **Medical** [494, 2254, 2328, 2333, 2390, 2526, 2561, 2738, 2837, 2868, 2917, 3007, 3023, 3058, 3150, 3219]. **Medicine** [2122]. **medium** [1390]. **Meeting** [1057, 1314, 2312]. **Meets** [1408, 2218, 2259, 3071, 3174, 3197, 3367]. **melding** [1378]. **Membership** [2422, 2844, 3160]. **Membrane** [2142, 2209]. **Memoriam** [646, 1236, 2075, 2166]. **Memories** [297, 317, 1241, 1401, 1474, 1666]. **Memory** [27, 530, 586, 658, 696, 700, 987, 1191, 1412, 1486, 1604, 1683, 2233, 2339, 2448, 2780]. **MEMS** [1640]. **Men** [2301]. **Menagerie** [1477, 1737]. **Mental** [2182, 2741]. **Menu** [1679]. **Mesh** [1398, 1452, 1529, 2312, 2888, 3082]. **meshes** [1202]. **message** [1206]. **message-passing** [1206]. **Messages** [1552, 2474]. **Messaging** [3310]. **Meta** [1290, 1335, 1528, 1584, 1804, 2852, 3046, 3052]. **Meta-Analysis** [1528, 2852]. **Meta-learning** [1290, 3046]. **Meta-Study** [1335, 3052]. **Meta-Survey** [1584, 1804]. **Metadata** [1313, 1875].

Metaheuristic [2480, 2821]. **Metaheuristics** [1220, 1710, 2316, 2601]. **metalevel** [915]. **Metamorphic** [1797]. **Metaphor** [2076]. **Metaprogramming** [2037]. **metasearch** [1199]. **Metaverse** [1417, 2851, 2967, 2997, 3032, 3330]. **Metaverses** [2922]. **Method** [820, 1039, 1788, 2091, 2504]. **Methodological** [2573]. **Methodologies** [391, 1275, 1300, 1596, 1630, 2449, 2461, 2985, 3157, 3349]. **Methodology** [64, 384, 574, 2049, 2073, 2452, 2458, 2523, 2685, 2848, 3142]. **Methods** [81, 119, 136, 158, 245, 319, 354, 448, 534, 614, 620, 625, 742, 1446, 1504, 1530, 1622, 1648, 1658, 1660, 1675, 1692, 1703, 1716, 1730, 1757, 1790, 1817, 1827, 1841, 1855, 1862, 1865, 1870, 1876, 1886, 1914, 1926, 1927, 1962, 1999, 2018, 2039, 2041, 2107, 2121, 2127, 2146, 2163, 2217, 2232, 2236, 2272, 2274, 2295, 2298, 2320, 2400, 2477, 2486, 2499, 2625, 2633, 2695, 2700, 2769, 2823, 2837, 2857, 2877, 2893, 2916, 2923, 2978, 3024, 3026, 3039, 3067, 3072, 3073, 3105, 3108, 3113, 3117, 3119, 3150, 3178, 3183, 3219, 3236, 3237, 3245, 3304, 3320, 3324, 3333, 3355, 3372, 3391]. **Methods** [672, 749, 882, 885–887, 890, 947, 968, 1004, 1006, 1042, 1050, 1082, 1085, 1100, 1202, 1219, 1269, 1270, 1303, 1316, 1323, 2161, 2644, 2692, 2955, 3027, 3070, 3197, 3257, 3348]. **Metric** [1192, 2558]. **Metrics** [613, 739, 1209, 1218, 1681, 1749, 1807, 1850, 1963, 2039, 2456, 2584, 2646, 2860, 2983, 3161]. **Micro** [2489]. **microarchitects** [1315]. **Microarchitectural** [2309, 2572]. **Microarchitecture** [799, 803, 1753]. **Microarchitectures** [2930]. **Microblogging** [1984]. **Microblogs** [2507]. **Microcode** [235]. **Microdata** [2732]. **Microeconomics** [85]. **Microfluidic** [2284]. **Microprocessor** [801, 1243]. **Microprocessors** [1370, 1564]. **Microprogram** [180]. **Microprogramming** [11, 16, 33, 234, 236]. **Microscopic** [1499]. **MicroService** [3396]. **Microservices** [2744]. **Microservices-based** [2744]. **Microstate** [3381]. **Middleboxes** [3251]. **middleware** [1064, 1484]. **Migration** [1181, 1468, 1646, 2014, 2808, 3168]. **Military** [2697, 2895]. **millennium** [957]. **Mind** [1088, 2068]. **Mini** [42]. **Mini-Languages** [42]. **Minimizing** [228]. **Mining** [872, 1249, 1252, 1256, 1324, 1327, 1395, 1402, 1541, 1570, 1605, 1661, 1720, 1736, 1751, 1780, 1876, 2011, 2028, 2327, 2366, 2376, 2463, 2531, 2762, 3230, 3274]. **MIR** [1838]. **MIS** [56]. **misalignment** [853]. **Misbehaviour** [2755]. **Misinformation** [3044, 3147]. **Missing** [2563]. **Mission** [966]. **Mission-critical** [966]. **Misuse** [2590, 2592, 3374]. **Mitigating** [1368, 1564, 2517]. **Mitigation** [1522, 2384, 2474, 2749, 3055, 3089, 3175, 3351]. **Mitigations** [2241]. **MITRE** [1067, 1068, 3083]. **Mix** [3060, 3108]. **Mix-based** [3108]. **Mix-Zones** [3060]. **Mixed** [1777, 2034, 2101, 2546]. **ML** [936, 981, 3319]. **ML-Enabled** [3319]. **MLLM** [3261]. **MLOps** [2836, 3191]. **mmWave** [3296]. **Mobile** [817, 973, 989, 1049, 1153, 1205, 1231, 1261, 1381, 1386, 1465, 1497, 1499, 1505, 1510, 1532, 1562, 1563, 1593, 1594, 1612, 1621, 1689, 1692, 1760, 1788, 1806, 1808, 1839, 1900, 1901, 1904, 1935, 2045, 2064, 2072, 2077, 2090, 2136, 2155, 2173, 2352, 2371, 2385, 2401, 2411, 2588, 2619, 2643, 2693, 2721, 2765, 2785, 2786, 2812, 2897, 2953, 2998, 3060, 3115]. **Mobile-Based** [1808].

Mobility [237, 1499, 1539, 1593, 2014, 2144, 2236, 2437, 2845, 2885, 3347]. **Mobility-Induced** [2014]. **Modal** [1022, 1067, 2473, 3025, 3147]. **Modalities** [733, 2735, 3314]. **Modality** [1963, 2832, 3148]. **Mode** [1827]. **Model** [71, 84, 126, 159, 378, 384, 520, 622, 631, 884, 912, 970, 1255, 1305, 1436, 1494, 1514, 1573, 1712, 1968, 1979, 2301, 2408, 2502, 2706, 2768, 2794, 2909, 2955, 3015, 3187]. **Model-** [2706]. **Model-Based** [378, 520, 1573, 2909, 2955]. **Model-Driven** [1494, 3187]. **modelchecking** [889]. **Modeling** [161, 396, 406, 449, 471, 681, 1143, 1190, 1211, 1312, 1325, 1349, 1351, 1385, 1425, 1501, 1521, 1523, 1558, 1583, 1593, 1594, 1651, 1660, 1697, 1767, 1785, 1815, 1939, 1954, 1999, 2015, 2051, 2058, 2069, 2077, 2110, 2114, 2152, 2303, 2332, 2402, 2423, 2461, 2740, 2860, 2953, 3026, 3075, 3081, 3109, 3244]. **Modelings** [2231]. **Modelling** [1823, 2349, 2705, 2764, 2879, 3161]. **Models** [8, 155–158, 200, 261, 269, 289, 310, 311, 387, 403, 414, 423, 529, 603, 716, 719, 739, 817, 1005, 1499, 1507, 1566, 1582, 1601, 1692, 1729, 1732, 1743, 1747, 1757, 1886, 1894, 1919, 1972, 2032, 2107, 2114, 2132, 2142, 2144, 2146, 2152, 2179, 2236, 2286, 2312, 2385, 2391, 2533, 2550, 2560, 2584, 2586, 2605, 2649, 2666, 2689, 2747, 2767, 2771, 2782, 2807, 2816, 2827, 2845, 2857, 2867, 2889, 2890, 2897, 2927, 2941, 2982, 2996, 3034, 3091, 3112, 3117, 3118, 3128, 3130, 3154, 3172, 3180–3182, 3223, 3226, 3259, 3273, 3287, 3299, 3303, 3312, 3313, 3324, 3333, 3349]. **Models** [669, 711, 877, 994, 1007, 1043, 1144, 1183, 1269, 1273, 1279, 1433, 2214, 3158, 3258, 3264, 3280, 3348]. **Models-based** [3182]. **Moderately** [1527]. **Modern** [1713, 1763, 1862, 2012, 2384, 2839, 2956]. **Modular** [1024, 2994]. **module** [1174]. **Modules** [617]. **Moment** [2618]. **Moments** [1991, 2431]. **Monitor** [4, 569]. **Monitoring** [40, 1565, 1835, 2973, 3095, 3347, 3365]. **Monitors** [2748]. **Monocular** [2510, 2511, 3067]. **Morphology** [3256]. **most** [1396]. **Motifs** [2215]. **Motion** [509, 1211, 1830, 2038, 2643, 2719]. **Motivations** [1817, 2699, 3164]. **Motor** [2573]. **mounted** [2307]. **Mouse** [2906]. **Movement** [179, 228, 2556]. **Moving** [854, 1685]. **MPEG** [1222]. **MPEG-7** [1222]. **MR** [1890, 2428]. **Mulsemedia** [1884, 1982, 2337]. **Multi** [898, 1067, 1424, 1475, 1719, 1779, 1807, 1925, 1953, 1961, 1979, 1980, 2061, 2080, 2081, 2121, 2123, 2131, 2361, 2473, 2506, 2529, 2532, 2757, 2801, 2856, 2888, 2894, 2905, 2939, 3025, 3047, 3059, 3087, 3139, 3143, 3147, 3158, 3194, 3233, 3360, 3364]. **Multi-** [1719]. **Multi-/** [1719]. **Multi-access** [2529]. **Multi-Agent** [1779, 3194]. **Multi-Agents** [3143]. **Multi-Class** [3087]. **Multi-Core** [1980, 2131]. **multi-crypto-processor** [1424]. **Multi-document** [2532, 2757]. **Multi-Domain** [3158]. **Multi-Factor** [3364]. **Multi-Hop** [2888]. **multi-interface** [898]. **Multi-Label** [2080]. **Multi-Modal** [1067, 2473, 3025, 3147]. **Multi-model** [1979]. **Multi-Object** [2121]. **Multi-Objective** [1475, 2081, 2361, 2506, 3360]. **Multi-prediction** [2905]. **Multi-resident** [2123]. **Multi-Robot** [1807, 1953, 3139]. **Multi-scale** [3059]. **Multi-Task** [3047]. **Multi-Tasking** [2801]. **Multi-Tenant** [1925, 2061]. **Multi-View** [2939, 3233]. **Multi-Vocal** [1961, 2856, 2894]. **Multiagent** [601, 1582]. **multicast** [1053, 1235]. **Multicomputer** [1014]. **Multicomputers** [529]. **Multicore** [1387, 1600, 1722, 1756]. **Multidatabase**

[573]. **Multidimensional** [1006, 1840]. **Multidisciplinary** [432]. **Multihop** [1538]. **Multilabel** [1537]. **Multilevel** [2091]. **Multilingual** [2151, 3303]. **Multimedia** [615–617, 619, 620, 624, 627–630, 632–635, 638–642, 688, 1157, 1193, 1382, 1476, 1611, 1655, 1690, 1704, 1803, 1884, 1978, 2158, 2199, 2337, 2785]. **Multimodal** [898, 1054, 1291, 1528, 1881, 2580, 2700, 2968, 2979, 3016, 3097, 3237]. **Multimodality** [2403]. **Multiobjective** [1176, 1546, 1950, 2272]. **Multioccupant** [1589]. **Multiparty** [1289]. **multiplayer** [1447]. **Multiple** [334, 466, 1336, 1571, 2061, 2203, 2382, 2643]. **Multiple-Access** [334]. **Multiple-valued** [2203]. **Multiplex** [2235]. **Multiplication** [2674]. **multipoint** [1052]. **multipoints** [1039]. **Multiprocessing** [59, 143]. **Multiprocessor** [116, 227, 539, 701, 1356]. **Multiprocessors** [530, 1092]. **Multiprogramming** [82, 94, 813]. **Multiscalar** [800]. **Multiscale** [589]. **Multisensorial** [1762, 1884]. **Multithreading** [1213, 1951]. **Multitier** [2133]. **Multivariate** [2676]. **Multivocal** [2113, 2190, 2983, 3164]. **Muscle** [2973, 3382]. **Music** [356, 359–362, 1309, 1351, 1511, 1764, 1838, 2129, 2330, 2759, 3039, 3245]. **MVS** [159]. **My** [2919]. **Myoelectric** [3382]. **Mystery** [2156]. **Myth** [626]. **myths** [883].

Named [2207, 2248, 2569, 2779]. **Naming** [1968]. **Nano** [1774, 3179]. **Nano-Crossbar** [1774]. **Narrative** [2723, 2743]. **NAT** [2728]. **NAT-centric** [2728]. **Natural** [593, 627, 1258, 1637, 1690, 2242, 2257, 2533, 2586, 2603, 2625, 2678, 2764, 2782, 2840, 2984, 2993, 3047, 3056, 3173, 3210, 3220, 3245, 3261]. **Natural-Language** [627]. **Naturalistic** [773, 1765]. **Naturalness** [1874]. **Nature** [555, 568, 2209]. **Nature-Inspired** [2209]. **Navigating** [1164, 3293]. **Navigation** [1068, 1985, 2064, 2998, 3305]. **navigational** [1106]. **Near** [893, 1427, 2953]. **Near-duplicate** [1427]. **Near-infrared** [2953]. **near-real-time** [893]. **Nearest** [2315]. **Need** [939, 1743, 2337, 2824]. **needed** [1125, 2966]. **Needs** [571, 585, 923]. **Negation** [2902]. **Negative** [1564, 1956]. **Neighbour** [2315]. **Neonatal** [3383]. **Net** [146, 147]. **Nets** [127, 1902, 2660]. **Network** [126, 155–159, 161, 272, 315, 349, 653, 808, 870, 971, 1074, 1248, 1263, 1328, 1408, 1422, 1429, 1495, 1510, 1535, 1578, 1661, 1698, 1748, 1784, 1809, 1811, 1817, 1845, 1895, 1941, 1964, 1968, 2045, 2087, 2139, 2156, 2171, 2174, 2215, 2288, 2310, 2353, 2356, 2357, 2369, 2430, 2444, 2458, 2468, 2513, 2526, 2543, 2552, 2651, 2666, 2809, 2869, 2895, 2934, 2943, 2944, 2955, 2965, 3022, 3105, 3115, 3146, 3184, 3196, 3222, 3228, 3232, 3251, 3254, 3262, 3313]. **network-attached** [971]. **Network-Based** [349, 1263, 2356, 2444, 3105]. **Network-on-Chip** [1248, 1784, 2288]. **Networked** [633, 634]. **Networking** [698, 975, 976, 1499, 1512, 1549, 1593, 1852, 1952, 2148, 2200, 2294, 2353, 2482, 2501, 2569, 2610, 3101, 3341]. **Networking-based** [1952]. **Networks** [87, 162, 210, 367, 458, 483, 531, 1505, 1507, 1509, 1512, 1538, 1551, 1563, 1579, 1606, 1613, 1630, 1631, 1646, 1659, 1677, 1688, 1692, 1723, 1726, 1812, 1820, 1827, 1828, 1847, 1934, 1946, 1958, 1984, 2013, 2023, 2058, 2106, 2126, 2144, 2177, 2187, 2208, 2222, 2235, 2236, 2245, 2248, 2250, 2278, 2308, 2319, 2343, 2344, 2365, 2378, 2381, 2400, 2410, 2460, 2467, 2492, 2503, 2524, 2528, 2591, 2623, 2629, 2636, 2663, 2667, 2673, 2706, 2731, 2775, 2787, 2838, 2878, 2893, 2899, 2959, 3017, 3018, 3043, 3060, 3111, 3148, 3168, 3175, 3190, 3201, 3211, 3272, 3275, 3307, 3315, 3328, 3335, 3393]. **Networks** [161, 333, 661, 753, 1205, 1242, 1261, 1269, 1326, 1334, 1340, 1353, 1380, 1390, 1392, 1421, 1426, 1430, 1446, 1452, 1489, 1497, 1614, 1650, 1663, 1670, 1707, 1758, 1775, 1849, 2086, 2091, 2221, 2224, 2346, 2392, 2527, 2693, 2758, 2843, 2888, 2896, 3000, 3054, 3070, 3145, 3174, 3213, 3231, 3351, 3369, 3384]. **Networks-on-Chip** [1421, 1446, 1614]. **Neumann** [34, 3397]. **Neural** [661, 1849, 1964, 2106, 2151, 2179, 2221, 2232, 2263, 2278, 2346, 2356, 2370, 2378, 2392, 2400, 2444, 2508, 2513, 2527, 2528, 2585, 2636, 2659, 2663, 2666, 2673, 2695, 2758, 2787, 2869, 2878, 2893, 2943, 3000, 3017, 3022, 3070, 3105, 3111, 3146, 3154, 3190, 3201, 3211, 3213, 3307, 3313, 3315]. **Neurodegenerative** [2762]. **Neurodevelopmental** [2639]. **Neuroimage** [2832]. **Neuroimaging** [2473]. **Neuromorphic** [2673, 2998]. **Neuroprosthetics** [2947]. **News** [2161, 2570, 2723, 3148, 3239]. **Next** [834, 878, 879, 911, 913, 957, 1898, 2775, 2872]. **Next-generation** [911, 2775, 2872]. **Nexus** [2246, 3293]. **NFV** [1907, 2087, 2125]. **NFV/SDN** [1907]. **NGN** [1361]. **NISQ** [2822]. **NIST** [3317]. **NLG** [2456]. **NLOS** [3055]. **NLP** [2585, 2627]. **Node** [1509, 2177, 2468, 2955]. **Node-Capture** [1509]. **Nodes** [1946]. **Noise** [2329]. **Non** [191, 1182, 1639, 1752, 2401, 2470, 2655, 2695, 2917, 2973, 3018, 3238]. **Non-Deterministic** [191]. **Non-Functional** [2401, 3238]. **Non-GPS** [1752]. **Non-imaging** [2917]. **Non-invasive** [2973]. **Non-Neural** [2695]. **Non-Personal** [3018]. **non-physicists** [1182]. **Non-relational** [2655]. **Non-Stationary** [2470]. **Non-Transactional** [1639]. **nondeterminism** [984]. **nonlinear** [832]. **nonmajors** [861]. **nonmetric** [1355]. **Nonparametric** [1937]. **nonrepudiation** [1289]. **Nonverbal** [2861]. **Normalization** [2662]. **Northbound** [2308]. **NoSQL** [1833, 2303]. **Notations** [306, 329–331]. **Note** [1, 45, 89, 93, 506]. **Notification** [2066]. **Notion** [740]. **Novelty** [2995]. **Novice** [1240, 1516]. **Novices** [252]. **Nuclear** [2976]. **Nudges** [1739]. **Number** [211, 1271, 1672, 2299, 2515]. **Numerical** [666].

O [760, 970, 972, 973, 1816, 2798, 3327]. **O-efficient** [974]. **Obfuscation** [1624, 3051]. **obfuscations** [1442]. **Object** [355, 415, 477, 498, 520, 573, 578, 677, 706, 712, 754, 912–914, 920, 921, 924–926, 1012, 1042, 1064, 1134, 1136, 1140, 1143, 1144, 1150, 1164, 1165, 1170–1172, 1175, 1207, 1214, 1218, 1230, 1247, 1260, 1275, 1339, 1448, 1771, 1967, 2118, 2121, 2217, 2429, 2511, 2865, 3043, 3048, 3169]. **Object-based** [477, 1230]. **Object-centric** [3043]. **object-orient** [914]. **object-orientation** [1172]. **Object-Oriented** [415, 706, 712, 754, 912, 913, 920, 921, 924–926, 1012, 1042, 1134, 1136, 1140, 1144, 1150, 1164, 1165, 1171, 1175, 1207, 1218, 1339]. **Objective** [1475, 1568, 2081, 2361, 2506, 3360]. **Objectives**

[87, 871, 1811, 2523]. **Objects** [580, 737, 916, 1160, 1164, 1519]. **Oblivious** [2398]. **obstacles** [1450]. **obtaining** [1180]. **Occlusion** [1818]. **Oceans** [2200]. **OCR** [2311]. **ODEs** [353]. **Off** [3211, 3384]. **Off-chain** [3384]. **Offensive** [1787]. **Office** [220, 383]. **Offline** [1406, 3102]. **Offloading** [1926, 1935, 2132, 2769, 2770]. **offs** [2094]. **Olfaction** [1611, 1762]. **Olfaction-Based** [1762]. **Olfaction-Enhanced** [1611]. **Olfactory** [3028]. **Omission** [1831]. **On-Chip** [1908]. **On-Device** [3299]. **On-line** [41, 1076]. **on-road** [1440]. **On-the-fly** [884]. **One** [228, 790, 1328, 2343]. **One-Dimensional** [228]. **One-Way** [2343]. **Ongoing** [818, 2568]. **Online** [692, 1003, 1295, 1298, 1316, 1396, 1447, 1473, 1570, 1630, 1659, 1680, 1714, 1728, 1739, 1796, 1809, 1984, 2109, 2251, 2467, 2493, 2591, 2742, 2824, 3221, 3241, 3369]. **onto** [1668]. **Ontologies** [1480, 1994, 2155]. **Ontology** [1270, 1377, 1868, 2611]. **OOP** [923]. **Open** [241, 777, 812, 848, 1030, 1112, 1155–1157, 1314, 1364, 1514, 1550, 1684, 1809, 1853, 1893, 2020, 2088, 2333, 2518, 2535, 2569, 2635, 2677, 2793, 2883, 2902, 3016, 3119, 3154]. **Open-Ethical** [3154]. **Open-Source** [1364, 3154]. **Open-world** [2635, 2902]. **OpenFlow** [2616]. **Operating** [109, 111, 371, 693, 699, 1208, 2244]. **Operation** [141]. **Operational** [156, 185, 186, 731, 735, 1085, 1189, 2645]. **Operations** [3008, 3113, 3137, 3295, 3337]. **Operators** [1691]. **Opinion** [1720]. **Opportunistic** [1410, 1507]. **Opportunities** [1770, 1797, 1998, 2023, 2041, 2161, 2198, 2205, 2264, 2293, 2362, 2375, 2383, 2426, 2447, 2494, 2623, 2635, 2665, 2682, 2701, 2705, 2764, 2766, 2821, 2836, 2942, 2971, 2976, 2995, 3107, 3115, 3120, 3138, 3147, 3212, 3231, 3284, 3295, 3379]. **Optical** [611, 1784, 1908, 2129, 2307, 2752, 2787]. **Optimal** [988, 1618]. **Optimisation** [1475, 1950, 2506]. **Optimisations** [2931]. **Optimistic** [1239]. **Optimization** [339, 628, 656, 673, 1041, 1176, 1220, 1404, 1566, 1622, 1628, 1733, 1883, 1900, 2078, 2090, 2149, 2272, 2361, 2370, 2455, 2642, 2669, 2696, 2717, 2772, 2822, 2977, 3193, 3271, 3360, 3385]. **Optimizations** [1481, 1604, 1847, 3000]. **Optimized** [2492, 2675]. **Optimizing** [1024, 2987, 3206]. **Option** [3307]. **options** [327]. **Oracle** [2638]. **Orbit** [1055]. **Orbit/Virtue** [1055]. **Orchestrated** [2045]. **Orchestrating** [2019, 2134]. **Orchestration** [1721, 1961, 2404, 2459]. **Order** [1235, 1491, 2195]. **Ordered** [299, 510]. **Organisation** [72]. **Organization** [114, 116, 180, 632, 1526, 2783]. **Organizational** [327, 685, 1441]. **Organizing** [365, 1328, 1380, 1445]. **orient** [914]. **Orientation** [573, 1172]. **Oriented** [15, 31, 32, 326, 415, 706, 712, 754, 851, 912, 913, 918, 920, 921, 924–926, 1012, 1042, 1134, 1136, 1140, 1144, 1150, 1152, 1154, 1164, 1165, 1170, 1171, 1175, 1207, 1218, 1275, 1339, 1349, 1362, 1526, 1610, 1832, 1931, 2262, 2754]. **Origin** [2758, 3075]. **Origin-destination** [3075]. **Orthogonal** [1991, 2431]. **oscillator** [1462]. **OSS** [3094]. **Other** [916, 1080, 2462, 2566]. **our** [1130]. **Out-of-Band** [1643]. **Out-of-Distribution** [3281]. **outcomes** [1345]. **Outdoors** [1608]. **Outdoors-Indoors** [1608]. **Outlier** [2107, 2243]. **Outlier/Anomaly** [2243]. **Outlook** [1895, 2218, 2245, 3349, 3350]. **Output** [24, 688, 3165]. **Outsourced** [2815]. **Outsourcing** [1824, 2059]. **Over-the-air**

[2365]. **Overfitting** [596, 2400]. **Overhead** [1819]. **Overlap** [24]. **Overlapping** [1426]. **Overlay** [1326, 2126]. **Oversubscription** [1925]. **Overview** [73, 75, 80, 101, 112, 167, 207, 453, 679, 983, 984, 1152, 1220, 1276, 1286, 1346, 1457, 1738, 1934, 2049, 2080, 2117, 2139, 2142, 2180, 2264, 2368, 2374, 2486, 2492, 2511, 2594, 2609, 2711, 2971, 3047, 3051, 3062, 3152, 3171, 3191, 3246, 3306, 3378]. **Own** [1982]. **OZ** [839].

P2P [1403, 1591]. **P4** [2616]. **PAcceptor** [1166]. **Pace** [1624, 2671]. **Packages** [47]. **packer** [1442]. **Packet** [1244, 2067, 2156]. **Packing** [988, 2538]. **page** [1296]. **Pages** [2066]. **Paging** [45]. **Pain** [3093]. **Pairwise** [1618]. **Palmprint** [1359]. **Palpation** [1667]. **Pandemic** [2571, 2790]. **paper** [876]. **Papers** [3397]. **Paradigm** [557, 720, 800, 1478, 1562, 1944, 2785]. **Paradigms** [440, 476, 574, 717, 718, 722, 916, 930, 1512, 1685, 1832, 2014, 2045, 3107]. **Parallel** [92, 112, 114, 299, 345, 346, 443, 547, 548, 583, 655, 659, 674, 970, 1005, 1125, 1618, 1656, 1794, 1816, 1916, 1989, 2138, 2287, 2454, 2601, 2773, 3162]. **Parallelism** [582, 1165, 2640]. **Parallelization** [1960]. **Parallelizing** [708]. **Parameter** [1675, 2095]. **Parametric** [2336]. **Paris** [646]. **Parkinsons** [3285]. **Parsing** [68]. **Part** [294, 295, 2213, 2216, 2547, 2548, 2560, 2605, 3205, 3247, 3255]. **Partial** [728, 741, 880, 1008, 1011, 1016, 1018, 1025, 1027, 1029–1031, 1034–1036, 1038, 1818, 1865, 3102]. **Partially** [2505]. **Particle** [1628]. **Partitioned** [367, 1547]. **Partitioning** [1722, 2683]. **Pascal** [279]. **Passenger** [3297]. **passing** [1206]. **Passive** [1118, 1955]. **Password** [3198]. **Passwords** [1376, 2599]. **Past** [682, 964, 1453, 1734, 2355, 2428]. **Patches** [3094]. **Path** [784, 2156, 2623, 2664, 2927, 3072]. **Path-Planning** [2664, 3072]. **Pathology** [3356]. **Paths** [133]. **Pathways** [3252]. **Patiently** [2647]. **Pattern** [652, 1135, 1143, 1324, 1402, 1464, 1535, 1641, 2223, 2252, 2925]. **Pattern-Based** [1535]. **Pattern-matching** [652]. **Patterns** [916, 920, 926, 1100, 1111, 1149, 1173, 2171, 2798, 3263, 3274]. **Paving** [2125]. **Paxos** [1527]. **Payment** [3102, 3335]. **PCM** [2000]. **PDF** [2002]. **PDF-based** [2002]. **Pedestrian** [2320]. **Pedestrians** [1767]. **Peer** [1234, 1261, 1413, 1429, 1437, 1447, 1454, 1629, 2731]. **Peer-to-Peer** [1234, 1261, 1413, 1429, 1437, 1447, 1454, 1629, 2731]. **Peering** [3248]. **People** [1059, 1467, 1996]. **Peptide** [3226]. **Perception** [1461, 2812, 2998, 3256, 3271]. **Perceptually** [2675]. **Perfectly** [2419]. **Performance** [40, 84, 87, 155, 160, 344, 361, 483, 542, 552, 586, 671, 743, 795, 802, 958, 1004, 1056, 1079, 1173, 1180, 1193, 1205, 1212, 1309, 1421, 1559, 1652, 1711, 1816, 1919, 1959, 1963, 2008, 2057, 2104, 2110, 2173, 2186, 2253, 2272, 2561, 2684, 2817, 3185, 3244, 3273, 3300]. **Performance-Aware** [2008]. **Performance-based** [1959]. **Period** [211]. **Periodic** [2210]. **Permanent** [1614]. **Permissioned** [3050]. **Permissionless** [3050, 3244]. **Permutation** [119, 136]. **Permutations** [137, 138]. **Perplexed** [443]. **Persistence** [400, 920]. **Persistent** [2197, 2339, 2535, 3133]. **Person**

[1957, 2687]. **Personal** [506, 810, 1386, 2169, 2620, 3018, 3234]. **Personalization** [3297]. **Personalized** [1361]. **Perspective** [17, 616, 656, 797, 929, 941, 980, 1094, 1164, 1188, 1295, 1398, 1412, 1415, 1526, 1645, 1713, 1778, 1783, 1789, 1836, 1873, 1910, 1931, 2043, 2090, 2148, 2153, 2162, 2173, 2211, 2282, 2289, 2380, 2389, 2410, 2436, 2438, 2508, 2510, 2538, 2553, 2593, 2614, 2680, 2687, 2791, 2801, 2812, 2826, 2830, 2843, 2911, 2955, 3059, 3129, 3135, 3151, 3167, 3212, 3213, 3310, 3315, 3334, 3369, 3372, 3386, 3393]. **Perspectives** [153, 221, 395, 437, 648, 932, 1290, 1926, 1929, 2026, 2120, 2147, 2354, 2497, 2523, 2610, 2633, 2696, 2771, 3088, 3171, 3217, 3339, 3396]. **Persuasive** [2715]. **Perturbation** [2346]. **Pervasive** [1589]. **pervasiveness** [952]. **PET** [2949]. **PET/CT** [2949]. **Petascale** [1663]. **Petri** [127, 1902, 2660]. **Phase** [1412]. **Phase-change** [1412]. **philosophy** [1121]. **Phishing** [2360]. **Phone** [1510]. **photo** [2774]. **Photographs** [1917]. **Photorealistic** [2101]. **Physical** [642, 1389, 1487, 1668, 1869, 2293, 2416, 2645, 2657, 2725, 2737, 2909, 2954, 2963, 3124, 3187, 3242, 3293]. **Physical-Data** [642]. **physical-layer** [1389]. **Physically** [1523]. **physicists** [1182]. **Physics** [873, 1869, 2867, 3088]. **Physics-Based** [1869]. **Physics-Informed** [3088]. **Physiological** [2606, 3093]. **Picture** [12, 60]. **Pillars** [1653]. **Pilot** [1836]. **Pilot-Job** [1836]. **Pipeline** [115, 176, 2368, 3393]. **pipelined** [1433]. **Pipelining** [610]. **Pitfalls** [2321]. **PL** [20]. **PL/I** [20]. **Place** [3203]. **Placement** [482, 2117, 2283, 2744, 3342]. **Plagiarism** [2036]. **Plan** [605]. **Planar** [170]. **Planarity** [1928]. **Plane** [2269]. **Planes** [1965, 2770]. **Planning** [509, 599, 664, 768, 784, 1214, 1291, 1438, 1520, 1626, 1682, 1779, 2623, 2643, 2664, 2710, 2719, 3072, 3092, 3170, 3355]. **plans** [1453]. **Plant** [2905]. **Platform** [1901, 1945]. **Platforms** [1618, 1723, 1773, 1862, 2594, 2824, 2897, 3151, 3296, 3357]. **Play** [2176]. **Player** [436, 1785]. **Playlists** [1511]. **PLS** [2265]. **PLS-SEM** [2265]. **Point** [475, 491, 511, 512, 743, 2410, 3243]. **Point-of-Interest** [2410]. **points** [844, 1460]. **Poisoning** [2564, 2596, 2927, 3074]. **Poisson** [1334]. **policies** [874]. **Policy** [57, 88, 118, 149, 190, 226, 254, 284, 313, 338, 358, 381, 399, 418, 435, 457, 481, 500, 1914, 3116, 3173, 3301]. **Politeness** [2993]. **Politicised** [2742]. **politics** [873]. **Polling** [414]. **pollution** [1422]. **Polygon** [1398]. **Polygonization** [1545]. **polygons** [1460]. **Polymorphism** [372]. **popular** [939]. **Portability** [1744]. **Portfolio** [1473, 2455]. **Pose** [2510, 2511, 2550, 2687, 2763, 2881, 3279]. **Pose-guided** [2881]. **position** [876]. **Positioning** [1575, 1752, 1959, 2275]. **positions** [789]. **Positive** [143]. **possibilities** [1417]. **Post** [1756, 1922, 2311, 2585, 2681, 3307]. **Post-hoc** [2585]. **Post-OCR** [2311]. **Post-Quantum** [1922, 2681]. **Post-Silicon** [1756]. **Post-training** [3307]. **Postoperative** [3093]. **Postprocessing** [2478]. **Postview** [13, 30]. **Potential** [2197, 2863, 3177]. **Potentialities** [3099]. **Power** [807, 1029, 1194, 1243, 1334, 1415, 1416, 1515, 1660, 1732, 1925, 2110, 2152, 2174, 2748, 3351]. **power-law** [1334]. **Power-reduction** [1416]. **power/energy** [1415]. **Powered** [1562, 2693, 2986, 3167]. **Practical** [133, 782, 1824, 2205, 2244, 2392, 2447, 2704, 2727, 2869, 3121]. **practicality**

[1422]. **Practice** [212, 713, 768, 791, 816, 854, 890, 968, 1303, 1742, 2557, 2574]. **Practices** [75, 1248, 1567, 1831, 2607, 2743, 2903, 2925, 2985, 3084, 3164, 3282]. **Practitioner** [2197]. **Pragmatic** [808, 875, 1584, 2321]. **PRAM** [543]. **Pre** [2625, 2782, 2807, 2816, 2982, 3230]. **Pre-Analysis** [3230]. **Pre-train** [2625]. **Pre-Trained** [2782, 2807, 2816, 2982]. **Precision** [1625, 1711, 2085]. **Predecessor** [2157]. **Predict** [2625]. **Predictability** [950]. **Predictable** [187, 188]. **Predicting** [1638, 1671, 3125]. **Prediction** [84, 1316, 1677, 1688, 2109, 2251, 2281, 2381, 2609, 2631, 2841, 2905, 3141, 3222, 3283, 3353, 3372]. **Prediction-Based** [1677]. **Predictions** [2214, 2919]. **Predictive** [1651, 1732, 2147, 2697, 3109]. **Predictor** [160]. **Predictors** [2913]. **PREEMPT_RT** [1942]. **Preface** [1302]. **Preferences** [2283]. **prefetch** [1178]. **Prefetchers** [1976]. **Prefetching** [1654]. **Prelude** [217]. **Preprocessing** [2468]. **Prerequisite** [3350]. **Presence** [1791, 2350]. **Present** [682, 964, 1734, 2355]. **Presentation** [625, 1703, 1879, 2716, 3096]. **Presentation-level** [2716]. **Presentations** [642, 1704]. **Preservation** [1578, 1633, 2432, 2956, 3275]. **preserved** [3189]. **Preserving** [1320, 1647, 2191, 2318, 2462, 2732, 3071, 3184, 3208, 3218, 3326]. **Pretrained** [3303]. **Pretraining** [2633]. **Prevalence** [3359]. **prevalent** [1442]. **Prevention** [1699]. **Preview** [2, 6, 10, 14, 18, 22, 26]. **Pricing** [1453, 2032]. **Primer** [2407, 2587, 2633, 2827, 2921, 3303]. **Primitives** [680, 3335]. **Principal** [2257]. **Principles** [212, 326, 713, 2607, 2793, 3016, 3032, 3041]. **Priori}** [383]. **Priorities** [566, 856]. **Prioritisation** [3113]. **Prioritization** [2530]. **Privacy** [7, 675, 843, 1320, 1386, 1408, 1489, 1561, 1578, 1602, 1633, 1725, 1739, 1829, 1850, 1871, 1975, 1984, 1998, 2006, 2007, 2034, 2044, 2169, 2175, 2191, 2218, 2289, 2318, 2323, 2394, 2411, 2432, 2462, 2467, 2485, 2493, 2590, 2591, 2610, 2615, 2679, 2716, 2732, 2743, 2746, 2791, 2812, 2828, 2853, 2904, 2934, 2935, 2951, 2956, 3012, 3018, 3050, 3060, 3062, 3071, 3116, 3117, 3153, 3184, 3189, 3192, 3214, 3218, 3223, 3229, 3231, 3246, 3275, 3301, 3326, 3330, 3359, 3387]. **Privacy-Enhancing** [3062]. **Privacy-preserved** [3189]. **Privacy-Preserving** [1320, 2191, 2318, 2462, 2732, 3071, 3184, 3218]. **Private** [2319, 2656, 3163, 3387]. **PRNG** [2299]. **Proactive** [1881]. **Probabilistic** [241, 539, 1043, 1491, 1766, 1938, 2266]. **probably** [1043]. **Problem** [181, 182, 187, 188, 289, 308, 309, 525, 581, 1396, 1517, 1566, 1931, 2031, 2117, 2177, 2395, 2476, 2960]. **Problem-Oriented** [1931]. **Problem-Solving** [581]. **Problems** [203, 204, 395, 459, 472, 487, 784, 802, 840, 988, 1003, 1045, 1136, 1204, 1263, 1288, 1353, 1355, 1460, 1684, 1876, 2127, 2240, 2306, 2340, 2581, 2924, 2958, 3119, 3279]. **Procedure** [157]. **Procedures** [54]. **Process** [58, 476, 695, 711, 803, 1095, 1158, 1181, 1275, 1325, 1360, 1443, 1609, 1689, 1697, 1747, 1851, 2376, 2637, 2944, 3230]. **Process-centered** [1275]. **Processes** [29, 459, 472, 591, 904]. **Processing** [12, 60, 67, 112, 195, 350, 499, 627, 825, 1035, 1185, 1232, 1237, 1250, 1283, 1318, 1372, 1449, 1462, 1481, 1488, 1552, 1580, 1612, 1690, 1694, 1699, 1759, 1776, 1826, 1853, 1857, 1877, 1947, 1960, 1978, 2067, 2076, 2095, 2102, 2242, 2311, 2424, 2441, 2533, 2625, 2633, 2758, 2782, 2949, 2984, 2993, 3047, 3197, 3210, 3220, 3245, 3302, 3307]. **Processor** [113, 125, 1424, 1654, 1676]. **Processors** [90, 92, 112, 1213, 1387, 1600, 1722, 1976, 3027]. **Product** [531, 870, 1095, 1218, 1709]. **Production** [465, 1420, 1514, 2613, 2909, 3191, 3243]. **Productivity** [3084]. **Professionals** [3127]. **Profile** [424, 3204]. **Profiling** [792, 1594, 1660, 1734]. **Profit** [2078]. **Prognosis** [2690, 2692]. **Program** [34, 49, 86, 318, 546, 731, 734, 928, 929, 931, 932, 934, 935, 938, 941, 1015, 1017, 1020, 1021, 1023, 1026, 1031, 1077, 1368, 1369, 1998, 2301, 2536, 3063, 3107, 3279, 3371]. **Programmability** [905]. **Programmable** [1352, 2269, 2770, 2962, 3174]. **Programmer** [55]. **programmers** [1240]. **Programming** [42, 62, 65, 70, 74, 75, 77, 78, 114, 142, 168, 192, 251, 252, 279, 303, 304, 306, 329, 330, 361, 400, 415, 440, 442, 444, 445, 477, 548, 656, 691, 704–707, 710, 716, 717, 721–723, 750, 754–756, 821, 826, 828, 829, 832–834, 836, 840, 867, 917, 918, 920, 921, 924, 940, 954, 956–958, 964, 989, 1012, 1132, 1194, 1207, 1225, 1240, 1258, 1259, 1339, 1340, 1351, 1435, 1462, 1640, 1742, 1765, 1798, 1915, 2133, 2339, 2351, 2359, 2365, 2669, 3151, 3398]. **Programs** [76, 107, 243, 286, 331, 387, 403, 437, 443, 450, 476, 478, 738, 1027, 1082, 1180, 1367, 1374, 1459, 1754, 2287]. **Progress** [60, 146, 147, 704, 1352, 1520, 1624, 1993, 2293, 2676, 2806, 3040, 3120]. **Progressive** [3236]. **Project** [1158, 1345, 3167]. **Projecting** [203, 204]. **Projection** [205, 1390]. **Projections** [170]. **Projects** [74]. **Promise** [2080, 3038]. **Promising** [823, 850, 3379]. **Prompt** [2625, 3326]. **Prompting** [2625]. **Proof** [3322]. **Propagation** [614, 1533, 1613, 2637]. **Properties** [53, 914, 948, 950, 1284, 1702, 2124, 2825, 3238]. **Proposal** [2340]. **proposals** [1453]. **Propositional** [1259]. **Prospects** [1018, 2183, 2487, 2806, 2929]. **Prospectus** [599]. **Prosthetic** [3382]. **Prosthetics** [2947]. **Protecting** [1624, 2599]. **Protection** [1489, 2227, 2716, 2812, 3157, 3192, 3246]. **Protein** [1322]. **Protein-to-protein** [1322]. **Protocol** [1595, 2398, 3106, 3351]. **Protocols** [272, 315, 334, 808, 985, 1206, 1390, 1509, 1602, 1726, 1844, 1909, 1981, 2022, 2096, 2144, 2174, 2187, 2396, 2433, 2668, 2708, 2896, 2938, 2959, 2966, 3186, 3225, 3364]. **Prototypes** [1959]. **prototyping** [1132]. **Provably** [940, 1503]. **Provenance** [1846, 1971, 2565, 2746, 3332]. **Provenance-based** [2565]. **prover** [1032]. **Provide** [720]. **Providers** [2078]. **Proving** [49, 107]. **Provisioning** [2018, 3376]. **Proximity** [2433]. **Proximity-based** [2433]. **Pseudo** [2515]. **Pseudonym** [3275]. **Pseudorandom** [2299]. **PSO** [1628]. **Psychological** [251]. **Psychology** [247, 252, 1456, 3085]. **pub** [1454]. **pub/sub** [1454]. **Public** [861, 1553, 3244, 3269, 3297]. **Publication** [2732]. **Publish** [1216, 1647]. **Publish/Subscribe** [1216, 1647]. **publishing** [1320]. **pubs** [1008]. **PUF** [2737]. **PUFs** [1581]. **Pure** [556, 2433]. **purpose** [795]. **Purposes** [2267]. **pursuit** [827]. **Pushing** [2536]. **Putting** [144, 145]. **Puzzles** [2124]. **Python** [2817].

QA [2627]. **QCA** [2872]. **QCA-based** [2872]. **QMDS** [2757]. **QoE** [1586].

QoS [634, 1267, 1362, 1392, 1586, 1597, 3003]. **QoS-Aware** [1597]. **quadrature** [1379]. **quadrics** [1202]. **Quadrotor** [2876]. **Quadtree** [341]. **Qualitative** [595, 1530, 1558, 1702, 3053]. **Quality** [200, 757, 888, 965–968, 1300, 1419, 1439, 1800, 1827, 1831, 1950, 2374, 2397, 2487, 2594, 2750, 2781, 2847, 3103, 3142, 3253]. **Quantification** [1769]. **Quantify** [2799]. **Quantitative** [1118, 3366]. **Quantum** [1182, 1266, 1694, 1922, 2148, 2150, 2329, 2528, 2594, 2681, 2767, 2822, 2981, 3027, 3137, 3328]. **Quantum-cognitively** [2767]. **Quantum-inspired** [3137]. **Quasi** [211]. **Quasi-Random** [211]. **Queries** [2559, 2783]. **Query** [248, 339, 350, 366, 524, 628, 673, 1185, 1283, 1318, 1358, 1759, 1763, 1857, 1877, 2441, 2757]. **Query-focused** [2757]. **Querying** [1107, 2961]. **Question** [214, 215, 2099, 2465, 2608, 2627, 2991, 3261, 3320]. **Questions** [241, 2729, 3016]. **Queueing** [126, 156–159, 161, 162, 458, 459, 472, 1502]. **Queuing** [155, 414, 531]. **Quo** [3309].

R [257]. **Rabbit** [2742]. **Race** [2445]. **Racial** [3176]. **Radiation** [1522]. **Radicalisation** [2742]. **Radiological** [2690]. **RAID** [542]. **Railways** [2499]. **Rain** [2855]. **RAM** [453]. **Random** [211, 317, 1271, 1334, 1672, 1841, 2051, 2515]. **Randomization** [537]. **Randomized** [651]. **Randomness** [2267, 3090]. **Range** [213, 520, 553]. **Rank** [1521, 2547]. **Ranking** [1596, 1822, 2547, 2548, 2955]. **Ransomware** [2304, 2384, 2425, 3089]. **Rare** [1613, 2875, 3141]. **Rate** [344, 2455, 3174]. **ratio** [1236]. **Rationality** [2955]. **Raven** [3236]. **Ray** [1753]. **RDF** [1877]. **Re** [1066, 1125, 1957, 2192, 3089, 3224]. **Re-configurable** [1066]. **Re-examining** [3089]. **Re-Hosting** [2192]. **Re-identification** [1957, 3224]. **re-use** [1125]. **Reaching** [2886]. **Reaction** [1541]. **Reactive** [666, 1435, 2710]. **Readiness** [3290]. **Reading** [411, 2627]. **Ready** [1820]. **Real** [110, 183, 184, 694, 758, 820, 893, 942–947, 949–953, 994, 1131, 1284, 1297, 1356, 1483, 1484, 1587, 1640, 1719, 1753, 1942, 1959, 1980, 2056, 2101, 2210, 2300, 2461, 2553, 2613, 2729, 2811, 2970, 3221, 3254]. **real-life** [820]. **Real-Time** [110, 694, 758, 942–947, 949–953, 1131, 1297, 1356, 1483, 1484, 1587, 1640, 1719, 1753, 1942, 1980, 2101, 2210, 2461, 2729, 2811, 2970, 3221]. **Real-world** [994, 1959, 2553, 2613]. **Realism** [2545]. **Reality** [1086, 2034, 2101, 2307, 2352, 2371, 2483, 2546, 2619, 2644, 2835, 2866, 2922, 2989, 3002, 3028, 3036]. **Realization** [1258]. **Realizing** [1584]. **Rearrangement** [2958]. **Reasoning** [528, 595, 607, 609, 781, 1186, 1558, 1775, 2833, 3056, 3236, 3277, 3349]. **Reasons** [3021]. **rebirth** [1344]. **Recall** [2902]. **Recognition** [355, 378, 498, 520, 643, 1224, 1359, 1406, 1410, 1464, 1471, 1480, 1513, 1560, 1589, 1644, 1662, 1703, 1728, 1766, 1861, 1864, 1879, 1882, 1931, 1987, 2010, 2089, 2116, 2118, 2129, 2207, 2229, 2252, 2264, 2271, 2342, 2364, 2399, 2464, 2509, 2634, 2653, 2688, 2702, 2716, 2779, 2806, 2864, 2975, 3040, 3057, 3062, 3080, 3149, 3176, 3177, 3203, 3218, 3276, 3286, 3340, 3383]. **Recoloring** [1996]. **Recommendation** [1920, 2873, 3004, 3111, 3321]. **Recommendations**

[581, 2267, 2525, 2771, 2912, 3084]. **Recommended** [2888]. **Recommender** [1731, 1811, 1859, 1929, 2158, 2222, 2291, 2292, 2341, 2410, 2523, 2527, 2547, 2575, 2600, 2839, 2882, 2901, 2992, 3017, 3020, 3074, 3097]. **Recommenders** [3189]. **Reconfigurable** [1201, 1319, 1774, 2042]. **Reconfiguration** [1865, 2754]. **Reconnaissance** [2542]. **Reconstruction** [1214, 2829]. **Record** [133, 229, 246, 1245]. **recorder** [1057]. **Records** [307, 1780, 2463, 2899, 2956]. **Recourse** [2525]. **Recourses** [3064]. **recovering** [281, 282, 1202]. **Recovery** [128–130, 152, 255, 257, 326, 1206, 1352, 1411, 1646, 2233, 2963]. **recruitment** [3004]. **Rectangles** [428]. **Recurrence** [1671]. **Recurrences** [244]. **Recurrent** [181, 182, 2278]. **Recurring** [258, 259]. **Recursive** [243]. **recursively** [1288]. **Red** [640]. **Redefining** [2971]. **Reduce** [3023]. **Reduced** [2085]. **Reducing** [1794]. **Reduction** [504, 505, 1219, 1243, 1416, 1677, 2274, 2986]. **Reductions** [3204]. **Redundancy** [2642, 3027]. **reengineering** [961]. **Reference** [1773, 2864]. **Referents** [2880]. **Refinement** [387, 1634, 2924]. **Refinements** [403]. **Refining** [2908]. **Reflective** [915, 3134]. **Reformable** [2712]. **Region** [1857, 1955]. **Region-Based** [1955]. **Register** [1986]. **Registration** [515, 1530]. **Regression** [1393, 1506, 1724, 1880, 2704, 2969, 3361]. **Regularization** [2400, 2662]. **Regulating** [3196]. **Regulation** [2324]. **Regulatory** [2353]. **reidentification** [1467]. **Reinforcement** [1729, 1930, 2296, 2314, 2435, 2522, 2575, 2769, 2804, 2877, 2904, 2920, 2971, 3162, 3194, 3318, 3366]. **Reject** [3307]. **Related** [222–224, 341, 979, 1500, 1502, 1791, 1909, 1918, 1977, 2014, 2240, 2555, 2623]. **relating** [805]. **Relation** [1491, 1899, 2207, 2331, 2688, 2910, 3045, 3350]. **Relational** [97, 100, 197, 384, 495, 499, 1283, 2648, 2655]. **Relationship** [384, 726, 1135, 2504]. **Relationships** [1906]. **Relative** [2195]. **Relaxed** [3387]. **Relay** [2189]. **Relay-based** [2189]. **Release** [2656]. **relevant** [1043]. **Reliability** [106, 151, 427, 454, 489, 490, 1523, 1564, 1698, 1726, 2073, 2147, 2317, 2893, 3027, 3129, 3138]. **Reliable** [111, 542, 1155, 2018]. **Reloaded** [3089]. **Remarks** [211]. **Remote** [940, 1254, 1542, 1550, 2546, 2597, 2849, 3344]. **Removal** [2855]. **Renamings** [2093]. **Rendering** [682, 1542]. **rendezvous** [1308]. **Renegotiation** [1536]. **Renewable** [2753]. **Reorganization** [212, 1298]. **Repackaging** [847]. **Repair** [1666, 1810, 3107, 3279]. **repairing** [1398]. **Repeat** [2728]. **Repetitive** [2213, 2216]. **Repetitiveness** [2216]. **replacement** [1223]. **Replay** [1572]. **Replicated** [3122]. **Replication** [1233, 1239, 2211]. **Reply** [145, 147, 164]. **Report** [62, 227, 2390, 2473]. **Reporting** [1687]. **Represent** [2204]. **Representation** [270, 589, 591, 961, 1081, 2035, 2286, 2431, 2453, 2468, 2475, 2486, 2776, 2911, 3015, 3030, 3114]. **Representational** [3313]. **Representations** [179, 245, 428, 774, 1056, 1230, 1409, 1457, 1933, 2287, 2735, 2759, 3288]. **Representing** [590]. **Reproducibility** [1856]. **Reputation** [1307, 1582, 1590, 1743, 1894, 2462]. **Requirement** [1943]. **Requirements** [134, 895, 931, 957, 992, 1217, 1773, 2242, 2280, 2401, 2415, 2503, 2569, 2620, 2652, 3003, 3173, 3270]. **reranking** [1476]. **Research**

[70, 221, 359, 406, 566, 575, 576, 624, 635, 639, 745, 748, 804, 805, 819, 841, 862, 882, 896, 942, 958, 1078, 1208, 1248, 1375, 1510, 1532, 1573, 1586, 1611, 1684, 1713, 1748, 1754, 1777, 1795, 1801, 1809, 1816, 1873, 1898, 1901, 2019, 2074, 2188, 2255, 2265, 2275, 2324, 2333, 2352, 2375, 2384, 2391, 2413, 2427, 2457, 2503, 2520, 2573, 2612, 2658, 2665, 2676, 2681, 2704, 2729, 2738, 2809, 2824, 2831, 2863, 2866, 2907, 2923, 2948, 2974, 2985, 3003, 3008, 3012, 3040, 3055, 3085, 3089, 3123, 3137, 3152, 3157, 3169, 3177, 3179, 3209, 3246, 3254, 3295, 3316, 3372]. **research** [744, 746, 750, 790, 793, 811, 844, 846, 850, 892, 909, 921, 933, 953, 975, 976, 979, 992, 1094, 1345, 1427, 1428, 2574]. **Researchers** [604, 2549]. **Reservations** [633]. **resident** [2123]. **Residential** [1622]. **Resilience** [1745, 2111, 2334, 2948, 2954, 3054]. **Resilient** [1509, 2976]. **Resolution** [1825, 2083, 2112, 2180, 2443, 2724, 2933, 3001, 3352]. **Resolve** [230]. **Resource** [192, 633, 728, 781, 870, 1109, 1437, 1438, 1548, 1597, 1719, 1721, 1900, 2018, 2021, 2102, 2409, 2420, 2434, 2659, 2660, 2672, 2706, 2721, 2830, 3019, 3180, 3248, 3292, 3306, 3376]. **Resource-bounded** [728, 781]. **Resource-Constrained** [3019]. **Resource-Efficient** [2706, 3180]. **Resourceful** [454, 489, 490]. **Resources** [193, 906, 1387, 1932, 2008, 2108, 2627, 2937]. **Response** [328, 344, 568, 1391, 1463, 1883, 2251]. **Responsible** [2925, 3041, 3189]. **Results** [1030, 1109, 1396, 2760]. **Retargetable** [301, 321–324]. **Retrieval** [626, 676, 1043, 1105, 1177, 1226, 1237, 1277, 1358, 1384, 1427, 1478, 1485, 1500, 1634, 1746, 1838, 1871, 1939, 2020, 2132, 2150, 2333, 2892, 2937, 2950, 3132, 3207, 3245, 3367]. **Retrieval-based** [3367]. **Retrospective** [3152]. **reusable** [926, 955]. **Reuse** [503, 739, 1140, 2795]. **Reverse** [1595]. **Reversible** [1404, 2932]. **Review** [140, 520, 1528, 1530, 1598, 1606, 1607, 1671, 1675, 1797, 1815, 1862, 1864, 1884, 1907, 1948, 2017, 2036, 2052, 2104, 2113, 2169, 2173, 2240, 2243, 2252, 2262, 2297, 2331, 2360, 2363, 2366, 2395, 2442, 2448, 2460, 2467, 2493, 2590, 2601, 2622, 2629, 2676, 2682, 2697, 2702, 2733, 2755, 2803, 2825, 2839, 2862, 2863, 2893, 2894, 2900, 2910, 2913, 2949, 2952, 2962, 2983, 2991, 2995, 3012, 3015, 3039, 3081, 3088, 3091, 3092, 3124, 3127, 3132, 3139, 3144, 3183, 3188, 3196, 3207, 3227, 3234, 3253, 3259, 3275, 3284, 3298, 3323, 3332, 3337, 3338, 3364, 3365, 3382, 3391, 3395]. **Review** [353, 1549, 1562, 1626, 1705, 1724, 1731, 1744, 1767, 1769, 1785, 1808, 1831, 1838, 1890, 1891, 1896, 1961, 1991, 2003, 2062, 2102, 2140, 2225, 2247, 2249, 2255, 2276, 2282, 2322, 2327, 2340, 2358, 2384, 2416, 2420, 2421, 2444, 2457, 2469, 2509, 2545, 2556, 2570, 2583, 2588, 2636, 2645, 2677, 2679, 2704, 2731, 2743, 2750, 2751, 2753, 2756, 2786, 2814, 2840, 2845, 2847, 2849, 2860, 2866, 2877, 2920, 2945, 2953, 2998, 3009, 3021, 3024, 3029, 3044, 3058, 3082, 3093, 3095, 3105, 3116, 3126, 3136, 3148, 3161, 3164, 3175, 3224, 3226, 3232, 3285, 3305, 3310, 3315, 3317, 3324, 3374, 3380, 3390]. **Review** [241, 1072, 1190, 1212, 1228, 1254, 1275, 1286, 1333, 1337, 1350, 1371, 1379, 1396, 1438, 1461, 1464, 1466, 1533, 1597, 1712, 1782, 1875, 1881, 1955, 1956, 1962, 2026, 2049, 2050, 2064, 2065, 2141, 2182, 2183, 2199, 2237, 2303, 2318, 2377, 2451, 2480, 2481, 2561, 2578, 2617, 2630, 2641, 2644, 2714, 2757, 2769, 2804, 2805, 2811, 2841, 2856, 2875, 2880, 2886, 2887, 2929, 2938, 2980, 2985, 2986, 3011, 3026, 3028, 3036, 3064, 3070, 3084, 3087, 3096, 3131, 3158, 3185, 3280, 3297, 3316, 3344, 3355, 3379, 3383]. **Reviewing** [2324, 2325]. **Reviews** [2803]. **revised** [858]. **Revisited** [570, 598, 1603, 1673, 2239]. **Revisiting** [2056, 3271]. **Revolution** [640, 1128, 1129]. **revolutionary** [793]. **revolutionizing** [867]. **Rewriting** [1973, 2130]. **Rhetoric** [154, 1111]. **Rhetorical** [154]. **Rich** [1517]. **Riemannian** [3193]. **right** [1906]. **Rigid** [245, 2128]. **RISC** [2780]. **RISC-V** [2780]. **rise** [832]. **Risk** [1772, 1804, 2053, 2096, 2613, 3283, 3291]. **Road** [1440, 1955, 2172, 2829, 2869, 3347, 3386]. **Roadmap** [2086, 2417, 2836, 2927]. **Roads** [2154]. **Robot** [378, 1336, 1807, 1953, 2351, 2643, 2985, 3139, 3344]. **Robotic** [1628, 1802, 2024, 2936, 2947]. **Robotics** [663, 1690, 2719, 2801, 3293]. **Robots** [2064, 2155, 2641, 2998]. **Robust** [2466, 3263, 3270, 3316]. **Robustness** [771, 2276, 2626, 2890, 2926, 3191, 3211–3215, 3340]. **ROLAP** [1272]. **Role** [564, 606, 627, 630, 846, 852, 1026, 1141, 1143, 1605, 2280, 2322, 2526, 3143]. **roles** [1160]. **rollback** [1206]. **rollback-recovery** [1206]. **Root** [743, 2489, 3396]. **Rough'n'Ready** [1057]. **Rounds** [1981]. **Route** [3092]. **Routers** [2728]. **Routing** [1014, 1267, 1383, 1392, 1505, 1507, 1517, 1844, 2474, 2959, 3351]. **RPL** [2474]. **RSSI** [1463]. **RST** [1265]. **Rule** [2266, 2996]. **Rule-based** [2996]. **Rules** [670, 738, 1160]. **Rumors** [3254]. **Rumours** [1825]. **Run** [1022, 2748]. **Run-time** [1022, 2748]. **running** [1411]. **Runtime** [478, 1374, 2424, 3000].

Safe [1857, 2368, 3032]. **Safety** [382, 454, 489, 490, 888, 958, 1197, 2131, 2368, 2577, 2587, 2890, 2928, 3293, 3337]. **Safety-Critical** [2131, 2577, 2928]. **Sakr** [2166]. **Sampler** [103, 121–123]. **Samplers** [1940]. **Sampling** [1788, 2504]. **San** [1158]. **Sandar'sana** [3325]. **Sanskrit** [3325]. **Sarcasm** [1768]. **Satisfaction** [1146, 1638]. **Satisfiability** [1259, 2476]. **SBoxes** [3300]. **SCADA** [2092]. **Scalability** [771, 1659, 3389]. **Scalable** [1052, 1853, 1875, 2054]. **Scale** [530, 578, 624, 760, 786, 945, 969, 1391, 1449, 1482, 1505, 1580, 1767, 1794, 1822, 1868, 1893, 2023, 2027, 2361, 2482, 3059, 3128]. **Scaling** [1840, 1866, 2891]. **Scarcity** [2395, 2470]. **Scenario** [2951]. **Scenario-based** [2951]. **Scenarios** [1172, 2217, 2518, 2819]. **Scene** [1987, 2498]. **scenes** [994]. **Scheduling** [125, 628, 701, 1092, 1356, 1387, 1397, 1433, 1452, 1483, 1524, 1534, 1538, 1548, 1730, 1986, 1992, 2061, 2102, 2108, 2210, 2420, 2480, 2568, 2581, 2582, 2660, 2730, 2898]. **Schema** [391, 3029]. **Schemes** [419, 1452, 1513, 1538, 1693, 1872, 1877, 2000, 2196, 2289, 2876, 3231, 3275]. **scholarly** [1095]. **Science** [140, 171–173, 220, 438, 460, 555, 558–563, 565, 568, 648, 762, 764, 788, 790, 857, 861, 864, 866–868, 993, 1080, 1085, 1088, 1738, 2817]. **Sciences** [603, 2901]. **Scientific** [286, 777, 980, 1237, 1685, 1742, 1801, 1856, 2496, 3013, 3258, 3358]. **Scientist** [475, 491, 511, 512]. **scientists** [567, 1229, 1292, 1331]. **SConnector** [1166]. **Scope** [571, 585, 787]. **Scoping** [2556, 2835]. **Score** [2548]. **Score-Based** [2548]. **Scores** [3322]. **Screen** [2104, 2374]. **Screens** [411]. **Script** [3335]. **Script-based** [3335]. **scripting** [1066]. **Scriptless** [3335]. **Scripts** [1971]. **Scrum** [2852]. **SCTP** [1375]. **SDN** [1852, 1907, 2087, 2186, 2343, 2616, 3174].

Seamless [1608]. **Search** [71, 72, 238, 239, 299, 365, 592, 600, 767, 818, 840, 1105, 1247, 1253, 1355, 1394, 1476, 1478, 1638, 1655, 2157, 2263, 2370, 2383, 2508, 2558, 2559, 2650, 2777, 2815, 3022]. **Search-based** [1394]. **Searchable** [1503, 1735, 2871]. **Searching** [213, 553, 1192, 1193, 1750]. **Second** [983]. **Second-Generation** [983]. **Secondary** [542, 586, 697, 2463]. **Secret** [2419]. **Secret-sharing** [2419]. **Section** [207, 234]. **Secure** [210, 940, 1221, 1503, 1526, 1657, 1693, 1770, 1824, 1918, 2149, 2319, 2419, 2815, 2869, 2922, 3032, 3038, 3063, 3163, 3293, 3310, 3395]. **Secured** [3232]. **Securing** [1543, 2621]. **Security** [111, 199, 261, 262, 315, 448, 534, 546, 1508, 1553, 1556, 1557, 1602, 1633, 1652, 1669, 1678, 1680, 1681, 1708, 1711, 1725, 1739, 1760, 1829, 1862, 1873, 1887, 1893, 1936, 1945, 1961, 1963, 1968, 1998, 2015, 2034, 2068, 2077, 2097, 2119, 2124, 2137, 2169, 2175, 2198, 2262, 2288, 2295, 2313, 2373, 2434, 2450, 2451, 2485, 2535, 2553, 2555, 2557, 2610, 2622, 2679, 2703, 2728, 2739, 2743, 2746, 2749, 2756, 2809, 2848, 2863, 2883, 2887, 2903, 2904, 2935, 2967, 2970, 3012, 3094, 3113, 3115, 3124, 3138, 3153, 3175, 3179, 3196, 3223, 3240, 3242, 3250, 3252, 3292, 3295, 3300, 3332, 3364, 3374]. **Security** [675, 843, 874, 888, 1329, 1368, 1400, 1408, 1423, 1489, 1975, 1999, 2171, 2514, 2615, 2752, 2797, 2966, 3005, 3145, 3294, 3330, 3351]. **Security-Control** [448]. **Security-focused** [1862]. **See** [2307]. **See-through** [2307]. **Seeing** [590, 2038]. **Segmentation** [1890, 1997, 2428, 2952, 3181, 3309]. **segments** [1460]. **Seismic** [2653]. **Selecting** [133]. **Selection** [64, 1137, 1290, 1473, 1724, 1789, 2163, 2695, 3169]. **Self** [365, 521, 971, 1328, 1380, 1445, 1854, 1893, 2126, 2275, 2718, 2916, 3029, 3323, 3388]. **Self-Adaptive** [1854, 1893, 3323]. **Self-Assessments** [2916]. **Self-Aware** [1854]. **Self-calibration** [2275]. **Self-managing** [971]. **Self-Organizing** [365, 1328, 1380, 1445]. **Self-Stabilization** [521]. **Self-stabilizing** [2126]. **Self-Supervised** [2718, 3388]. **Self-tuning** [3029]. **SEM** [2265]. **Semantic** [406, 423, 579, 626, 806, 923, 1053, 1106, 1425, 1592, 1634, 1990, 2027, 2228, 2333, 2570, 2736, 2812, 2961, 3034, 3181, 3273]. **Semantically** [1096]. **Semantics** [710, 726, 731, 735, 937, 939, 1086, 1114, 1189, 1949, 2058]. **SEMATECH** [1169]. **Semi** [1635, 2505, 2648, 3005]. **Semi-Structured** [2648]. **Semi-Supervised** [1635, 2505, 3005]. **Semiconductor** [317]. **Sense** [602, 1294, 3268]. **Sensing** [1510, 1562, 1705, 1814, 1970, 2219, 2436, 2471, 2518, 2661, 2710, 2849, 2953, 2978, 2997, 3077, 3177]. **Sensitive** [1399, 2130, 2301, 2415, 3101]. **Sensitivity** [3090]. **Sensor** [1242, 1269, 1291, 1340, 1353, 1390, 1392, 1489, 1497, 1509, 1579, 1606, 1613, 1625, 1650, 1670, 1677, 1723, 1726, 1812, 2187, 2264, 2321, 2653, 2711, 2762, 2838, 2896, 2959, 2988, 3175, 3276]. **Sensor-Based** [2264, 2762, 3276]. **Sensor-Cloud** [2711]. **Sensors** [1471, 1539, 1835, 2010, 2411]. **Sensory** [2946]. **Sentence** [2486]. **Sentiment** [1635, 1648, 1720, 2495, 2589, 2611, 2700, 2767, 2803, 2840, 2929, 2972, 2979, 3369]. **Separable** [1122]. **Separating** [967]. **Separation** [912, 1434, 3250]. **Seq2Seq** [2827]. **Sequence** [1618, 1859, 1956]. **Sequence-Aware** [1859]. **Sequences** [211, 1485, 2204]. **Sequencing** [2022]. **Sequential** [537, 1324, 1402, 3024, 3111]. **Serendipity** [2771]. **Series** [1327, 1395, 2243, 2551, 2628, 2629, 2969, 3086, 3336, 3392]. **serve** [894]. **Server**

[641, 718, 1002, 1049, 1064, 1203, 1276, 1616, 1976, 2110, 2193]. **Server-** [1616]. **Server-Based** [2193]. **Server-centric** [1276]. **Serverless** [2407, 2409, 2426, 3136]. **Servers** [349, 635, 1173, 2152]. **Service** [848, 1143, 1157, 1439, 1444, 1506, 1526, 1536, 1553, 1588, 1598, 1827, 2014, 2117, 2273, 2375, 2489, 2658, 2722, 2795, 3282]. **Service-Based** [2489]. **Service-Oriented** [1526]. **Serviceability** [427]. **Services** [85, 469, 1064, 1101, 1361, 1380, 1450, 1633, 2174, 2191, 2227, 2372, 2812, 3342]. **Session** [1623, 1708, 2341, 2938, 3111, 3321]. **Session-based** [2341, 3111, 3321]. **sessions** [1053]. **Set** [487, 809, 2165, 2204, 3249]. **Sets** [1950]. **Setting** [3032]. **Settings** [1969]. **SGX** [2313]. **Shallow** [2963]. **Shape** [736, 1350, 1795, 3230]. **Shape-Changing** [1795]. **Shapes** [1284, 3165]. **Shared** [530, 1387, 1604, 1606, 1683]. **Shared-Memory** [530, 1604]. **Sharing** [8, 19, 37, 1053, 1250, 1772, 2196, 2370, 2419, 3054, 3248, 3266, 3292]. **Sheet** [2646]. **Shelf** [605]. **Sherif** [2166]. **Shift** [557]. **Shimon** [1236]. **Short** [3143]. **Shot** [2029, 2115, 2429, 2701, 2865, 3046, 3286]. **Shot-Type** [2029]. **Should** [475, 491, 511, 512, 860]. **show** [965]. **Shrink** [2370]. **sick** [3036]. **Side** [1616, 2309, 2646, 2657, 2930, 3353]. **Side-Channel** [2309, 2646, 2657, 2930, 3353]. **Sign** [2164, 3340]. **Sign-on** [2164]. **Signal** [591, 1612, 1729, 1947, 3197]. **Signal-to-Symbol** [591]. **Signals** [3093]. **Signature** [1910]. **Signatures** [2681]. **Signed** [1661]. **significance** [1102]. **Signs** [2606]. **SIGPLAN** [585]. **SIGs** [571]. **Silicon** [1756]. **Similarity** [1247, 1355, 1747, 2146, 2228, 2238, 2558, 3313]. **Simple** [782]. **Simplification** [2230]. **simulate** [1087]. **simulated** [1254]. **Simulating** [1088, 2666]. **Simulation** [28, 377, 459, 472, 505, 543, 547, 987, 1391, 1660, 1667, 1723, 1842, 1924, 2072, 3059]. **simulations** [666]. **Simulators** [1429, 1966, 2070, 2561]. **Simultaneous** [2155]. **Single** [2164, 2709, 2855, 3001, 3131, 3233]. **Single-Document** [3131]. **Single-Image** [3001]. **Single-view** [3233]. **Singularity** [1628]. **sites** [1335]. **Situ** [2726]. **Situation** [2507, 2537]. **Situation-awareness** [2537]. **Situational** [2645]. **Six** [804, 1653]. **Size** [1219, 2663]. **Sketch** [2774]. **Sketch-to-photo** [2774]. **Skill** [1930]. **Skimming** [2030]. **Skin** [2001]. **Skiplist** [3368]. **Skipped** [3368]. **SLA** [2098, 2722]. **SLAM** [1830]. **Slice** [1444]. **Slicing** [1369, 1436, 1902]. **slicing-based** [1369]. **Slot** [2586]. **Small** [428, 1139, 2038, 2104]. **Smaller** [2689]. **Smart** [1314, 1453, 1589, 1622, 1705, 1727, 1770, 1773, 1896, 1948, 1965, 1978, 2050, 2169, 2190, 2297, 2335, 2490, 2543, 2645, 2749, 2778, 2797, 2874, 2894, 3050, 3103, 3124, 3347, 3375]. **Smart-Contract** [2297]. **Smartphone** [1410, 1792, 2988]. **smartphone-based** [1410, 1792]. **Smartphones** [1608, 2531, 2534]. **Smear** [2421]. **snapshot** [978]. **SNS** [2452]. **Social** [221, 383, 603, 1430, 1441, 1455, 1552, 1592, 1612, 1630, 1659, 1661, 1758, 1809, 1811, 1825, 1941, 1946, 1984, 2011, 2058, 2120, 2182, 2256, 2410, 2436, 2467, 2504, 2591, 2741, 2912, 2934, 2944, 2965, 3017, 3148, 3241, 3254, 3369]. **Socializing** [1634]. **Socially** [1629, 2507]. **society** [1311]. **Socio** [2153]. **Socio-technical** [2153]. **Soft** [734, 825, 1676, 1719, 1951, 2785, 2947]. **Software** [74, 83, 106, 110, 111, 140, 153, 171–

173, 183, 184, 200, 285, 320, 382, 427, 503, 556, 575, 576, 610, 613, 702, 711, 714, 719, 739, 892, 954, 962, 1305, 1497, 1512, 1571, 1599, 1624, 1641, 1709, 1713, 1742, 1751, 1773, 1810, 1820, 1831, 1851, 1852, 1952, 1972, 2005, 2093, 2100, 2162, 2240, 2265, 2276, 2277, 2282, 2308, 2393, 2413, 2448, 2497, 2521, 2530, 2540, 2549, 2594, 2631, 2658, 2685, 2686, 2729, 2733, 2743, 2745, 2754, 2810, 2903, 2915, 2945, 2957, 3052, 3123, 3126, 3135, 3157, 3164, 3238, 3255, 3308, 3319, 3338, 3359, 3371, 3381]. **Software** [690, 691, 756, 757, 784, 798, 809, 881, 926, 931, 964–967, 995, 1007, 1034, 1036, 1042, 1112, 1136, 1152, 1188, 1190, 1201, 1275, 1302, 1306, 1342, 1345, 1354, 1364, 1385, 1394, 1441, 1466, 1712]. **Software-Based** [2521, 3308]. **Software-Change** [3052]. **Software-Defined** [1512, 1820, 1852, 1952, 2100]. **SOHO** [2728]. **SoK** [2657, 2668, 2691, 2970, 3068, 3173]. **Solids** [245]. **Solution** [1584, 1950, 2395, 2581]. **Solutions** [266, 267, 395, 459, 472, 988, 1003, 1045, 1222, 1400, 1444, 1450, 1549, 1601, 1608, 1616, 1750, 1775, 1936, 2003, 2197, 2250, 2263, 2325, 2347, 2405, 2425, 2503, 2518, 2523, 2569, 2623, 2624, 2644, 2651, 2658, 2670, 2711, 2738, 2934, 2967, 2989, 3144, 3155, 3169, 3184, 3202, 3218, 3316, 3384, 3389]. **Solving** [244, 353, 581, 834, 1288, 2446]. **Some** [24, 53, 59, 169, 236, 241, 244, 805, 828, 850, 883, 988, 1018, 1030, 1080, 1210]. **Sorting** [43, 345, 517, 1257, 1325]. **Sound** [1987, 2818]. **soup** [1325]. **Source** [1364, 1686, 2114, 2617, 2799, 3154, 3288]. **sources** [1336]. **Sovereignty** [2813]. **Soviet** [150]. **Space** [600, 1059, 1470, 1509, 1522, 1547, 2068, 2300, 2685, 2775, 3072, 3193]. **Space-air-ground** [2775]. **Space-Efficient** [600]. **Spaces** [1192, 1193, 1485, 2558, 2866, 2911]. **spam** [1366]. **Sparse** [61, 2674, 2773, 3360]. **Spatial** [595, 1106, 1558, 1702, 1857, 1988, 2466, 2487, 2878]. **Spatio** [1717, 1876, 2406, 3109]. **Spatio-Temporal** [1717, 1876, 2406, 3109]. **Speaker** [1861]. **Special** [207, 234, 356, 440, 462, 1302, 2914, 3205]. **specialization** [1017, 1020, 1023, 1026, 1028, 1037]. **specializing** [1033]. **Specific** [959, 1149, 1246, 1525, 3247]. **Specification** [720, 919, 1042, 1082, 1131, 1297, 1373, 1641, 2024, 2335]. **Specifications** [19, 808, 1022, 1195, 1293]. **Specified** [478, 1385]. **Spectral** [2878]. **Speculation** [1642]. **Speech** [230, 1419, 1878, 2694, 2742, 3235, 3239]. **Speech-Understanding** [230]. **Speed** [483, 614, 698, 1847]. **Speedups** [505]. **Spiking** [2673]. **Split** [2520]. **Splits** [2205]. **Spoken** [1200]. **Spontaneous** [1493]. **Spoofing** [1619]. **Sports** [1717, 2942]. **Spreading** [1958]. **SQL** [678]. **Square** [743]. **Square-Root** [743]. **SRAM** [1522]. **SRAM-Based** [1522]. **Stability** [1151, 1383, 2860, 3090]. **Stabilization** [521, 2477]. **stabilizing** [2126]. **Staffing** [56]. **Stage** [3230]. **Stages** [3165]. **staging** [1022]. **Stance** [2063]. **Standard** [25]. **Standardization** [166]. **Standards** [686, 809, 1245, 1317, 1484, 2244, 2423, 2439, 2573]. **Start** [3136]. **Starting** [2981]. **State** [162, 459, 469, 472, 535, 749, 1185, 1196, 1203, 1314, 1340, 1342, 1378, 1426, 1429, 1436, 1490, 1532, 1553, 1621, 1627, 1655, 1676, 1720, 1747, 1750, 1793, 1811, 1862, 1868, 1879, 1945, 1970, 2012, 2086, 2088, 2099, 2136, 2147, 2198, 2207, 2211, 2231, 2294, 2324, 2375, 2424, 2497, 2522, 2574, 2612, 2652, 2661, 2679, 2704, 2705, 2707, 2764, 2809, 2821, 2831, 2851, 3083, 3099, 3135, 3188, 3254, 3259, 3282, 3311, 3319]. **State-based** [1436]. **State-machine** [2211]. **State-of-practice** [2574]. **State-of-research** [2574]. **State-of-the-Art** [1314, 1426, 1747, 1793, 1811, 1862, 1868, 1879, 2136, 2198, 2207, 2231, 2294, 2679, 2821, 2831, 3135, 3254, 3282, 3319]. **Stateful** [2974]. **Statement** [810, 982]. **Statements** [77, 3291]. **Static** [726, 731, 1092, 1649, 2336, 2478]. **statically** [1339]. **Stationary** [2470]. **Statistical** [47, 424, 448, 1280, 1479, 2049, 2267, 3348]. **Statistically** [2466]. **Statistically-Robust** [2466]. **Status** [62, 227, 536, 1417, 2184, 2552, 3217, 3309]. **Steady** [459, 472]. **Steady-State** [459, 472]. **Stealing** [2747]. **Steganography** [1458, 3104, 3304]. **Stemming** [1664]. **step** [1328]. **steps** [879]. **Stepwise** [387, 403]. **Stereo** [300]. **stochastic** [185, 186, 1443]. **Stock** [3105]. **Storage** [228, 542, 635, 697, 760, 796, 971, 972, 1323, 1416, 1496, 1639, 1693, 1786, 1875, 1877, 2100, 2141, 2696, 2931]. **Stores** [180, 1833]. **Storms** [1636]. **Story** [2290]. **Straightforward** [84]. **STRAM** [1921]. **Strategic** [744–748, 750–761, 763, 764, 896, 900, 921, 1772, 2680]. **Strategies** [436, 498, 738, 1223, 1719, 1807, 1992, 2079, 2222, 2492, 2795, 2929, 2947, 2948, 3078, 3104, 3175, 3242, 3275]. **Stream** [1372, 1451, 1481, 1718, 1960, 2102, 2291, 2424]. **Stream-Based** [2291]. **Streaming** [1591, 1995, 2356, 2389, 2651, 2785, 3393]. **Streams** [1864, 2470, 2505, 2995, 3378]. **Stress** [1881]. **Strict** [725, 1341]. **Strikes** [3301]. **String** [242, 1187, 1396, 2213, 2216, 2446]. **Stroke** [2342]. **Strong** [1581]. **Strongly** [299]. **Structural** [20, 731, 1111, 1151, 1232, 1551, 1759]. **Structure** [21, 237, 488, 589, 814, 1105, 1125, 1445, 1817, 1830, 2476, 2512, 3057]. **Structured** [76, 77, 174, 175, 774, 1042, 2648, 2899]. **Structures** [36, 91, 111, 213, 263, 341, 487, 649, 937, 1191, 1193, 1241, 1278, 1441, 2204, 3262, 3270]. **Structuring** [58, 307, 1365]. **Student** [2109]. **Studies** [248, 1987, 2544, 2545, 2611, 2880, 3125]. **Study** [42, 251, 448, 538, 1080, 1086, 1195, 1335, 1359, 1426, 1462, 1506, 1635, 1669, 1719, 1813, 1848, 1851, 1965, 1972, 1974, 1991, 2062, 2098, 2145, 2176, 2186, 2190, 2242, 2262, 2401, 2499, 2632, 2686, 2736, 2810, 2822, 2836, 2858, 2909, 2934, 2981, 3006, 3009, 3052, 3123, 3137, 3190, 3359, 3381]. **Style** [78]. **Stylistic** [1969]. **Stylometry** [1781]. **Sub** [1454, 2913]. **Sub-symbolic** [2913]. **Subdiscipline** [601]. **Subgraph** [2215, 2960, 3385]. **Subject** [645, 766, 999]. **Subjectivity** [636]. **Subscribe** [1216, 1647]. **Subsymbolic** [3024]. **Success** [1295, 1438, 3169]. **suffix** [1264]. **Summarization** [1855, 2040, 2532, 2584, 2757, 2819, 3131, 3348]. **summary** [678]. **Summer** [2747]. **Super** [2112, 2443, 2724, 3001]. **Super-Resolution** [2112, 2443, 2724, 3001]. **Supercomputer** [375]. **Superhighways** [618]. **superimposition** [1348]. **Superpixel** [2952]. **Supervised** [1635, 2092, 2505, 2718, 3005, 3181, 3378, 3388]. **Supervision** [1159, 1899].

Supervisory [4]. **Supply** [2739, 2784]. **Support** [111, 692, 702, 822, 851, 1061, 1293, 1333, 1709, 1746, 1916, 2339, 2789, 3127]. **Supported** [1047, 1048, 1051, 2025, 2372]. **Supporting** [1112, 1516, 2320, 2762]. **Surface** [66, 1545]. **Surfaces** [1470, 3134]. **Surveillance** [1291, 1467, 1607, 1626, 1987, 2172, 2182, 2255, 2630, 3224]. **Survey** [59, 483, 488, 1008, 1013, 1089, 1093, 1273, 1291, 1495, 1505, 1531, 1557, 1602, 1622, 1652, 1728, 1760, 1761, 1766, 1809, 1835, 1839, 1843, 1872, 1874, 1876, 1887, 1889, 1939, 1943, 1944, 1959, 1992, 2004, 2019, 2028, 2039, 2040, 2046, 2087, 2112, 2124, 2143, 2184, 2230, 2254, 2256, 2272, 2283, 2286, 2290, 2291, 2339, 2351, 2365, 2378, 2382, 2406, 2429, 2440, 2446, 2449, 2458, 2474, 2476, 2513, 2516, 2523, 2526, 2537, 2557, 2563, 2575, 2643, 2654, 2703, 2707, 2776, 2778, 2781, 2792, 2795, 2835, 2933, 2948, 2978, 3160, 3163, 3208, 3210, 3336, 3346, 3350, 3352]. **Survey** [515, 1219, 1358, 1488, 1500, 1503, 1510, 1511, 1517, 1565, 1572, 1583, 1591, 1603, 1643, 1651, 1660, 1662, 1689, 1701, 1706, 1714, 1749, 1755, 1777, 1817, 1837, 1854, 1901, 1908, 1938, 1945, 1946, 1987, 2033, 2048, 2055, 2070, 2085, 2108, 2119, 2131, 2156, 2170, 2195, 2202, 2223, 2228, 2229, 2259, 2277, 2279, 2288, 2319, 2332, 2334, 2343, 2345, 2355, 2371, 2419, 2495, 2508, 2551, 2562, 2569, 2576, 2599, 2608, 2628, 2639, 2642, 2661, 2681, 2732, 2760, 2780, 2798, 2861, 2879, 2903, 2911, 2912, 2918, 3030, 3037, 3108, 3119, 3120, 3179, 3195, 3238, 3251, 3288, 3335, 3362, 3371, 3372]. **Survey** [116, 437, 517, 1069, 1134, 1493, 1570, 1574, 1581, 1632, 1642, 1666, 1677, 1702, 1753, 1771, 1800, 1814, 1833, 1894, 1909, 1912, 1928, 1940, 1947, 1949, 1995, 2010, 2018, 2034, 2051, 2078, 2079, 2081, 2090, 2106, 2125, 2126, 2151, 2155, 2222, 2260, 2294, 2313, 2328, 2369, 2389, 2399, 2400, 2411, 2413, 2459, 2461, 2470, 2471, 2504, 2529, 2540, 2603, 2650, 2653, 2655, 2695, 2700, 2726, 2730, 2741, 2754, 2774, 2779, 2787, 2788, 2801, 2833, 2836, 2850, 2873, 2916, 2957, 2974, 3086, 3125, 3150, 3193, 3223, 3229, 3242, 3244, 3252, 3273, 3276, 3300, 3308, 3326, 3328, 3333, 3340, 3358]. **Survey** [7, 406, 509, 543, 1491, 1552, 1575, 1579, 1587, 1592, 1593, 1628, 1637, 1648, 1678, 1715, 1716, 1718, 1730, 1751, 1804, 1819, 1842, 1847, 1863, 1869, 1878, 1880, 1886, 1888, 1904, 1905, 1911, 1954, 1977, 1988, 2007, 2020, 2021, 2044, 2095, 2096, 2110, 2127, 2138, 2193, 2231, 2234, 2317, 2364, 2379, 2422, 2439, 2462, 2479, 2503, 2505, 2519, 2541, 2566, 2597, 2634, 2640, 2649, 2660, 2674, 2694, 2698, 2709, 2716, 2719, 2727, 2771, 2785, 2794, 2820, 2844, 2848, 2859, 2864, 2865, 2874, 2892, 2899, 2931, 2940, 2969, 3022, 3035, 3046, 3110, 3151, 3254, 3290, 3292, 3307, 3311, 3314, 3343, 3396]. **Survey** [114, 255, 427, 432, 1508, 1512, 1515, 1519, 1568, 1577, 1588, 1590, 1634, 1641, 1644, 1646, 1655, 1656, 1680, 1697, 1726, 1756, 1768, 1783, 1883, 1902, 1906, 1913, 1920, 2013, 2015, 2030, 2043, 2047, 2063, 2069, 2071, 2191, 2200, 2278, 2292, 2307, 2344, 2356, 2387, 2415, 2443, 2455, 2465, 2501, 2506, 2507, 2524, 2525, 2530, 2534, 2559, 2560, 2584, 2604, 2605, 2621, 2664, 2678, 2706, 2713, 2725, 2749, 2759, 2876, 2884, 2906, 2946, 2947, 2950, 2959, 2960, 2996, 3010, 3031, 3048, 3057, 3078, 3085, 3104, 3109, 3113, 3143, 3187, 3218, 3220, 3240, 3245, 3247, 3255, 3261, 3274, 3281, 3313, 3320, 3327, 3353, 3356, 3394]. **Survey** [8, 1378, 1513, 1518, 1529, 1566, 1580, 1640, 1672, 1688, 1778, 1786, 1832, 1855, 1925, 1950, 1970, 1980, 1986, 1990, 2024, 2025, 2031, 2037, 2042, 2066, 2072, 2089, 2093, 2100, 2152, 2168, 2206, 2218, 2219, 2232, 2233, 2245, 2302, 2309, 2330, 2342, 2359, 2403, 2407, 2408, 2430, 2437, 2438, 2445, 2452, 2482, 2488, 2520, 2528, 2532, 2579, 2585, 2591, 2592, 2616, 2618, 2625, 2656, 2662, 2684, 2696, 2715, 2766–2768, 2793, 2818, 2823, 2870, 2871, 2881, 2882, 2889, 2890, 2897, 2961, 2973, 2982, 2984, 3001, 3004, 3019, 3020, 3025, 3050, 3073, 3094, 3097, 3111, 3118, 3162, 3201, 3211, 3235, 3236, 3241, 3243, 3248, 3269, 3278, 3283, 3302, 3341]. **Survey** [192, 458, 988, 1496, 1498, 1504, 1544, 1546, 1554, 1556, 1567, 1595, 1596, 1599, 1600, 1605, 1609, 1611, 1612, 1617, 1647, 1654, 1691, 1722, 1732, 1793, 1798, 1799, 1846, 1900, 1918, 1922, 1936, 1951, 1957, 1983, 1984, 2006, 2012, 2016, 2027, 2038, 2057, 2083, 2123, 2188, 2194, 2210, 2227, 2248, 2296, 2304, 2305, 2310, 2311, 2314, 2326, 2336, 2357, 2380, 2388, 2390, 2425, 2478, 2490, 2521, 2544, 2553, 2572, 2587, 2610, 2638, 2689, 2723, 2747, 2765, 2770, 2782, 2789, 2837, 2854, 2901, 2920, 2935, 2936, 2956, 2975, 3005, 3055, 3074, 3098, 3146, 3177, 3209, 3239, 3329, 3367]. **Survey** [3, 61, 248, 362, 459, 472, 1263, 1428, 1465, 1532, 1563, 1584, 1636, 1668, 1681, 1698, 1703, 1727, 1765, 1803, 1820, 1828, 1830, 1840, 1841, 1857, 1866, 1885, 1919, 1923, 1942, 1953, 1960, 1971, 1982, 1996, 2000, 2014, 2045, 2058, 2076, 2084, 2109, 2134, 2167, 2172, 2179, 2196, 2212, 2215, 2263, 2265, 2266, 2275, 2353, 2367, 2373, 2410, 2431, 2456, 2477, 2483, 2500, 2542, 2577, 2581, 2659, 2667, 2671, 2712, 2735, 2738, 2784, 2790, 2812, 2838, 2853, 2902, 2923, 2928, 2993, 3007, 3018, 3034, 3043, 3067, 3075, 3090, 3102, 3225, 3270, 3272, 3312, 3322, 3325, 3366, 3385, 3393]. **Survey** [35, 47, 71, 134, 1244, 1361, 1407, 1419, 1490, 1538, 1542, 1543, 1550, 1569, 1585, 1610, 1619, 1621, 1635, 1650, 1661, 1670, 1693, 1700, 1710, 1719, 1742, 1752, 1775, 1776, 1791, 1823, 1824, 1827, 1829, 1844, 1858, 1867, 1899, 1916, 1941, 1963, 1966, 2103, 2118, 2209, 2221, 2246, 2268, 2316, 2333, 2348, 2350, 2354, 2361, 2376, 2381, 2397, 2426, 2432, 2489, 2536, 2539, 2546, 2571, 2573, 2596, 2637, 2687, 2701, 2718, 2775, 2802, 2813, 2855, 2867, 2896, 2908, 2943, 2944, 2954, 2979, 2999, 3008, 3017, 3065, 3080, 3115, 3134, 3141, 3168, 3174, 3260, 3267, 3296, 3342, 3349, 3357, 3360, 3377]. **Survey** [11, 36, 99, 135, 987, 1489, 1492, 1499, 1535, 1540, 1576, 1614, 1645, 1658, 1663, 1707, 1721, 1774, 1779, 1784, 1796, 1845, 1849, 1850, 1865, 1870, 1877, 1882, 1893, 1903, 1924, 1973, 1978, 2032, 2035, 2082, 2091, 2111, 2115, 2133, 2150, 2159, 2160, 2185, 2189, 2224, 2226, 2238, 2253, 2273, 2335, 2341, 2412, 2466, 2484, 2502, 2512, 2518, 2527, 2543, 2550, 2564, 2586, 2595, 2651, 2680, 2688, 2693, 2710, 2720, 2745, 2758, 2773, 2807, 2815, 2830, 2832, 2842, 2924, 2937, 2992, 2997, 3014, 3027, 3040, 3061, 3100, 3103, 3129, 3130, 3145, 3153, 3156, 3159, 3249, 3287, 3299, 3331, 3339, 3363, 3370, 3376, 3384, 3388]. **Survey** [113, 1387, 1539, 1545, 1548, 1555, 1629, 1657, 1729, 1736, 1780, 1806, 1818, 1825, 1860, 1929, 1937, 1981, 2116, 2135, 2161, 2174, 2201, 2214, 2241, 2281, 2318, 2347, 2349, 2393, 2394, 2398, 2414, 2417, 2435, 2436, 2498, 2514, 2531, 2565, 2567, 2600, 2602, 2615, 2631, 2648, 2675, 2699, 2708, 2721, 2724, 2748, 2752, 2761–2763, 2772, 2796, 2816, 2843, 2846, 2857, 2891, 2898, 2917, 2926, 2932, 2939, 2951, 2994, 3045, 3054, 3056, 3063, 3069, 3079, 3106, 3112, 3133, 3140, 3149, 3170, 3176, 3180, 3182, 3184, 3192, 3199, 3203, 3204, 3213, 3237, 3258, 3264, 3286, 3291, 3294, 3301, 3318, 3330, 3334, 3345, 3348, 3351, 3368, 3369, 3373, 3387]. **Survey** [41, 1043, 1071, 1073, 1091, 1176, 1201, 1202, 1204, 1206, 1208, 1209, 1213, 1221, 1223, 1234, 1235, 1237, 1245, 1248, 1256, 1259, 1266, 1270, 1274, 1278, 1279, 1283, 1289, 1294, 1299, 1301, 1307, 1309, 1311–1313, 1316, 1317, 1319–1321, 1323, 1326, 1332, 1338, 1343, 1345, 1348, 1354, 1356, 1357, 1363, 1366, 1375, 1380, 1381, 1391, 1393, 1399, 1404–1406, 1409, 1410, 1413, 1414, 1418, 1420, 1423, 1424, 1430, 1431, 1433–1436, 1439, 1451, 1453, 1455, 1458, 1468, 1473, 1474, 1476, 1479, 1480, 1482, 1484, 1486, 1487, 2464, 2958, 3072, 3197]. **survey** [296, 1042, 1224, 1260, 1261, 1265, 1314, 1329, 1349, 1353, 1382, 1390, 1392, 1415, 1440, 1447, 1448, 1452, 1467]. **Surveying** [1781, 2895]. **Surveyor** [120–122, 128–130, 137, 138, 144–147, 154, 163, 164, 171–175, 181–188, 201–204, 214–217, 222–224, 231, 232, 238, 239, 258, 259, 264–267, 273–276, 281, 282, 290–292, 303, 304, 308–311, 321–324, 329, 330, 401, 402, 460, 478, 489, 490, 511, 512, 586]. **Surveys** [615, 716, 1008]. **Survival** [619, 1903]. **Surviving** [1708]. **Sustainability** [2153]. **Sustainable** [1727, 1897, 1935]. **Swarm** [1628, 2801, 3145]. **Switching** [314]. **Symbol** [591]. **Symbolic** [510, 1843, 2560, 2605, 2759, 2913, 3024, 3245, 3361]. **Symmetric** [209, 1424, 1735, 2516, 2871]. **Symmetry** [1255]. **Symposium** [615, 648, 716, 1008, 1011, 1047, 1048, 1051, 1069, 1070, 1073, 1089, 1093, 1134]. **Synchronization** [255, 695]. **Synchronous** [1062, 1459, 1462, 2174, 2546]. **Synergy** [798, 3256, 3347, 3382]. **Syntactic** [21, 2252]. **syntax** [1083]. **SynthaVision** [264, 265]. **Synthesis** [361, 1032, 1404, 1917, 2687, 2832, 2842, 2917]. **Synthesizing** [2899]. **Synthetic** [2845, 3023, 3161]. **System** [28, 37, 39, 63, 111, 126, 143, 150, 151, 155, 167–169, 230, 257, 288, 360, 370, 631, 806, 812, 848, 972, 1037, 1078, 1131, 1156, 1297, 1343, 1424, 1497, 1536, 1689, 1740, 1760, 1832, 1847, 1891, 1929, 1965, 2077, 2105, 2202, 2244, 2280, 2536, 2622, 2783, 2797, 2820, 2992, 3078, 3102, 3120, 3159, 3206, 3218]. **System-Level** [972, 1343, 2202]. **Systematic** [1570, 1598, 1606, 1607, 1671, 1675, 1705, 1724, 1731, 1760, 1785, 1815, 1831, 1907, 1912, 1972, 1991, 2003, 2017, 2036, 2104, 2113, 2240, 2252, 2276, 2297, 2327, 2331, 2358, 2360, 2363, 2395, 2401, 2444, 2493, 2499, 2541, 2545, 2588, 2601, 2629, 2674, 2676, 2677, 2682, 2697, 2704, 2731, 2736, 2750, 2753, 2755, 2756, 2803, 2822, 2836, 2840, 2845, 2863, 2893, 2894, 2900, 2913, 2940, 2949, 2953, 2995, 3002, 3009, 3044, 3082, 3091, 3113, 3116, 3126, 3127, 3136, 3137, 3139, 3183, 3188, 3207, 3227, 3229, 3232, 3273, 3298, 3324, 3332, 3337, 3338, 3364, 3365, 3380, 3381, 3391, 3394, 3395]. **Systematic** [724, 1397, 1434, 1464, 1466, 1506, 1549, 1597, 1712, 1782, 1834, 1848, 1850, 1851, 1875, 1896, 2049, 2064, 2065, 2141, 2176, 2199, 2242, 2281, 2282, 2303, 2347, 2428, 2534, 2561, 2583, 2595, 2617, 2625, 2631, 2632, 2644, 2662, 2714, 2720, 2769, 2770, 2805, 2807, 2811, 2847, 2858, 2866, 2868, 2880, 2887, 2909, 2929, 2934, 2941, 2945, 2956, 2981, 2985, 2986, 3001, 3007, 3021, 3029, 3036, 3084, 3096, 3105, 3131, 3148, 3161, 3297, 3310, 3316, 3344, 3348, 3355, 3374, 3379, 3383, 3388]. **Systematically** [1863, 2239]. **Systematization** [3033]. **Systems** [9, 17, 44, 53, 96, 97, 109, 158, 198, 220, 227, 256, 296, 339, 396, 431, 442, 454, 490, 534, 547, 616, 624, 629, 630, 717, 720, 1494, 1501, 1528, 1582, 1587, 1591, 1662, 1683, 1764, 1777, 1794, 1811, 1812, 1854, 1862, 1869, 1884, 1921, 1974, 2015, 2048, 2061, 2095, 2119, 2131, 2147, 2158, 2162, 2164, 2211, 2222, 2247, 2271, 2284, 2291, 2292, 2386, 2391, 2406, 2416, 2424, 2462, 2501, 2523, 2537, 2540, 2541, 2575, 2613, 2660, 2755, 2835, 2839, 2850, 2851, 2895, 2903, 2962, 2970, 2974, 2991, 3039, 3091, 3268, 3289, 3293, 3311, 3319, 3323, 3371, 3372, 3396]. **Systems** [4, 141, 157, 197, 219, 245, 250, 255, 294, 295, 318, 328, 335, 395, 420, 424, 470, 539, 573, 578, 601, 604, 632–634, 639, 732, 1014, 1226, 1496, 1498, 1513, 1558, 1567, 1573, 1590, 1681, 1703, 1731, 1732, 1745, 1799, 1802, 1841, 1848, 1859, 1953, 1980, 2024, 2026, 2057, 2069, 2100, 2102, 2137, 2210, 2266, 2275, 2293, 2321, 2356, 2380, 2410, 2423, 2441, 2456, 2497, 2517, 2521, 2546, 2553, 2572, 2577, 2666, 2667, 2725, 2729, 2768, 2811, 2882, 2901, 2928, 2936, 2946, 2954, 2963, 2996, 3004, 3006, 3020, 3029, 3055, 3074, 3095, 3097, 3327, 3329, 3341]. **Systems** [35, 36, 98, 152, 228, 349, 371, 464, 465, 477, 489, 494, 528, 548, 577, 580, 658, 670, 693, 700, 709, 773, 783, 795, 901, 942, 944, 969, 1033, 1065, 1067, 1104, 1132, 1138, 1159, 1160, 1189, 1201, 1203, 1206, 1208, 1257, 1283, 1307, 1309, 1311, 1351, 1356, 1365, 1381, 1385, 1410, 1416, 1454, 1502, 1542, 1555, 1601, 1629, 1639, 1663, 1693, 1719, 1752, 1758, 1796, 1829, 1836, 1875, 1932, 1963, 2341, 2347, 2484, 2496, 2527, 2547, 2564, 2565, 2567, 2600, 2615, 2691, 2722, 2758, 2909, 2942, 3017, 3027, 3041, 3059, 3149, 3180, 3185, 3214, 3297, 3344, 3368, 3386]. **systems** [674, 692, 694, 699, 758, 759, 779, 781, 811, 820, 831, 844, 847, 849, 852, 910, 933, 945, 946, 949, 961, 1046, 1098, 1103, 1207, 1218, 1233, 1238, 1243, 1282, 1314, 1345, 1403, 1438, 1440, 1449, 1482, 1483, 1487]. **Systems-of-Systems** [2497]. **Systolic** [2772].

Table [38, 81, 1048, 1070, 1462, 3057]. **tabled** [1030]. **Tables** [69, 79, 3013]. **tabletop** [1470]. **Tabular** [3161]. **Tabulation** [243]. **Tackling** [1555, 2472, 2834]. **tactical** [1032]. **Tag** [1634, 2554]. **Tagged** [2554]. **tagging** [1382]. **TAI** [3215]. **Tailorable** [897]. **Tails** [201, 202]. **take** [1123]. **Takedown** [2649]. **Target** [1650, 2653]. **Targeting** [2326, 3158]. **Task** [1060, 1092, 1420, 2420, 2479, 2643, 2719, 3047, 3139]. **Task-based** [1060]. **Tasking** [2801]. **Tasks** [773, 1628, 2929, 3288, 3381]. **taxi** [1455]. **Taxonomic** [2480]. **Taxonomies** [1954, 2212, 3092, 3270]. **Taxonomy** [345, 546, 1312, 1375, 1492, 1499, 1525, 1540, 1543, 1550, 1556, 1577, 1592, 1621, 1706, 1721, 1764, 1786, 1801, 1805, 1806, 1852–1854, 1866, 1897, 1901, 1932, 1938, 1948, 1983, 2006, 2008, 2020, 2029, 2030, 2032, 2042, 2061, 2092, 2098, 2102, 2110, 2125, 2134, 2140, 2152, 2170, 2206, 2221, 2224, 2304, 2316, 2318, 2334, 2340, 2404, 2409, 2413, 2420, 2425, 2430, 2439, 2449, 2453, 2521, 2542, 2568, 2580, 2582, 2587, 2627, 2636, 2680, 2696, 2709, 2722, 2744, 2755, 2783, 2808, 2819, 2841, 2876, 2938, 2941, 2952, 2959, 3008, 3041, 3054, 3087, 3107, 3108, 3136, 3140, 3142, 3159, 3231, 3304, 3379, 3381]. **taxonomy** [91, 1235, 1240, 1244, 1250, 1264, 1324, 1428]. **Taxonomy-Based** [2020]. **TCP** [1205]. **TDMA** [1538]. **TDX** [2990]. **teach** [860]. **Teaching** [1974]. **Team** [1717, 2340, 3385]. **Teaming** [2916]. **Teams** [3206]. **Technical** [290–292, 943, 1850, 2153, 2407, 2620, 2951, 3345]. **Technique** [1973, 3060].

Techniques
[49, 63, 235, 243, 244, 255, 307, 505, 515, 516, 524, 543, 1014, 1180, 1226, 1488, 1541, 1554, 1577, 1588, 1600, 1609, 1617, 1642, 1654, 1671, 1679, 1696, 1706, 1722, 1740, 1751, 1753, 1757, 1794, 1800, 1805, 1814, 1843, 1862, 1873, 1913, 1925, 1947, 1980, 1997, 2005, 2025, 2040, 2046, 2054, 2078, 2087, 2128, 2149, 2239, 2254, 2279, 2284, 2330, 2365, 2401, 2415, 2423, 2430, 2452, 2474, 2482, 2494, 2513, 2532, 2537, 2538, 2559, 2592, 2599, 2624, 2634, 2650, 2669, 2690, 2706, 2716, 2732, 2859, 2860, 2949, 2972, 2973, 3051, 3076, 3077, 3095, 3109, 3121, 3177, 3187, 3247, 3255, 3343].
Techniques
[38, 61, 134, 135, 152, 482, 647, 681, 682, 688, 689, 889, 903, 985, 1042, 1176, 1228, 1243, 1244, 1267, 1283, 1307, 1313, 1328, 1329, 1354, 1363, 1369, 1370, 1384, 1387, 1394, 1397, 1416, 1482, 1486, 1487, 1535, 1573, 1657, 1667, 1669, 1695, 1699, 1721, 1736, 1745, 1781, 1806, 1820, 1845, 1857, 1875, 1885, 2083, 2111, 2178, 2310, 2418, 2466, 2480, 2542, 3054, 3075, 3225, 3239, 3249, 3267, 3351, 3354, 3379].
Technological [849, 1829, 3212]. **Technologies** [637, 911, 1234, 1322, 1333, 1465, 1474, 1665, 1698, 1705, 1765, 2022, 2050, 2097, 2203, 2371, 2552, 2588, 2623, 2672, 2775, 2870, 2873, 2962, 3025, 3062, 3076, 3228, 3232, 3296, 3384].
Technology
[95, 690, 803, 823, 842, 871, 894, 922, 925, 960, 1200, 1212, 1321, 1386, 1570, 1910, 2094, 2141, 2247, 2338, 2519, 2645, 2740, 2796, 2966, 2994, 3011, 3144, 3152].
telecommunications [753]. **Telemetry** [3262]. **Temperature** [1564]. **Tempo** [1033]. **Temporal** [1131, 1255, 1297, 1500, 1702, 1717, 1823, 1876, 2105, 2331, 2406, 2841, 3109, 3171]. **Ten** [42, 66]. **Tenant** [1925, 2061]. **term** [2482]. **Terminals** [19]. **Terminology** [3255]. **Terrorism** [2011]. **Tertiary** [2686, 2810, 2862, 3006, 3123]. **Test**
[995, 1140, 1724, 1761, 1834, 1880, 2267, 2884]. **Testbeds** [3298]. **Testing**
[86, 271, 285, 317, 453, 713, 946, 1293, 1328, 1332, 1506, 1700, 1797, 2017, 2055, 2072, 2240, 2279, 2401, 2502, 2549, 2685, 2704, 2733, 2810, 3257]. **Text**
[41, 249, 354, 411, 449, 516, 652, 676, 1198, 1253, 1262, 1377, 1406, 1541, 1664, 1720, 1878, 1969, 2043, 2229, 2230, 2249, 2327, 2414, 2576, 2608, 2626, 2671, 2695, 2816, 2982, 3118, 3131, 3272, 3348]. **Text-based** [2043, 2626].
text-compression [652]. **Texts** [2331, 2333, 2864]. **Textual** [1990]. **Texture** [994, 2453]. **Their**
[483, 1796, 1934, 1940, 2068, 2241, 2555, 2626, 2758, 3104, 3200]. **Them** [2321].
Thematic [2170]. **Themes** [2740]. **theorem** [1032]. **Theoretic**
[1883, 2006, 2323, 2710, 2828]. **Theoretical** [59, 221, 1085, 1694]. **Theories**
[415, 806, 810, 1351, 2161, 2231]. **Theory**
[245, 319, 564, 599, 654, 746, 768, 791, 807, 809, 816, 821, 854, 978–980, 1069, 1070, 1073, 1210, 1408, 1725, 1872, 1892, 2150, 2431, 2557, 3075, 3397].
Therapeutic [2639, 3125, 3226]. **There** [558, 2220, 2457]. **Thermal**
[1370, 1524, 1699, 1966]. **Thermal-Aware** [1524]. **Things**
[1689, 1750, 1822, 1867, 1909, 1920, 1977, 2087, 2168, 2201, 2289, 2432, 2487, 2519, 2563, 2604, 2612, 2621, 2672, 2778, 2883, 2912, 3010, 3102, 3138, 3179, 3323, 3332].
think [845]. **Thinking** [1580]. **Third** [44]. **Thought** [3277]. **Thoughts**

[582, 789, 841, 857, 904]. **Thread** [1642, 1683]. **Thread-Level** [1642]. **Threat** [1601, 1619, 1954, 2071, 2595, 2671, 2749, 3133, 3252]. **Threats** [1400, 1945, 2175, 2308, 2450, 2451, 2535, 2564, 2738, 2739, 2903, 2904, 2934, 3155, 3174]. **Three** [270, 355, 494, 679, 893, 1117, 1214, 1888, 2561]. **Three-Dimensional** [270, 355, 494, 679, 893, 1214, 1888, 2561]. **Throughput** [24, 2381]. **thrown** [1088]. **Thwarting** [2780]. **tightly** [908]. **Time** [8, 19, 37, 110, 334, 344, 495, 557, 694, 758, 893, 942–947, 949–953, 1022, 1050, 1059, 1115, 1131, 1215, 1297, 1312, 1327, 1356, 1395, 1397, 1445, 1483, 1484, 1587, 1640, 1719, 1753, 1942, 1980, 2101, 2210, 2243, 2300, 2415, 2461, 2492, 2551, 2628, 2629, 2631, 2729, 2748, 2811, 2969, 2970, 3055, 3086, 3101, 3221, 3336, 3392]. **Time-based** [3055]. **Time-Bound** [2415]. **Time-Constrained** [334]. **Time-Critical** [2492]. **time-evolving** [1050]. **Time-Sensitive** [2415, 3101]. **Time-series** [1395]. **Time-Sharing** [8, 19, 37]. **Time-triggered** [2210]. **time-varying** [1445]. **Timed** [1477, 1737, 2557, 2660]. **Timing** [948, 1701, 1938, 1980, 2930]. **TinyML** [2712, 3011]. **TLP** [211]. **TLS** [2699]. **Today** [564]. **Together** [3372]. **Tolerance** [454, 489, 490, 1278, 1446, 1698, 1774, 1951, 2729, 3027]. **Tolerant** [109, 110, 469, 525, 1044, 1231, 1483, 1625, 2211]. **Too** [604]. **Tool** [1189, 1709, 2025, 2789, 3172]. **Tool-supported** [2025]. **Toolflows** [1849]. **Tooling** [1713]. **Toolkit** [3061]. **toolkits** [1055]. **toolmaker** [941]. **Tools** [427, 714, 821, 880, 890, 931, 1071, 1268, 1363, 1442, 1501, 1569, 1588, 1595, 1674, 1820, 1862, 1914, 1920, 2005, 2022, 2054, 2085, 2199, 2231, 2337, 2383, 2559, 2685, 2733, 2944, 3161, 3198, 3267, 3274]. **Top** [1283, 1946, 2482, 2990]. **Top-** [1283, 1946]. **Top-Down** [2990]. **Topic** [2305, 2332, 2402, 2860]. **Topic-based** [2305]. **Topical** [42]. **Topics** [2740]. **topological** [1284]. **Topologies** [314]. **Topology** [1242, 1267, 1812, 2353, 3014]. **Topology-aware** [3014]. **Tor** [1652]. **Total** [1235]. **Touch** [2173]. **Touch-dynamics** [2173]. **tour** [1187]. **Toxic** [2694]. **Trace** [987, 1026, 1969, 2236]. **Trace-Driven** [987]. **Tracers** [1819]. **traces** [1455]. **Tracing** [1753, 2433, 2654]. **Trackers** [1967, 2935]. **Tracking** [1260, 1650, 1798, 1967, 2121, 2123, 2270, 2447, 2483, 2511, 2588]. **Trade** [871, 2094, 3211]. **Trade-off** [3211]. **Trade-offs** [2094]. **Tradeoff** [2791]. **Tradeoffs** [743]. **Traditional** [1963, 2343, 3181]. **Traffic** [1413, 1729, 1845, 2069, 2139, 2154, 2172, 2217, 2310, 2458, 2699, 2820, 3222, 3340, 3347]. **train** [2625]. **Trained** [2747, 2782, 2807, 2816, 2982]. **Training** [640, 2344, 2564, 2943, 3127, 3128, 3307]. **trajectories** [1425]. **Trajectory** [1578, 2146, 2226, 2601, 3302]. **Trajectory-based** [2601]. **Transaction** [326, 3050]. **Transactional** [1231, 1639]. **Transactions** [290–292, 1411]. **Transcriptional** [2353]. **Transfer** [960, 1931, 2089, 2391, 2398, 3276]. **transfinite** [1039]. **transform** [1274, 1327]. **transform-based** [1327]. **Transformation** [318, 591, 928, 935, 1021, 1081, 2502]. **Transformations** [170, 205, 552, 934, 1020, 2560]. **Transformer** [2391, 2695, 2816, 3340]. **Transformer-Based** [2695, 2816]. **Transformers** [2387, 2539, 2727]. **Transforming** [738, 848, 2663]. **transience** [920]. **Transient** [2241, 2826]. **Transient-Execution** [2826]. **Transition** [208, 214, 215]. **Transitions**

[1516]. **Transitive** [401, 402]. **Translation** [69, 79, 1280, 1384, 1474, 1479, 2151, 2232, 2659, 2774]. **transliteration** [1338]. **Transmission** [1995]. **Transmissions** [2174]. **Transparency** [3207]. **Transparent** [2045]. **Transport** [1091, 1143, 2755, 3297]. **Transportation** [2928, 3170, 3268, 3386]. **Travel** [2354]. **Treatment** [2349, 3309]. **Tree** [194, 216, 660, 1399, 1999, 2007, 2128, 2205, 3309, 3312]. **Tree-based** [1999, 3312]. **Trees** [72, 299, 302, 1485, 2388]. **Trend** [3089]. **Trends** [924, 1277, 1347, 1394, 1427, 1453, 1529, 1665, 1754, 1823, 1839, 1891, 1947, 1967, 1992, 2086, 2120, 2183, 2355, 2427, 2552, 2652, 2700, 2719, 2740, 2809, 3000, 3016, 3025, 3027, 3079, 3119, 3156, 3175, 3246, 3268, 3279]. **Trials** [1103]. **triangle** [1202]. **Triangular** [3211]. **Triclustering** [1888]. **triggered** [2210]. **Trojan** [3315]. **Trust** [1281, 1335, 1430, 1450, 1582, 1583, 1630, 1743, 1894, 1906, 1943, 2053, 2159, 2181, 2612, 2652, 2912, 3012, 3206, 3293]. **Trusting** [2919]. **Trustworthiness** [1921, 2909, 3234, 3289]. **Trustworthy** [2469, 2607, 2914, 2915, 2917, 2922, 2936, 3123, 3185, 3191, 3205, 3214, 3215, 3217, 3221, 3266, 3307]. **TrustZone** [1923]. **Truth** [2436]. **TSN** [2461, 3101]. **Tuning** [671, 1415, 2095, 3029, 3049, 3324]. **Turing** [555]. **Tutorial** [15, 25, 31, 32, 102, 131, 469, 571, 585, 1090, 1091, 1210, 1471, 1537, 1762, 1790, 1821, 1895, 1982, 2029, 2060, 2205, 2315, 2392, 2509, 2551, 2838, 2987, 2988, 3121, 3341, 3393]. **TV** [1361]. **Tweet** [1635]. **twelve** [1376]. **Twin** [3143]. **Twins** [2427, 3228]. **Twitter** [1648]. **Two** [228, 436, 778, 2108, 2342, 2806, 3198, 3355]. **Two-Dimensional** [228, 2342]. **Two-Factor** [3198]. **Two-Player** [436]. **Type** [415, 709, 732, 737, 933, 1028, 1207, 1620, 2029]. **typed** [1339]. **Types** [372, 400, 1022, 1341, 1623, 2108, 3006, 3122]. **Typewriter** [19]. **Typewriter-Like** [19]. **Typing** [734, 1108, 2285].

UAV [2029, 2368, 2372, 2623, 2830, 2876, 3003, 3038, 3145, 3337]. **UAV-Assisted** [3003]. **UAV-Enabled** [2830]. **UAV-supported** [2372]. **UAVNet** [2451]. **Ubiquitous** [194, 954, 1381, 1682, 2219, 3368]. **Ultra** [1875, 2418]. **Ultra-Large** [1875]. **Ultra-low** [2418]. **Ultrasound** [2254]. **UML** [1349, 1385, 2707]. **UML-based** [1349]. **Unbounded** [592, 767]. **Uncertainty** [230, 665, 2261, 2380, 3307]. **Uncertainty-aware** [2261]. **Unclever** [37]. **Unclonable** [2737]. **Uncompressed** [2932]. **Unconnected** [3102]. **Uncontrolled** [2597]. **Undercomputing** [596]. **Underground** [2838]. **Understanding** [230, 278, 372, 590, 861, 1628, 1630, 1660, 1707, 1739, 1793, 1863, 1949, 1997, 2129, 2234, 2493, 2586, 3013, 3261, 3289]. **Underwater** [1723, 1812, 2187, 2698, 3138]. **Undirected** [592, 767]. **unfinished** [1128, 1129]. **unfold** [1020]. **unfold/fold** [1020]. **Unification** [432]. **Unified** [150, 471, 1236, 1773, 2221, 2301, 2349, 2436, 2485, 2790, 2794, 2841, 2878, 3058, 3133, 3321]. **uniform** [1016, 1443]. **Unifying** [729, 810, 825, 1023]. **Union** [487]. **unit** [995]. **Units** [535, 3353]. **Universal** [869, 2486]. **university** [859]. **UNIX** [370]. **Unlearning** [2761, 3073]. **Unlinking** [1126]. **Unlocking** [2989]. **Unmanned** [2664, 2765, 2820]. **Unobtrusive** [2471]. **Unravelling** [3394]. **unseen** [1347]. **Unsolved** [1460]. **Unstructured** [2394]. **Unsupervised**

[1990, 2286, 3069]. **unto** [770]. **Unveiling** [2156, 3347, 3364]. **Update** [88, 264, 265, 3378]. **updated** [1176, 2958]. **Uplift** [2349]. **Urban** [1510, 1941, 2845, 2870, 3170, 3347]. **Usability** [686, 903, 1184, 1196, 1782, 2173]. **Usable** [620]. **Usage** [1391, 1798, 2534]. **Use** [465, 685, 1067, 1118, 1125, 2283, 2312, 2321, 2373, 2396, 2463, 2590, 3093, 3165]. **Used** [1667, 2456]. **Useful** [2138]. **User** [247, 536, 619, 690, 886, 894, 901, 904, 905, 908, 1056, 1184, 1196, 1200, 1342, 1410, 1490, 1493, 1494, 1516, 1596, 1638, 1655, 1733, 1739, 1977, 2104, 2251, 2324, 2351, 2610, 2619, 2696, 2766, 3044, 3246]. **User-centered** [3044]. **User-Centred** [3246]. **User-Defined** [1733]. **User-Generated** [1596]. **User-Item** [1490]. **User-related** [1977]. **Users** [1809]. **Userspace** [1819]. **Using** [168, 227, 384, 469, 926, 1036, 1144, 1149, 1172, 1258, 1293, 1464, 1469, 1471, 1510, 1539, 1575, 1671, 1736, 1751, 1834, 1889, 1899, 1924, 2087, 2143, 2145, 2172, 2175, 2182, 2217, 2262, 2332, 2473, 2507, 2588, 2741, 2792, 2816, 2849, 2861, 2978, 2988, 3102, 3126, 3159, 3162, 3272, 3285]. **USSR** [198]. **Utilising** [2137]. **Utility** [887, 2935, 3161]. **Utilizing** [2937]. **UWB** [2275]. **UX** [3053].

V [2184, 2780]. **V2X** [2615]. **Validation** [285, 286, 948, 1172, 1328, 1756, 2156, 2884]. **Value** [966, 2919]. **valued** [2203]. **VANET** [1584]. **VANETs** [3012]. **Variability** [1697, 1709]. **Variable** [2753, 2936]. **Variables** [3363]. **Variance** [505, 2455]. **Variants** [1915, 1934, 2344, 2960]. **Variation** [1609]. **Variational** [3020]. **Variety** [1979]. **Various** [1945, 3314]. **Varying** [1445, 2314]. **Vector** [1658, 1916, 2177, 2560, 2605]. **Vehicle** [1440, 1517, 1757, 2146, 2208, 2271, 2667, 3302]. **Vehicles** [1775, 2116, 2154, 2206, 2320, 2405, 2664, 2734, 2765, 3155, 3271]. **Vehicular** [1631, 1692, 1775, 1958, 2132, 2144, 2236, 2434, 3060, 3231, 3275]. **Ventricle** [2428]. **Verifiable** [2419]. **Verification** [285, 733, 734, 879, 883, 946, 985, 1036, 1302, 1304, 1980, 2024, 2059, 2335, 2412, 2442, 2707, 2754, 3079]. **Verification-oriented** [2754]. **verified** [1306]. **Verifying** [262, 1574]. **Versa** [591]. **Version** [471, 1007]. **Versioning** [1116, 1125]. **Versus** [327, 725, 793, 814, 2056]. **Vertex** [1580]. **Vertex-Centric** [1580]. **Vertical** [3115, 3294, 3312]. **Verticals** [2796]. **Vessel** [1228, 3309]. **via** [1020, 1463, 1635, 2010, 2057, 2532, 2782]. **Vice** [591]. **Victim** [2927]. **Video** [623, 625, 626, 631, 643, 1347, 1427, 1569, 1995, 2030, 2038–2040, 2062, 2255, 2305, 2356, 2389, 2418, 2460, 2477, 2618, 2675, 2715, 2941, 2977, 3069, 3080, 3112, 3225, 3341, 3393]. **videoblogging** [1321]. **Videos** [2578, 2630, 2718, 3067, 3224]. **Vienna** [46]. **View** [20, 55, 237, 729, 875, 1023, 1214, 1231, 1897, 2409, 2486, 2517, 2915, 2939, 3233]. **Viewing** [170, 205]. **Views** [383]. **Violations** [1523]. **Violence** [2630]. **Virtual** [27, 696, 865, 1056, 1197, 1378, 1417, 1461, 1468, 1566, 1604, 1668, 2056, 2283, 2350, 2363, 2545, 2546, 2644, 2651, 2684, 3028, 3036, 3100, 3254]. **virtuality** [824]. **Virtualization** [1400, 1423, 1621, 1730, 1936, 2087, 2097, 2811]. **Virtualized** [1601, 1636].

Virtue [1055]. **visibility** [1460]. **Visible** [1575, 1959]. **Vision** [378, 1347, 1690, 1715, 1801, 1955, 2089, 2224, 2252, 2259, 2271, 2368, 2387, 2630, 2698, 2714, 2870, 2924, 2985, 3023, 3088, 3209, 3210, 3340]. **Vision-Based** [2271, 2368, 2630, 2714]. **Visual** [590, 896, 901, 1489, 1679, 1830, 1931, 1949, 1967, 2064, 2099, 2101, 2172, 2234, 3049, 3192, 3236, 3261, 3286, 3320, 3339, 3370]. **Visualization** [684, 785, 897, 1055, 1098, 1117, 1172, 1270, 2330]. **Visualizations** [2448, 2493]. **Visualizing** [1038, 1637]. **Vital** [2606]. **Vlogging** [1321]. **VLSI** [482, 535, 547, 657]. **VM** [160]. **VM/370** [160]. **Vocabulary** [1369, 1920]. **Vocal** [1961, 2856, 2894]. **Voice** [328, 1861, 2268, 2514, 3053, 3149]. **VoIP** [1419, 1458]. **Volatility** [2444]. **Vols** [644, 645, 765, 766, 997, 999]. **Volume** [684, 2889]. **Volunteer** [1983]. **Voronoi** [488]. **Voting** [2247, 2597]. **VPNs** [2703]. **VR** [2403, 3169]. **vs** [1017, 2824]. **Vulnerabilities** [1368, 2119, 2308, 2309, 2313, 2373, 2411, 2622, 3094, 3351, 3364]. **Vulnerability** [1751, 2096, 2212, 2377, 2530, 2617, 2957, 3126].

Waiting [2647]. **Wallets** [2756]. **War** [3308]. **Warm** [2981]. **Warm-Starting** [2981]. **Warning** [3110]. **Watches** [1862]. **Watchmen** [1862]. **Water** [3375]. **Water-IoT** [3375]. **Watermarking** [1265, 3118]. **Wavefront** [3204]. **wavelet** [1327]. **Way** [2125, 2343, 3083]. **Ways** [2321]. **WBAN** [1698]. **WBANs** [2189]. **Weakly** [3181]. **Weakly-supervised** [3181]. **Wearable** [1662, 1787, 1963, 2010, 2104, 2137, 2143, 2935, 2942, 3365]. **web** [724, 862, 895, 975, 1064, 1071, 1109, 1117, 1123, 1127, 1173, 1177, 1203, 1209, 1223, 1226, 1233, 1276, 1296, 1301, 1321, 1335, 1432, 1506, 1588, 1596, 1708, 1734, 1750, 1793, 1866, 1880, 2066, 2164, 2377, 2699, 2736, 2950, 2999]. **Web-based** [1432]. **Web-server** [1203]. **Weight** [2370]. **Weight-Sharing** [2370]. **Welfare** [1705]. **Well** [76]. **Well-Structured** [76]. **We're** [1964]. **We've** [1964]. **Where** [618, 822, 1103, 1318, 1964, 2800, 2824]. **White** [3216]. **Who** [1862, 2936]. **Wi** [3177]. **Wi-Fi** [3177]. **Wide** [1117, 1226, 1291]. **WiFi** [1970, 2661]. **Wikipedia** [2847]. **Wild** [2229]. **Will** [562, 809, 1087, 1123]. **Win** [201, 202]. **windows** [908, 2304]. **Windows-based** [2304]. **Wired** [2381]. **Wireless** [1242, 1269, 1328, 1340, 1380, 1389, 1390, 1392, 1422, 1452, 1507, 1512, 1538, 1539, 1579, 1613, 1645, 1670, 1677, 1698, 1726, 1812, 1827, 2023, 2174, 2187, 2219, 2381, 2518, 2693, 2752, 2785, 2838, 2896, 2959, 2978, 3175]. **within** [1411, 1871, 3176, 3298]. **Without** [592, 767]. **Word** [1294]. **Words** [516]. **Work** [420, 1047, 1048, 1051, 1569, 1918, 1934]. **Workflow** [1160, 1433, 1835, 1846, 1974]. **Workflow-Based** [1846]. **Workflows** [1685, 1992, 2019, 2061]. **Working** [231, 232, 2165, 2789]. **Workload** [1603, 2713, 2898]. **Works** [2963]. **Workshop** [581]. **World** [590, 951, 994, 1117, 1226, 1959, 2553, 2613, 2635, 2880, 2902]. **worlds** [1378, 1417]. **Worm** [1958]. **Wormhole** [1014]. **worn** [1471, 2483]. **Worst** [1938, 2195]. **Worst-Case** [1938]. **Worst-order** [2195]. **WPAD** [2647]. **Write** [443]. **Writing** [5]. **WWW** [622, 911]. **www.acm.org** [1008].

XAI [2624, 2940, 3216, 3336, 3391]. **Xanadu** [1129]. **Xanalogical** [1125]. **XDP** [2067]. **XL** [1454]. **XML** [1113, 1222, 1346, 1759]. **XPath** [1287]. **XR** [2862, 2922, 2989, 3344]. **XR-Enabled** [3344].

Year [1571]. **Years** [1227, 1376, 2379, 2858].

Zero [2788]. **Zero-day** [2788]. **Ziv** [1388]. **Zones** [3060]. **zooming** [1286].

References

Finerman:1969:EN

[1] Aaron Finerman. An editorial note. *ACM Computing Surveys*, 1(1):1, March 1969. CODEN CMSVAN. ISSN 0010-4892.

Dorn:1969:EPa

[2] William S. Dorn. Editor's preview.... *ACM Computing Surveys*, 1(1): 2–5, March 1969. CODEN CMSVAN. ISSN 0010-4892.

Rosen:1969:ECH

[3] Saul Rosen. Electronic computers: a historical survey. *ACM Computing Surveys*, 1(1):7–36, March 1969. CODEN CMSVAN. ISSN 0010-4892.

Rosin:1969:SMS

[4] Robert F. Rosin. Supervisory and monitor systems. *ACM Computing Surveys*, 1(1):37–54, March 1969. CODEN CMSVAN. ISSN 0010-4892.

Glass:1969:EDC

[5] R. L. Glass. An elementary discussion of compiler/interpreter writing. *ACM Computing Surveys*, 1(1):55–77, March 1969. CODEN CMSVAN. ISSN 0010-4892.

Dorn:1969:EPb

[6] William S. Dorn. Editor's preview .... *ACM Computing Surveys*, 1(2): 81–84, June 1969. CODEN CMSVAN. ISSN 0010-4892.

Hoffman:1969:CPS

[7] Lance J. Hoffman. Computers and privacy: a survey. *ACM Computing Surveys*, 1(2):85–103, June 1969. CODEN CMSVAN. ISSN 0010-4892.

McKinney:1969:SAT

[8] J. M. McKinney. A survey of analytical time-sharing models. *ACM Computing Surveys*, 1(2):105–116, June 1969. CODEN CMSVAN. ISSN 0010-4892.

Dodd:1969:EDM

[9] George G. Dodd. Elements of data management systems. *ACM Computing Surveys*, 1(2):117–133, June 1969. CODEN CMSVAN. ISSN 0010-4892.

Dorn:1969:EPc

[10] William S. Dorn. Editor's preview .... *ACM Computing Surveys*, 1(3): 135–138, September 1969. CODEN CMSVAN. ISSN 0010-4892.

Wilkes:1969:GIM

[11] M. V. Wilkes. The growth of interest in microprogramming: a literature survey. *ACM Computing Surveys*, 1(3):139–145, September 1969. CODEN CMSVAN. ISSN 0010-4892.

Rosenfeld:1969:PPC

[12] Azriel Rosenfeld. Picture processing by computer. *ACM Computing Surveys*, 1(3):147–176, September 1969. CODEN CMSVAN. ISSN 0010-4892.

Dorn:1969:EPd

[13] William S. Dorn. Editor's postview .... *ACM Computing Surveys*, 1(3): 177, September 1969. CODEN CMSVAN. ISSN 0010-4892.

Dorn:1969:EPe

[14] William S. Dorn. Editor's preview .... *ACM Computing Surveys*, 1(4): 179–182, December 1969. CODEN CMSVAN. ISSN 0010-4892.

Kent:1969:ALM

[15] William Kent. Assembler-language macroprogramming: a tutorial oriented toward the IBM 360. *ACM Computing Surveys*, 1(4):183–196, December 1969. CODEN CMSVAN. ISSN 0010-4892. See also [31, 32].

Rosin:1969:CCM

[16] Robert F. Rosin. Contemporary concepts of microprogramming and emulation. *ACM Computing Surveys*, 1(4):197–212, December 1969. CODEN CMSVAN. ISSN 0010-4892. See also [33].

Aron:1969:ISP

[17] J. D. Aron. Information systems in perspective. *ACM Computing Surveys*, 1(4):213–236, December 1969. CODEN CMSVAN. ISSN 0010-4892.

Dorn:1970:EPa

[18] William S. Dorn. Editor's preview .... *ACM Computing Surveys*, 2(1): 1–3, March 1970. CODEN CMSVAN. ISSN 0010-4892.

Dolotta:1970:FST

[19] T. A. Dolotta. Functional specifications for typewriter-like time-sharing terminals. *ACM Computing Surveys*, 2(1):5–31, March 1970. CODEN CMSVAN. ISSN 0010-4892.

Beech:1970:SVP

[20] David Beech. A structural view of PL/I. *ACM Computing Surveys*, 2 (1):33–64, March 1970. CODEN CMSVAN. ISSN 0010-4892.

Cohen:1970:LSF

[21] Doron J. Cohen and C. C. Gotlieb. A list structure form of grammars for syntactic analysis. *ACM Computing Surveys*, 2(1):65–82, March 1970. CODEN CMSVAN. ISSN 0010-4892.

Dorn:1970:EPb

[22] William S. Dorn. Editor's preview .... *ACM Computing Surveys*, 2(2): 83–87, June 1970. CODEN CMSVAN. ISSN 0010-4892.

Sedelow:1970:CHF

[23] Sally Yeates Sedelow. The computer in the humanities and fine arts. *ACM Computing Surveys*, 2(2):89–110, June 1970. CODEN CMSVAN. ISSN 0010-4892.

Hellerman:1970:TAS

[24] H. Hellerman and H. J. Smith, Jr. Throughput analysis of some idealized input, output, and compute overlap configurations. *ACM Computing Surveys*, 2(2):111–118, June 1970. CODEN CMSVAN. ISSN 0010-4892.

Chapin:1970:FAS

[25] Ned Chapin. Flowcharting with the ANSI Standard: a tutorial. *ACM Computing Surveys*, 2(2):119–146, June 1970. CODEN CMSVAN. ISSN 0010-4892.

Dorn:1970:EPc

[26] William S. Dorn. Editor's preview .... *ACM Computing Surveys*, 2(3): 147–152, September 1970. CODEN CMSVAN. ISSN 0010-4892.

Denning:1970:VM

[27] Peter J. Denning. Virtual memory. *ACM Computing Surveys*, 2(3):153–189, September 1970. CODEN CMSVAN. ISSN 0010-4892.

MacDougall:1970:CSS

[28] M. H. MacDougall. Computer system simulation: an introduction. *ACM Computing Surveys*, 2(3):191–209, September 1970. CODEN CMSVAN. ISSN 0010-4892.

Smith:1970:DCI

[29] Cecil L. Smith. Digital control of industrial processes. *ACM Computing Surveys*, 2(3):211–241, September 1970. CODEN CMSVAN. ISSN 0010-4892.

Dorn:1970:EPd

[30] William S. Dorn. Editor's postview .... *ACM Computing Surveys*, 2(3): 243, September 1970. CODEN CMSVAN. ISSN 0010-4892.

Christoph:1970:LEA

[31] Albert C. Christoph. Letter to the Editor: "Assembler-Language Macroprogramming: A Tutorial Oriented Toward the IBM 360". *ACM Computing Surveys*, 2(3):243–244, September 1970. CODEN CMSVAN. ISSN 0010-4892. See [15, 32].

Kent:1970:LEA

[32] William Kent. Letter to the Editor: "Assembler-Language Macroprogramming: A Tutorial Oriented Toward the IBM 360". *ACM Computing Surveys*, 2(3):244, September 1970. CODEN CMSVAN. ISSN 0010-4892. See [15, 31].

Rosin:1970:ECC

[33] Robert F. Rosin. Erratum: "Contemporary Concepts of Microprogramming and Emulation". *ACM Computing Surveys*, 2(3):244, September 1970. CODEN CMSVAN. ISSN 0010-4892. See [16].

Knuth:1970:NFC

[34] Donald E. Knuth. Von Neumann's first computer program. *ACM Computing Surveys*, 2(4):247–260, December 1970. CODEN CMSVAN. ISSN 0010-4892. Reprinted in [3397].

Smith:1970:SIG

[35] Lyle B. Smith. A survey of interactive graphical systems for mathematics. *ACM Computing Surveys*, 2(4):261–301, December 1970. CODEN CMSVAN. ISSN 0010-4892.

Williams:1971:SDS

[36] Robin Williams. A survey of data structures for computer graphics systems. *ACM Computing Surveys*, 3(1):1–21, March 1971. CODEN CMSVAN. ISSN 0010-4892.

Foster:1971:UTS

[37] Caxton C. Foster. An unclever time-sharing system. *ACM Computing Surveys*, 3(1):23–48, March 1971. CODEN CMSVAN. ISSN 0010-4892.

Price:1971:TLT

[38] C. E. Price. Table lookup techniques. *ACM Computing Surveys*, 3(2):49–64, June 1971. CODEN CMSVAN. ISSN 0010-4892.

Coffman:1971:SD

[39] E. G. Coffman, M. J. Elphick, and A. Shoshani. System deadlocks. *ACM Computing Surveys*, 3(2):67–78, June 1971. CODEN CMSVAN. ISSN 0010-4892.

Lucas:1971:PEM

[40] Henry C. Lucas, Jr. Performance evaluation and monitoring. *ACM Computing Surveys*, 3(3):79–91, September 1971. CODEN CMSVAN. ISSN 0010-4892.

vanDam:1971:LTE

[41] Andries van Dam and David E. Rice. On-line text editing: a survey. *ACM Computing Surveys*, 3(3):93–114, September 1971. CODEN CMSVAN. ISSN 0010-4892.

Ledgard:1971:TML

[42] Henry F. Ledgard. Ten mini-languages: a study of topical issues in programming languages. *ACM Computing Surveys*, 3(3):115–146, September 1971. CODEN CMSVAN. ISSN 0010-4892.

Martin:1971:S

[43] W. A. Martin. Sorting. *ACM Computing Surveys*, 3(4):147–174, December 1971. CODEN CMSVAN. ISSN 0010-4892.

Denning:1971:TGC

[44] Peter J. Denning. Third generation computer systems. *ACM Computing Surveys*, 3(4):175–216, December 1971. CODEN CMSVAN. ISSN 0010-4892.

Denning:1972:NPD

[45] Peter J. Denning. A note on paging drum efficiency. *ACM Computing Surveys*, 4(1):1–3, March 1972. CODEN CMSVAN. ISSN 0010-4892.

Wegner:1972:VDL

[46] Peter Wegner. The Vienna Definition Language. *ACM Computing Surveys*, 4(1):5–63, March 1972. CODEN CMSVAN. ISSN 0010-4892.

Schucany:1972:SSP

[47] W. R. Schucany, Paul D. Minton, and B. Stanley Shannon, Jr. A survey of statistical packages. *ACM Computing Surveys*, 4(2):65–79, June 1972. CODEN CMSVAN. ISSN 0010-4892.

Nievergelt:1972:WMC

[48] J. Nievergelt and J. C. Farrar. What machines can and cannot do. *ACM Computing Surveys*, 4(2):81–96, June 1972. CODEN CMSVAN. ISSN 0010-4892.

Elspas:1972:ATP

[49] Bernard Elspas, Karl N. Levitt, Richard J. Waldinger, and Abraham Waksman. An assessment of techniques for proving program correctness. *ACM Computing Surveys*, 4(2):97–147, June 1972. CODEN CMSVAN. ISSN 0010-4892.

Weiss:1972:A

[50] Eric A. Weiss. An appreciation. *ACM Computing Surveys*, 4(3):147, September 1972. CODEN CMSVAN. ISSN 0010-4892.

Presser:1972:LL

[51] Leon Presser and John R. White. Linkers and loaders. *ACM Computing Surveys*, 4(3):149–167, September 1972. CODEN CMSVAN. ISSN 0010-4892.

Hoare:1972:I

[52] C. A. R. Hoare and D. C. S. Allison. Incomputability. *ACM Computing Surveys*, 4(3):169–178, September 1972. CODEN CMSVAN. ISSN 0010-4892.

Holt:1972:SDP

[53] Richard C. Holt. Some deadlock properties of computer systems. *ACM Computing Surveys*, 4(3):179–196, September 1972. CODEN CMSVAN. ISSN 0010-4892.

Stutzman:1972:DCC

[54] Byron W. Stutzman. Data communication control procedures. *ACM Computing Surveys*, 4(4):197–220, December 1972. CODEN CMSVAN. ISSN 0010-4892.

Barnes:1972:PVA

[55] Bruce H. Barnes. A programmer's view of automata. *ACM Computing Surveys*, 4(4):221–239, December 1972. CODEN CMSVAN. ISSN 0010-4892.

Willoughby:1972:SMF

[56] Theodore C. Willoughby. Staffing the MIS function. *ACM Computing Surveys*, 4(4):241–259, December 1972. CODEN CMSVAN. ISSN 0010-4892.

Organick:1973:EP

[57] Elliott I. Organick. Editorial policy .... *ACM Computing Surveys*, 5(1): 1–3, March 1973. CODEN CMSVAN. ISSN 0010-4892.

Horning:1973:PS

[58] J. J. Horning and B. Randell. Process structuring. *ACM Computing Surveys*, 5(1):5–30, March 1973. CODEN CMSVAN. ISSN 0010-4892.

Baer:1973:SST

[59] J. L. Baer. A survey of some theoretical aspects of multiprocessing. *ACM Computing Surveys*, 5(1):31–80, March 1973. CODEN CMSVAN. ISSN 0010-4892.

Rosenfeld:1973:PPP

[60] Azriel Rosenfeld. Progress in picture processing: 1969–71. *ACM Computing Surveys*, 5(2):81–108, June 1973. CODEN CMSVAN. ISSN 0010-4892.

Pooch:1973:SIT

[61] Udo W. Pooch and Al Nieder. A survey of indexing techniques for sparse matrices. *ACM Computing Surveys*, 5(2):109–133, June 1973. CODEN CMSVAN. ISSN 0010-4892.

White:1973:SRC

[62] William W. White. A status report on computing algorithms for mathematical programming. *ACM Computing Surveys*, 5(3):135–166, September 1973. CODEN CMSVAN. ISSN 0010-4892.

Couger:1973:EBS

[63] J. Daniel Couger. Evolution of business system analysis techniques. *ACM Computing Surveys*, 5(3):167–198, September 1973. CODEN CMSVAN. ISSN 0010-4892.

Timmreck:1973:CSM

[64] E. M. Timmreck. Computer selection methodology. *ACM Computing Surveys*, 5(4):200–222, December 1973. CODEN CMSVAN. ISSN 0010-4892.

BrinchHansen:1973:CPC

[65] Per Brinch Hansen. Concurrent programming concepts. *ACM Computing Surveys*, 5(4):223–245, December 1973. CODEN CMSVAN. ISSN 0010-4892.

Sutherland:1974:CTH

[66] Ivan E. Sutherland, Robert F. Sproull, and Robert A. Schumacker. A characterization of ten hidden-surface algorithms. *ACM Computing Surveys*, 6(1):1–55, March 1974. CODEN CMSVAN. ISSN 0010-4892.

Freeman:1974:CPL

[67] Herbert Freeman. Computer processing of line-drawing images. *ACM Computing Surveys*, 6(1):57–97, March 1974. CODEN CMSVAN. ISSN 0010-4892.

Aho:1974:LP

[68] A. V. Aho and S. C. Johnson. LR parsing. *ACM Computing Surveys*, 6 (2):99–124, June 1974. CODEN CMSVAN. ISSN 0010-4892.

Pooch:1974:TDT

[69] Udo W. Pooch. Translation of decision tables. *ACM Computing Surveys*, 6(2):125–151, June 1974. CODEN CMSVAN. ISSN 0010-4892. See [79].

Bobrow:1974:NPL

[70] Daniel G. Bobrow and Bertram Raphael. New programming languages for artificial intelligence research. *ACM Computing Surveys*, 6(3):153–174, September 1974. CODEN CMSVAN. ISSN 0010-4892.

Severance:1974:ISM

[71] Dennis G. Severance. Identifier search mechanisms: a survey and generalized model. *ACM Computing Surveys*, 6(3):175–194, September 1974. CODEN CMSVAN. ISSN 0010-4892.

Nievergelt:1974:BST

[72] J. Nievergelt. Binary search trees and file organisation. *ACM Computing Surveys*, 6(3):195–207, September 1974. CODEN CMSVAN. ISSN 0010-4892.

Denning:1974:GEO

[73] Peter J. Denning. Guest Editor's overview .... *ACM Computing Surveys*, 6(4):209–211, December 1974. CODEN CMSVAN. ISSN 0010-4892.

Brown:1974:PDS

[74] P. J. Brown. Programming and documenting software projects. *ACM Computing Surveys*, 6(4):213–220, December 1974. CODEN CMSVAN. ISSN 0010-4892.

Yohe:1974:OPP

[75] J. M. Yohe. An overview of programming practices. *ACM Computing Surveys*, 6(4):221–245, December 1974. CODEN CMSVAN. ISSN 0010-4892.

Wirth:1974:CWS

[76] Niklaus Wirth. On the composition of well-structured programs. *ACM Computing Surveys*, 6(4):247–259, December 1974. CODEN CMSVAN. ISSN 0010-4892.

Knuth:1974:SPG

[77] Donald E. Knuth. Structured programming with `go to` statements. *ACM Computing Surveys*, 6(4):261–301, December 1974. CODEN CMSVAN. ISSN 0010-4892. Reprinted with revisions in *Current Trends in Programming Methodology*, Raymond T. Yeh, ed., **1** (Englewood Cliffs, NJ: Prentice-Hall, 1977), 140–194; *Classics in Software Engineering*, Edward Nash Yourdon, ed. (New York: Yourdon Press, 1979), 259–321. Reprinted with "final" revisions in [3398, pp. 17–89].

Kernighan:1974:PSE

[78] Brian W. Kernighan and P. J. Plauger. Programming style: Examples and counterexamples. *ACM Computing Surveys*, 6(4):303–319, December 1974. CODEN CMSVAN. ISSN 0010-4892.

Pooch:1974:CTD

[79] Udo W. Pooch. Corrigendum: "Translation of Decision Tables". *ACM Computing Surveys*, 6(4):321, December 1974. CODEN CMSVAN. ISSN 0010-4892. See [69].

Organick:1975:EO

[80] Elliott I. Organick. Editor's overview. *ACM Computing Surveys*, 7(1):1, March 1975. CODEN CMSVAN. ISSN 0010-4892.

Maurer:1975:HTM

[81] W. D. Maurer and T. G. Lewis. Hash table methods. *ACM Computing Surveys*, 7(1):5–19, March 1975. CODEN CMSVAN. ISSN 0010-4892.

Presser:1975:MC

[82] Leon Presser. Multiprogramming coordination. *ACM Computing Surveys*, 7(1):21–44, March 1975. CODEN CMSVAN. ISSN 0010-4892. See also [94].

Mooers:1975:CSC

[83] Calvin N. Mooers. Computer software and copyright. *ACM Computing Surveys*, 7(1):45–72, March 1975. CODEN CMSVAN. ISSN 0010-4892.

Boyse:1975:SMC

[84] John W. Boyse and David R. Warn. A straightforward model for computer performance prediction. *ACM Computing Surveys*, 7(2):73–93, June 1975. CODEN CMSVAN. ISSN 0010-4892.

Cotton:1975:MMC

[85] Ira W. Cotton. Microeconomics and the market for computer services. *ACM Computing Surveys*, 7(2):95–111, June 1975. CODEN CMSVAN. ISSN 0010-4892.

Huang:1975:APT

[86] J. C. Huang. An approach to program testing. *ACM Computing Surveys*, 7(3):113–128, September 1975. CODEN CMSVAN. ISSN 0010-4892.

Kimbleton:1975:CCN

[87] Stephen R. Kimbleton and G. Michael Schneider. Computer communication networks: Approaches, objectives, and performance considerations. *ACM Computing Surveys*, 7(3):129–173, September 1975. CODEN CMSVAN. ISSN 0010-4892.

Organick:1975:EPU

[88] Elliott I. Organick. Editorial policy update. *ACM Computing Surveys*, 7(4):173, December 1975. CODEN CMSVAN. ISSN 0010-4892.

Patil:1975:GEN

[89] Suhas S. Patil. Guest Editor's note .... *ACM Computing Surveys*, 7(4): 175, December 1975. CODEN CMSVAN. ISSN 0010-4892.

Keller:1975:LAP

[90] Robert M. Keller. Look-ahead processors. *ACM Computing Surveys*, 7 (4):177–195, December 1975. CODEN CMSVAN. ISSN 0010-4892.

Anderson:1975:CIS

[91] George A. Anderson and E. Douglas Jensen. Computer interconnection structures: Taxonomy, characteristics, and examples. *ACM Computing Surveys*, 7(4):197–213, December 1975. CODEN CMSVAN. ISSN 0010-4892.

Thurber:1975:APP

[92] Kenneth J. Thurber and Leon D. Wald. Associative and parallel processors. *ACM Computing Surveys*, 7(4):215–255, December 1975. CODEN CMSVAN. ISSN 0010-4892.

Organick:1975:EN

[93] Elliott I. Organick. Editor's note. *ACM Computing Surveys*, 7(4):257, December 1975. CODEN CMSVAN. ISSN 0010-4892.

Presser:1975:CMC

[94] Leon Presser. Corrigendum: "Multiprogramming Coordination". *ACM Computing Surveys*, 7(4):257, December 1975. CODEN CMSVAN. ISSN 0010-4892. See [82].

Sibley:1976:GEI

[95] E. H. Sibley. Guest Editor's introduction: The development of data-base technology. *ACM Computing Surveys*, 8(1):1–5, March 1976. CODEN CMSVAN. ISSN 0010-4892.

Fry:1976:EDB

[96] James P. Fry and Edgar H. Sibley. Evolution of data-base management systems. *ACM Computing Surveys*, 8(1):7–42, March 1976. CODEN CMSVAN. ISSN 0010-4892.

Chamberlin:1976:RDB

[97] Donald D. Chamberlin. Relational data-base management systems. *ACM Computing Surveys*, 8(1):43–66, March 1976. CODEN CMSVAN. ISSN 0010-4892. Reprinted in A. R. Hurson, L. L. Miller, and S. H. Pakzad, Parallel Architectures for Database Systems, IEEE Computer Society Press, Washington, DC, 1989.

Taylor:1976:CDB

[98] Robert W. Taylor and Randall L. Frank. CODASYL data-base management systems. *ACM Computing Surveys*, 8(1):67–103, March 1976. CODEN CMSVAN. ISSN 0010-4892.

Tsichritzis:1976:HDB

[99] D. C. Tsichritzis and F. H. Lochovsky. Hierarchical data-base management: a survey. *ACM Computing Surveys*, 8(1):105–123, March 1976. CODEN CMSVAN. ISSN 0010-4892.

Michaels:1976:CRC

[100] Ann S. Michaels, Benjamin Mittman, and C. Robert Carlson. A comparison of the relational and CODASYL approaches to data-base management. *ACM Computing Surveys*, 8(1):125–151, March 1976. CODEN CMSVAN. ISSN 0010-4892.

Organick:1976:EO

[101] Elliott I. Organick. Editorial overview. *ACM Computing Surveys*, 8(2): 153, June 1976. CODEN CMSVAN. ISSN 0010-4892.

Tanenbaum:1976:TA

[102] Andrew S. Tanenbaum. A tutorial on Algol 68. *ACM Computing Surveys*, 8(2):155–190, June 1976. CODEN CMSVAN. ISSN 0010-4892. See also [131].

Marcotty:1976:SFD

[103] Michael Marcotty, Henry F. Ledgard, and Gregor V. Bochmann. A sampler of formal definitions. *ACM Computing Surveys*, 8(2):191–276, June 1976. CODEN CMSVAN. ISSN 0010-4892. See also [121–123].

Reddi:1976:CFC

[104] S. S. Reddi and E. A. Feustel. A conceptual framework for computer architecture. *ACM Computing Surveys*, 8(2):277–300, June 1976. CODEN CMSVAN. ISSN 0010-4892.

Yeh:1976:GEa

[105] Raymond T. Yeh. Guest editorial .... *ACM Computing Surveys*, 8(3): 301–303, September 1976. CODEN CMSVAN. ISSN 0010-4892. Special Issue on Reliable Software: Part I: Software Validation.

Fosdick:1976:DFA

[106] Lloyd D. Fosdick and Leon J. Osterweil. Data flow analysis in software reliability. *ACM Computing Surveys*, 8(3):305–330, September 1976. CODEN CMSVAN. ISSN 0010-4892.

Hantler:1976:IPC

[107] Sidney L. Hantler and James C. King. An introduction to proving the correctness of programs. *ACM Computing Surveys*, 8(3):331–353, September 1976. CODEN CMSVAN. ISSN 0010-4892.

Yeh:1976:GEb

[108] Raymond T. Yeh. Guest editorial .... *ACM Computing Surveys*, 8(4): 355–357, December 1976. CODEN CMSVAN. ISSN 0010-4892. Special Issue on Reliable Software: Part II: Fault-Tolerant Software.

Denning:1976:FTO

[109] Peter J. Denning. Fault tolerant operating systems. *ACM Computing Surveys*, 8(4):359–389, December 1976. CODEN CMSVAN. ISSN 0010-4892. See also [120, 128–130].

Hecht:1976:FTS

[110] H. Hecht. Fault-tolerant software for real-time applications. *ACM Computing Surveys*, 8(4):391–407, December 1976. CODEN CMSVAN. ISSN 0010-4892.

Linden:1976:OSS

[111] Theodore A. Linden. Operating system structures to support security and reliable software. *ACM Computing Surveys*, 8(4):409–445, December 1976. CODEN CMSVAN. ISSN 0010-4892. See also [128–130].

Feng:1977:GEO

[112] Tse-Yun Feng. Guest editorial: an overview of parallel processors and processing. *ACM Computing Surveys*, 9(1):1–2, March 1977. CODEN CMSVAN. ISSN 0010-4892.

Yau:1977:APA

[113] S. S. Yau and H. S. Fung. Associative processor architecture — a survey. *ACM Computing Surveys*, 9(1):3–27, March 1977. CODEN CMSVAN. ISSN 0010-4892.

Kuck:1977:SPM

[114] David J. Kuck. A survey of parallel machine organization and programming. *ACM Computing Surveys*, 9(1):29–59, March 1977. CODEN CMSVAN. ISSN 0010-4892.

Ramamoorthy:1977:PA

[115] C. V. Ramamoorthy and H. F. Li. Pipeline architecture. *ACM Computing Surveys*, 9(1):61–102, March 1977. CODEN CMSVAN. ISSN 0010-4892. See also [176].

Enslow:1977:MOS

[116] Philip H. Enslow, Jr. Multiprocessor organization — a survey. *ACM Computing Surveys*, 9(1):103–129, March 1977. CODEN CMSVAN. ISSN 0010-4892.

Denning:1977:ATIa

[117] Peter J. Denning. About this issue .... *ACM Computing Surveys*, 9(2): 131, June 1977. CODEN CMSVAN. ISSN 0010-4892.

Denning:1977:EP

[118] Peter J. Denning. Editorial policy. *ACM Computing Surveys*, 9(2):133–135, June 1977. CODEN CMSVAN. ISSN 0010-4892.

Sedgewick:1977:PGM

[119] Robert Sedgewick. Permutation generation methods. *ACM Computing Surveys*, 9(2):137–164, June 1977. CODEN CMSVAN. ISSN 0010-4892. See also [136–138].

Levin:1977:SFA

[120] Roy Levin and Peter J. Denning. Surveyor's forum: an amplification on Hydra's capabilities. *ACM Computing Surveys*, 9(2):165, June 1977. CODEN CMSVAN. ISSN 0010-4892. See [109].

Donahue:1977:SFC

[121] James Donahue. Surveyor's forum: a criticism of sampler. *ACM Computing Surveys*, 9(2):166–167, June 1977. CODEN CMSVAN. ISSN 0010-4892. See [103, 122, 123].

Marcotty:1977:SFC

[122] Michael Marcotty and Henry F. Ledgard. Surveyor's forum: a criticism of sampler. *ACM Computing Surveys*, 9(2):167–168, June 1977. CODEN CMSVAN. ISSN 0010-4892. See [103, 121, 123].

Marcotty:1977:CSF

[123] Michael Marcotty, Henry F. Ledgard, and Gregor V. Bochmann. Corrigendum: "A Sampler of Formal Definitions". *ACM Computing Surveys*, 9(2):168, June 1977. CODEN CMSVAN. ISSN 0010-4892. See [103, 121, 122].

Denning:1977:ATIb

[124] Peter J. Denning. About this issue .... *ACM Computing Surveys*, 9(3): 171–172, September 1977. CODEN CMSVAN. ISSN 0010-4892.

Gonzalez:1977:DPS

[125] Mario J. Gonzalez, Jr. Deterministic processor scheduling. *ACM Computing Surveys*, 9(3):173–204, September 1977. CODEN CMSVAN. ISSN 0010-4892.

Lipsky:1977:AQN

[126] Lester Lipsky and J. D. Church. Applications of a queueing network model for a computer system. *ACM Computing Surveys*, 9(3):205–221, September 1977. CODEN CMSVAN. ISSN 0010-4892. See also [144, 145].

Peterson:1977:PN

[127] James L. Peterson. Petri nets. *ACM Computing Surveys*, 9(3):223–252, September 1977. CODEN CMSVAN. ISSN 0010-4892. See also [146, 147].

Iliffe:1977:SFE

[128] J. K. Iliffe. Surveyor's forum: an error recovery. *ACM Computing Surveys*, 9(3):253–254, September 1977. CODEN CMSVAN. ISSN 0010-4892. See [109, 111, 129, 130].

Dennis:1977:SFE

[129] Jack B. Dennis. Surveyor's forum: An error recovery. *ACM Computing Surveys*, 9(3):254, September 1977. CODEN CMSVAN. ISSN 0010-4892. See [109, 111, 128, 130].

Denning:1977:SFE

[130] Peter J. Denning. Surveyor's forum: an error recovery. *ACM Computing Surveys*, 9(3):254–255, September 1977. CODEN CMSVAN. ISSN 0010-4892. See [109, 111, 128, 129].

Tanenbaum:1977:CTA

[131] Andrew S. Tanenbaum. Corrigenda: "A Tutorial on Algol 68". *ACM Computing Surveys*, 9(3):255–256, September 1977. CODEN CMSVAN. ISSN 0010-4892. See [102].

Denning:1977:AIL

[132] Peter J. Denning. About this issue .... *ACM Computing Surveys*, 9(4): 257, December 1977. CODEN CMSVAN. ISSN 0010-4892.

Severance:1977:PAS

[133] D. G. Severance and J. V. Carlis. A practical approach to selecting record access paths. *ACM Computing Surveys*, 9(4):259–272, December 1977. CODEN CMSVAN. ISSN 0010-4892.

Taggart:1977:SIR

[134] William M. Taggart, Jr. and Marvin O. Tharp. A survey of information requirements analysis techniques. *ACM Computing Surveys*, 9(4):273–290, December 1977. CODEN CMSVAN. ISSN 0010-4892.

Weide:1977:SAT

[135] Bruce Weide. A survey of analysis techniques for discrete algorithms. *ACM Computing Surveys*, 9(4):291–313, December 1977. CODEN CMSVAN. ISSN 0010-4892. See also [163, 164, 181, 182].

Sedgewick:1977:CPG

[136] Robert Sedgewick. Corrigenda: "Permutation Generation Methods". *ACM Computing Surveys*, 9(4):314, December 1977. CODEN CMSVAN. ISSN 0010-4892. See [119, 137, 138].

Parsons:1977:SFF

[137] Thomas W. Parsons. Surveyor's forum: a forgotten generation of permutations. *ACM Computing Surveys*, 9(4):315, December 1977. CODEN CMSVAN. ISSN 0010-4892. See [119, 136, 138].

MacCallum:1977:SFF

[138] I. R. MacCallum. Surveyor's forum: a forgotten generation of permutations. *ACM Computing Surveys*, 9(4):316–317, December 1977. CODEN CMSVAN. ISSN 0010-4892. See [119, 136, 137].

Denning:1978:ATIa

[139] Peter J. Denning. About this issue .... *ACM Computing Surveys*, 10(1): 1–2, March 1978. CODEN CMSVAN. ISSN 0010-4892.

Fitzsimmons:1978:RES

[140] Ann Fitzsimmons and Tom Love. A review and evaluation of software science. *ACM Computing Surveys*, 10(1):3–18, March 1978. CODEN CMSVAN. ISSN 0010-4892. See also [171–173, 201, 202].

King:1978:CBA

[141] John Leslie King and Edward L. Schrems. Cost-benefit analysis in information systems development and operation. *ACM Computing Surveys*, 10(1):19–34, March 1978. CODEN CMSVAN. ISSN 0010-4892.

Sandewall:1978:PIE

[142] Erik Sandewall. Programming in an interactive environment: the "Lisp" experience. *ACM Computing Surveys*, 10(1):35–71, March 1978. CODEN CMSVAN. ISSN 0010-4892. See also [174, 175].

Srodawa:1978:PEM

[143] Ronald J. Srodawa. Positive experiences with a multiprocessing system. *ACM Computing Surveys*, 10(1):73–82, March 1978. CODEN CMSVAN. ISSN 0010-4892.

Phister:1978:SFP

[144] Montgomery Phister, Jr. Surveyor's forum: Putting costs through effectively. *ACM Computing Surveys*, 10(1):83, March 1978. CODEN CMSVAN. ISSN 0010-4892. See [126, 145].

Lipsky:1978:SFP

[145] Lester Lipsky and James D. Church. Surveyor's forum: Putting costs through effectively: Author's reply. *ACM Computing Surveys*, 10(1): 83–84, March 1978. CODEN CMSVAN. ISSN 0010-4892. See [126, 144].

Genrich:1978:SFN

[146] H. J. Genrich and P. S. Thiagarajan. Surveyor's forum: Net progress. *ACM Computing Surveys*, 10(1):84–85, March 1978. CODEN CMSVAN. ISSN 0010-4892. See [127, 147].

Peterson:1978:SFN

[147] James Peterson. Surveyor's forum: Net progress: Author's reply. *ACM Computing Surveys*, 10(1):85, March 1978. CODEN CMSVAN. ISSN 0010-4892. See [127, 146].

Denning:1978:ATIb

[148] Peter J. Denning. About this issue .... *ACM Computing Surveys*, 10(2): 87, June 1978. CODEN CMSVAN. ISSN 0010-4892.

Denning:1978:EP

[149] Peter J. Denning. Editorial policy. *ACM Computing Surveys*, 10(2): 89–92, June 1978. CODEN CMSVAN. ISSN 0010-4892.

Davis:1978:SBU

[150] N. C. Davis and S. E. Goodman. The Soviet Bloc's unified system of computers. *ACM Computing Surveys*, 10(2):93–122, June 1978. CODEN CMSVAN. ISSN 0010-4892.

Randell:1978:RIC

[151] B. Randell, P. A. Lee, and P. C. Treleaven. Reliability issues in computing system design. *ACM Computing Surveys*, 10(2):123–165, June 1978. CODEN CMSVAN. ISSN 0010-4892.

Verhofstad:1978:RTD

[152] Joost S. M. Verhofstad. Recovery techniques for database systems. *ACM Computing Surveys*, 10(2):167–195, June 1978. CODEN CMSVAN. ISSN 0010-4892.

Zelkowitz:1978:PSE

[153] Marvin V. Zelkowitz. Perspectives in software engineering. *ACM Computing Surveys*, 10(2):197–216, June 1978. CODEN CMSVAN. ISSN 0010-4892. See also [183, 184, 214, 215].

Relles:1978:SFD

[154] Nathan Relles. Surveyor's forum: Devising the rhetoric of rhetorical devices. *ACM Computing Surveys*, 10(2):217, June 1978. CODEN CMSVAN. ISSN 0010-4892.

Graham:1978:GEO

[155] G. Scott Graham. Guest Editor's overview... queuing network models of computer system performance. *ACM Computing Surveys*, 10(3):219–224, September 1978. CODEN CMSVAN. ISSN 0010-4892.

Denning:1978:OAQ

[156] Peter J. Denning and Jeffrey P. Buzen. The operational analysis of queueing network models. *ACM Computing Surveys*, 10(3):225–261, September 1978. CODEN CMSVAN. ISSN 0010-4892. See [185, 186].

Rose:1978:MPQ

[157] Clifford A. Rose. A measurement procedure for queueing network models of computer systems. *ACM Computing Surveys*, 10(3):263–280, September 1978. CODEN CMSVAN. ISSN 0010-4892.

Chandy:1978:AMA

[158] K. Mani Chandy and Charles H. Sauer. Approximate methods for analyzing queueing network models of computing systems. *ACM Comput-*

ing Surveys, 10(3):281–317, September 1978. CODEN CMSVAN. ISSN 0010-4892.

Buzen:1978:QNM

[159] Jeffrey P. Buzen. A queueing network model of MVS. *ACM Computing Surveys*, 10(3):319–331, September 1978. CODEN CMSVAN. ISSN 0010-4892.

Bard:1978:VPP

[160] Y. Bard. The VM/370 performance predictor. *ACM Computing Surveys*, 10(3):333–342, September 1978. CODEN CMSVAN. ISSN 0010-4892.

Wong:1978:QNM

[161] J. W. Wong. Queueing network modeling of computer communication networks. *ACM Computing Surveys*, 10(3):343–351, September 1978. CODEN CMSVAN. ISSN 0010-4892.

Muntz:1978:QNC

[162] Richard R. Muntz. Queueing networks: a critique of the state of the art and directions for the future. *ACM Computing Surveys*, 10(3):353–359, September 1978. CODEN CMSVAN. ISSN 0010-4892. See also [187, 188].

Gaschnig:1978:SFE

[163] John Gaschnig. Surveyor's forum: Experimental analysis discretely done. *ACM Computing Surveys*, 10(3):361, September 1978. CODEN CMSVAN. ISSN 0010-4892. See [135, 164, 181, 182].

Weide:1978:SFE

[164] Bruce W. Weide. Surveyor's forum: Experimental analysis discretely done: Author's reply. *ACM Computing Surveys*, 10(3):361–362, September 1978. CODEN CMSVAN. ISSN 0010-4892. See [135, 163, 181, 182].

Denning:1978:ATIc

[165] Peter J. Denning. About this issue .... *ACM Computing Surveys*, 10(4): 363–364, December 1978. CODEN CMSVAN. ISSN 0010-4892. Special Issue: Graphics Standards.

Newman:1978:RET

[166] William M. Newman and Andries van Dam. Recent efforts towards graphics standardization. *ACM Computing Surveys*, 10(4):365–380, December 1978. CODEN CMSVAN. ISSN 0010-4892.

Michener:1978:FOC

[167] James C. Michener and Andries van Dam. Functional overview of the Core System with glossary. *ACM Computing Surveys*, 10(4):381–387, December 1978. CODEN CMSVAN. ISSN 0010-4892.

Bergeron:1978:GPU

[168] R. Daniel Bergeron, Peter R. Bono, and James D. Foley. Graphics programming using the Core System. *ACM Computing Surveys*, 10(4):389–443, December 1978. CODEN CMSVAN. ISSN 0010-4892.

Michener:1978:SMI

[169] James C. Michener and James D. Foley. Some major issues in the design of the Core Graphics System. *ACM Computing Surveys*, 10(4):445–463, December 1978. CODEN CMSVAN. ISSN 0010-4892.

Carlbom:1978:PGP

[170] Ingrid Carlbom and Joseph Paciorek. Planar geometric projections and viewing transformations. *ACM Computing Surveys*, 10(4):465–502, December 1978. CODEN CMSVAN. ISSN 0010-4892. See also [203–205].

Moranda:1978:SFS

[171] Paul B. Moranda. Surveyor's forum: Is software science hard? *ACM Computing Surveys*, 10(4):503–504, December 1978. CODEN CMSVAN. ISSN 0010-4892. See [140, 172, 173, 201, 202].

Baker:1978:SFS

[172] T. P. Baker. Surveyor's forum: Is software science hard? *ACM Computing Surveys*, 10(4):504, December 1978. CODEN CMSVAN. ISSN 0010-4892. See [140, 171, 173, 201, 202].

Fitzsimmons:1978:SFS

[173] Ann Fitzsimmons and Tom Love. Surveyor's forum: Is software science hard? *ACM Computing Surveys*, 10(4):504–505, December 1978. CODEN CMSVAN. ISSN 0010-4892. See [140, 171, 172, 201, 202].

Stallman:1978:SFS

[174] Richard M. Stallman. Surveyor's forum: Structured editing with a Lisp. *ACM Computing Surveys*, 10(4):505–507, December 1978. CODEN CMSVAN. ISSN 0010-4892. See [142, 175].

Sandewall:1978:SFS

[175] Erik Sandewall. Surveyor's forum: Structured editing with a Lisp. *ACM Computing Surveys*, 10(4):507–508, December 1978. CODEN CMSVAN. ISSN 0010-4892. See [142, 174].

Ramamoorthy:1978:CPA

[176] C. V. Ramamoorthy and H. F. Li. Corrigenda: "Pipeline Architecture". *ACM Computing Surveys*, 10(4):508, December 1978. CODEN CMSVAN. ISSN 0010-4892. See [115].

Denning:1979:AIL

[177] Peter J. Denning. About this issue .... *ACM Computing Surveys*, 11(1):1, March 1979. CODEN CMSVAN. ISSN 0010-4892.

Bernard:1979:MIC

[178] Dan Bernard. Management issues in cooperative computing. *ACM Computing Surveys*, 11(1):3–17, March 1979. CODEN CMSVAN. ISSN 0010-4892.

Badler:1979:DRH

[179] Norman I. Badler and Stephen W. Smoliar. Digital representations of human movement. *ACM Computing Surveys*, 11(1):19–38, March 1979. CODEN CMSVAN. ISSN 0010-4892. See also [217].

Dasgupta:1979:OMS

[180] Subrata Dasgupta. The organization of microprogram stores. *ACM Computing Surveys*, 11(1):39–65, March 1979. CODEN CMSVAN. ISSN 0010-4892.

Bender:1979:SFR

[181] Edward A. Bender. Surveyor's forum: a recurrent problem. *ACM Computing Surveys*, 11(1):67–68, March 1979. CODEN CMSVAN. ISSN 0010-4892. See [135, 163, 164, 182].

Weide:1979:SFR

[182] Bruce W. Weide. Surveyor's forum: a recurrent problem. *ACM Computing Surveys*, 11(1):68, March 1979. CODEN CMSVAN. ISSN 0010-4892. See [135, 163, 164, 181].

Wendel:1979:SFR

[183] Irving K. Wendel. Surveyor's forum: The real costs of software. *ACM Computing Surveys*, 11(1):68, March 1979. CODEN CMSVAN. ISSN 0010-4892. See [153, 184, 214, 215].

Zelkowitz:1979:SFR

[184] Marvin Zelkowitz. Surveyor's forum: The real costs of software. *ACM Computing Surveys*, 11(1):69, March 1979. CODEN CMSVAN. ISSN 0010-4892. See [153, 183, 214, 215].

Bard:1979:SFS

[185] Yonathan Bard. Surveyor's forum: Stochastic or operational? *ACM Computing Surveys*, 11(1):69–70, March 1979. CODEN CMSVAN. ISSN 0010-4892. See [156, 186].

Buzen:1979:SFS

[186] Jeffrey P. Buzen and Peter J. Denning. Surveyor's forum: Stochastic or operational? *ACM Computing Surveys*, 11(1):70, March 1979. CODEN CMSVAN. ISSN 0010-4892. See [156, 185].

Buzen:1979:SFP

[187] Jeffrey P. Buzen. Surveyor's forum: a predictable problem. *ACM Computing Surveys*, 11(1):71–72, March 1979. CODEN CMSVAN. ISSN 0010-4892. See [162, 188].

Muntz:1979:SFP

[188] Richard R. Muntz. Surveyor's forum: a predictable problem. *ACM Computing Surveys*, 11(1):72, March 1979. CODEN CMSVAN. ISSN 0010-4892. See [162, 187].

Goldberg:1979:AILa

[189] Adele Goldberg. About this issue .... *ACM Computing Surveys*, 11(2):73–74, June 1979. CODEN CMSVAN. ISSN 0010-4892.

Goldberg:1979:EP

[190] Adele Goldberg. Editorial policy. *ACM Computing Surveys*, 11(2):75–78, June 1979. CODEN CMSVAN. ISSN 0010-4892.

Cohen:1979:NDA

[191] Jacques Cohen. Non-deterministic algorithms. *ACM Computing Surveys*, 11(2):79–94, June 1979. CODEN CMSVAN. ISSN 0010-4892. See also [238, 239].

Molina:1979:SRD

[192] Francisco Walter Molina. A survey of resource directive decomposition in mathematical programming. *ACM Computing Surveys*, 11(2):95–104, June 1979. CODEN CMSVAN. ISSN 0010-4892.

McKell:1979:CCR

[193] Lynn J. McKell, James V. Hansen, and Lester E. Heitger. Charging for computing resources. *ACM Computing Surveys*, 11(2):105–120, June 1979. CODEN CMSVAN. ISSN 0010-4892.

Comer:1979:UBT

[194] Douglas Comer. Ubiquitous B-tree. *ACM Computing Surveys*, 11(2): 121–137, June 1979. CODEN CMSVAN. ISSN 0010-4892. See also [216].

Nagy:1979:GDP

[195] George Nagy and Sharad Wagle. Geographic data processing. *ACM Computing Surveys*, 11(2):139–181, June 1979. CODEN CMSVAN. ISSN 0010-4892.

Goldberg:1979:AILb

[196] Adele Goldberg. About this issue .... *ACM Computing Surveys*, 11(3): 183, September 1979. CODEN CMSVAN. ISSN 0010-4892.

Kim:1979:RDS

[197] Won Kim. Relational database systems. *ACM Computing Surveys*, 11 (3):187–211, September 1979. CODEN CMSVAN. ISSN 0010-4892. See also [222–224].

Dale:1979:DMS

[198] A. G. Dale. Database management systems development in the USSR. *ACM Computing Surveys*, 11(3):213–226, September 1979. CODEN CMSVAN. ISSN 0010-4892.

Denning:1979:DS

[199] Dorothy E. Denning and Peter J. Denning. Data security. *ACM Computing Surveys*, 11(3):227–249, September 1979. CODEN CMSVAN. ISSN 0010-4892.

Mohanty:1979:MMQ

[200] Siba N. Mohanty. Models and measurements for quality assessment of software. *ACM Computing Surveys*, 11(3):251–275, September 1979. CODEN CMSVAN. ISSN 0010-4892. See also [231, 232].

Fenichel:1979:SFH

[201] Robert Fenichel. Surveyor's forum: Heads I win, tails you lose. *ACM Computing Surveys*, 11(3):277, September 1979. CODEN CMSVAN. ISSN 0010-4892. See [140, 171–173, 202].

Zweben:1979:SFH

[202] Stuart H. Zweben. Surveyor's forum: Heads I win, tails you lose. *ACM Computing Surveys*, 11(3):277–278, September 1979. CODEN CMSVAN. ISSN 0010-4892. See [140, 171–173, 201].

Christiaen:1979:SFP

[203] H. Christiaen. Surveyor's forum: Projecting problems. *ACM Computing Surveys*, 11(3):278–279, September 1979. CODEN CMSVAN. ISSN 0010-4892. See [170, 204, 205].

Carlbom:1979:SFP

[204] Ingrid Carlbom. Surveyor's forum: Projecting problems. *ACM Computing Surveys*, 11(3):279–280, September 1979. CODEN CMSVAN. ISSN 0010-4892. See [170, 203, 205].

Carlbom:1979:CGP

[205] Ingrid Carlbom and Joseph Paciorek. Corrigenda: "Geometric Projection and Viewing Transformations". *ACM Computing Surveys*, 11 (3):280, September 1979. CODEN CMSVAN. ISSN 0010-4892. See [170, 203, 204].

Goldberg:1979:AILc

[206] Adele J. Goldberg. About this issue .... *ACM Computing Surveys*, 11 (4):281, December 1979. CODEN CMSVAN. ISSN 0010-4892. Special Issue: Cryptology.

Denning:1979:EOS

[207] Peter J. Denning. Editor's overview — special section on data encryption. *ACM Computing Surveys*, 11(4):283, December 1979. CODEN CMSVAN. ISSN 0010-4892.

Lempel:1979:CT

[208] Abraham Lempel. Cryptology in transition. *ACM Computing Surveys*, 11(4):285–303, December 1979. CODEN CMSVAN. ISSN 0010-4892.

Simmons:1979:SAE

[209] Gustavus J. Simmons. Symmetric and asymmetric encryption. *ACM Computing Surveys*, 11(4):305–330, December 1979. CODEN CMSVAN. ISSN 0010-4892.

Popek:1979:ESC

[210] Gerald J. Popek and Charles S. Kline. Encryption and secure computer networks. *ACM Computing Surveys*, 11(4):331–356, December 1979. CODEN CMSVAN. ISSN 0010-4892.

Bright:1979:QRN

[211] Herbert S. Bright and Richard L. Enison. Quasi-random number sequences from a long-period TLP generator with remarks on application to cryptography. *ACM Computing Surveys*, 11(4):357–370, December 1979. CODEN CMSVAN. ISSN 0010-4892.

Sockut:1979:DRP

[212] Gary H. Sockut and Robert P. Goldberg. Database reorganization — principles and practice. *ACM Computing Surveys*, 11(4):371–395, December 1979. CODEN CMSVAN. ISSN 0010-4892. Also published in/as: US Department of Commerce, National Bureau of Standards, Washington DC, Spec. Publ. 500-47, April 1979.

Bentley:1979:DSR

[213] Jon Louis Bentley and Jerome H. Friedman. Data structures for range searching. *ACM Computing Surveys*, 11(4):397–409, December 1979. CODEN CMSVAN. ISSN 0010-4892.

Alberts:1979:SFQ

[214] David S. Alberts. Surveyor's forum: a question of transition. *ACM Computing Surveys*, 11(4):411, December 1979. CODEN CMSVAN. ISSN 0010-4892. See [153, 183, 184, 215].

Zelkowitz:1979:SFQ

[215] Marvin V. Zelkowitz. Surveyor's forum: a question of transition. *ACM Computing Surveys*, 11(4):411–412, December 1979. CODEN CMSVAN. ISSN 0010-4892. See [153, 183, 184, 214].

Comer:1979:SFT

[216] Douglas Comer. Surveyor's forum: The tree branches. *ACM Computing Surveys*, 11(4):412, December 1979. CODEN CMSVAN. ISSN 0010-4892. See [194].

Buck-Lew:1979:SFD

[217] Maylun Buck-Lew. Surveyor's forum: a dance prelude. *ACM Computing Surveys*, 11(4):412–413, December 1979. CODEN CMSVAN. ISSN 0010-4892. See [179].

Goldberg:1980:AILa

[218] Adele J. Goldberg. About this issue .... *ACM Computing Surveys*, 12 (1):1–2, March 1980. CODEN CMSVAN. ISSN 0010-4892.

Maryanski:1980:BDS

[219] Fred J. Maryanski. Backend database systems. *ACM Computing Surveys*, 12(1):3–25, March 1980. CODEN CMSVAN. ISSN 0010-4892.

Ellis:1980:OIS

[220] Clarence A. Ellis and Gary J. Nutt. Office information systems and computer science. *ACM Computing Surveys*, 12(1):27–60, March 1980. CODEN CMSVAN. ISSN 0010-4892.

Kling:1980:SAC

[221] Rob Kling. Social analyses of computing: Theoretical perspectives in recent empirical research. *ACM Computing Surveys*, 12(1):61–110, March 1980. CODEN CMSVAN. ISSN 0010-4892.

Fernandez:1980:SFR

[222] E. B. Fernandez. Surveyor's forum: Related information. *ACM Computing Surveys*, 12(1):111–112, March 1980. CODEN CMSVAN. ISSN 0010-4892. See [197, 223, 224].

Kim:1980:SFR

[223] Won Kim. Surveyor's forum: Related information. *ACM Computing Surveys*, 12(1):112, March 1980. CODEN CMSVAN. ISSN 0010-4892. See [197, 222, 224].

Friesen:1980:SFR

[224] Oris D. Friesen. Surveyor's forum: Related information. *ACM Computing Surveys*, 12(1):112–113, March 1980. CODEN CMSVAN. ISSN 0010-4892. See [197, 222, 223].

Goldberg:1980:AILb

[225] Adele J. Goldberg. About this issue .... *ACM Computing Surveys*, 12 (2):115–116, June 1980. CODEN CMSVAN. ISSN 0010-4892.

Goldberg:1980:EP

[226] Adele J. Goldberg. Editorial policy. *ACM Computing Surveys*, 12(2): 117–120, June 1980. CODEN CMSVAN. ISSN 0010-4892.

Jones:1980:EUM

[227] Anita K. Jones and Peter Schwarz. Experience using multiprocessor systems — a status report. *ACM Computing Surveys*, 12(2):121–165, June 1980. CODEN CMSVAN. ISSN 0010-4892.

Wong:1980:MEH

[228] C. K. Wong. Minimizing expected head movement in one-dimensional and two-dimensional mass storage systems. *ACM Computing Surveys*, 12(2):167–178, June 1980. CODEN CMSVAN. ISSN 0010-4892.

Teorey:1980:LRA

[229] Toby J. Teorey and James P. Fry. The logical record access approach to database design. *ACM Computing Surveys*, 12(2):179–211, June 1980. CODEN CMSVAN. ISSN 0010-4892. See also [246].

Erman:1980:HIS

[230] Lee D. Erman, Frederick Hayes-Roth, Victor R. Lesser, and D. Raj Reddy. The Hearsay-II speech-understanding system: Integrating knowledge to resolve uncertainty. *ACM Computing Surveys*, 12(2):213–253, June 1980. CODEN CMSVAN. ISSN 0010-4892.

Dunn:1980:SFW

[231] Stanley Dunn. Surveyor's forum: Working on interpretations. *ACM Computing Surveys*, 12(2):255, June 1980. CODEN CMSVAN. ISSN 0010-4892. See [200, 232].

Mohanty:1980:SFW

[232] Siba Mohanty. Surveyor's forum: Working on interpretations. *ACM Computing Surveys*, 12(2):256, June 1980. CODEN CMSVAN. ISSN 0010-4892. See [200, 231].

Goldberg:1980:AILc

[233] Adele J. Goldberg. About this issue .... *ACM Computing Surveys*, 12 (3):257–258, September 1980. CODEN CMSVAN. ISSN 0010-4892.

Habib:1980:SSM

[234] Stanley Habib. Special section on microprogramming. *ACM Computing Surveys*, 12(3):259, September 1980. CODEN CMSVAN. ISSN 0010-4892.

Landskov:1980:LMC

[235] David Landskov, Scott Davidson, Bruce Shriver, and Patrick W. Mallett. Local microcode compaction techniques. *ACM Computing Surveys*, 12 (3):261–294, September 1980. CODEN CMSVAN. ISSN 0010-4892.

Dasgupta:1980:SAH

[236] Subrata Dasgupta. Some aspects of high-level microprogramming. *ACM Computing Surveys*, 12(3):295–323, September 1980. CODEN CMSVAN. ISSN 0010-4892.

Clark:1980:EML

[237] Wesley A. Clark. From electron mobility to logical structure: a view of integrated circuits. *ACM Computing Surveys*, 12(3):325–356, September 1980. CODEN CMSVAN. ISSN 0010-4892.

Wilson:1980:SFD

[238] Walter Wilson. Surveyor's forum: Determining a search. *ACM Computing Surveys*, 12(3):357–358, September 1980. CODEN CMSVAN. ISSN 0010-4892. See [191, 239].

Cohen:1980:SFD

[239] Jacques Cohen. Surveyor's forum: Determining a search. *ACM Computing Surveys*, 12(3):358, September 1980. CODEN CMSVAN. ISSN 0010-4892. See [191, 238].

Goldberg:1980:AILd

[240] Adele J. Goldberg. About this issue .... *ACM Computing Surveys*, 12 (4):359–360, December 1980. CODEN CMSVAN. ISSN 0010-4892.

Wetherell:1980:PLR

[241] C. S. Wetherell. Probabilistic languages: a review and some open questions. *ACM Computing Surveys*, 12(4):361–379, December 1980. CODEN CMSVAN. ISSN 0010-4892.

Hall:1980:ASM

[242] Patrick A. V. Hall and Geoff R. Dowling. Approximate string matching. *ACM Computing Surveys*, 12(4):381–402, December 1980. CODEN CMSVAN. ISSN 0010-4892.

Bird:1980:TTR

[243] R. S. Bird. Tabulation techniques for recursive programs. *ACM Computing Surveys*, 12(4):403–417, December 1980. CODEN CMSVAN. ISSN 0010-4892. See also [258, 259].

Lueker:1980:STS

[244] George S. Lueker. Some techniques for solving recurrences. *ACM Computing Surveys*, 12(4):419–436, December 1980. CODEN CMSVAN. ISSN 0010-4892. See also [266, 267].

Requicha:1980:RRS

[245] Aristides A. G. Requicha. Representations for rigid solids: Theory, methods, and systems. *ACM Computing Surveys*, 12(4):437–464, December 1980. CODEN CMSVAN. ISSN 0010-4892. See also [264, 265].

Teorey:1980:CLR

[246] Toby J. Teorey and James P. Fry. Corrigenda: "The Logical Record Access Approach to Database Design". *ACM Computing Surveys*, 12(4): 465, December 1980. CODEN CMSVAN. ISSN 0010-4892. See [229].

Moran:1981:GEI

[247] Thomas P. Moran. Guest Editor's introduction: an applied psychology of the user. *ACM Computing Surveys*, 13(1):1–11, March 1981. CODEN CMSVAN. ISSN 0010-4892. Special Issue: The Psychology of Human-Computer Interaction. See also [273, 274].

Reisner:1981:HFS

[248] Phyllis Reisner. Human factors studies of database query languages: a survey and assessment. *ACM Computing Surveys*, 13(1):13–31, March 1981. CODEN CMSVAN. ISSN 0010-4892.

Embley:1981:BAT

[249] David W. Embley and George Nagy. Behavioral aspects of text editors. *ACM Computing Surveys*, 13(1):33–70, March 1981. CODEN CMSVAN. ISSN 0010-4892. See also [275, 276].

Rouse:1981:HCI

[250] William B. Rouse. Human-computer interaction in the control of dynamic systems. *ACM Computing Surveys*, 13(1):71–99, March 1981. CODEN CMSVAN. ISSN 0010-4892.

Sheil:1981:PSP

[251] B. A. Sheil. The psychological study of programming. *ACM Computing Surveys*, 13(1):101–120, March 1981. CODEN CMSVAN. ISSN 0010-4892.

Mayer:1981:PHN

[252] Richard E. Mayer. The psychology of how novices learn computer programming. *ACM Computing Surveys*, 13(1):121–141, March 1981. CODEN CMSVAN. ISSN 0010-4892.

Goldberg:1981:AILa

[253] Adele Goldberg. About this issue .... *ACM Computing Surveys*, 13(2): 143–144, June 1981. CODEN CMSVAN. ISSN 0010-4892.

Goldberg:1981:EP

[254] Adele Goldberg. Editorial policy. *ACM Computing Surveys*, 13(2):145–148, June 1981. CODEN CMSVAN. ISSN 0010-4892.

Kohler:1981:STS

[255] Walter H. Kohler. A survey of techniques for synchronization and recovery in decentralized computer systems. *ACM Computing Surveys*, 13 (2):149–183, June 1981. CODEN CMSVAN. ISSN 0010-4892. See also [281, 282].

Bernstein:1981:CCD

[256] Philip A. Bernstein and Nathan Goodman. Concurrency control in distributed database systems. *ACM Computing Surveys*, 13(2):185–221, June 1981. CODEN CMSVAN. ISSN 0010-4892. Also published in/as: Auerbach Annual 1980, North-Holland 1981. See also [290–292].

Gray:1981:RMS

[257] Jim Gray, Paul McJones, Mike Blasgen, Bruce Lindsay, Raymond Lorie, Tom Price, Franco Putzolu, and Irving Traiger. The Recovery Manager of the System R Database Manager. *ACM Computing Surveys*, 13(2): 223–242, June 1981. CODEN CMSVAN. ISSN 0010-4892.

Bird:1981:SFR

[258] R. S. Bird. Surveyor's forum: a recurring bug. *ACM Computing Surveys*, 13(2):243, June 1981. CODEN CMSVAN. ISSN 0010-4892. See [243, 259].

Richter:1981:SFR

[259] Helmut Richter. Surveyor's forum: a recurring bug. *ACM Computing Surveys*, 13(2):243, June 1981. CODEN CMSVAN. ISSN 0010-4892. See [243, 258].

Goldberg:1981:AILb

[260] Adele Goldberg. About this issue .... *ACM Computing Surveys*, 13(3): 245, September 1981. CODEN CMSVAN. ISSN 0010-4892.

Landwehr:1981:FMC

[261] Carl E. Landwehr. Formal models for computer security. *ACM Computing Surveys*, 13(3):247–278, September 1981. CODEN CMSVAN. ISSN 0010-4892.

Cheheyl:1981:VS

[262] Maureen Harris Cheheyl, Morrie Gasser, George A. Huff, and Jonathan K. Millen. Verifying security. *ACM Computing Surveys*, 13(3): 279–339, September 1981. CODEN CMSVAN. ISSN 0010-4892.

Cohen:1981:GCL

[263] Jacques Cohen. Garbage collection of linked data structures. *ACM Computing Surveys*, 13(3):341–367, September 1981. CODEN CMSVAN. ISSN 0010-4892.

Requicha:1981:SFU

[264] Aristides A. G. Requicha. Surveyor's forum: an update on SynthaVision. *ACM Computing Surveys*, 13(3):369, September 1981. CODEN CMSVAN. ISSN 0010-4892. See [245, 265].

Steinberg:1981:SFU

[265] Herbert A. Steinberg. Surveyor's forum: an update on SynthaVision. *ACM Computing Surveys*, 13(3):369, September 1981. CODEN CMSVAN. ISSN 0010-4892. See [245, 264].

Keenan:1981:SFG

[266] Douglas J. Keenan. Surveyor's forum: Generating solutions. *ACM Computing Surveys*, 13(3):370, September 1981. CODEN CMSVAN. ISSN 0010-4892. See [244, 267].

Lueker:1981:SFG

[267] George S. Lueker. Surveyor's forum: Generating solutions. *ACM Computing Surveys*, 13(3):370, September 1981. CODEN CMSVAN. ISSN 0010-4892. See [244, 266].

Goldberg:1981:AILc

[268] Adele Goldberg. About this issue .... *ACM Computing Surveys*, 13(4): 371–372, December 1981. CODEN CMSVAN. ISSN 0010-4892.

Ahuja:1981:IM

[269] Narendra Ahuja and B. J. Schachter. Image models. *ACM Computing Surveys*, 13(4):373–397, December 1981. CODEN CMSVAN. ISSN 0010-4892. See also [310, 311].

Srihari:1981:RTD

[270] Sargur N. Srihari. Representation of three-dimensional digital images. *ACM Computing Surveys*, 13(4):399–424, December 1981. CODEN CMSVAN. ISSN 0010-4892.

Frank:1981:TDC

[271] Edward H. Frank and Robert F. Sproull. Testing and debugging custom integrated circuits. *ACM Computing Surveys*, 13(4):425–451, December 1981. CODEN CMSVAN. ISSN 0010-4892.

Tanenbaum:1981:NP

[272] Andrew S. Tanenbaum. Network protocols. *ACM Computing Surveys*, 13(4):453–489, December 1981. CODEN CMSVAN. ISSN 0010-4892.

Floyd:1981:SFA

[273] Christiane Floyd, Reinhard Keil, and Erhard Nullmeier. Surveyor's forum: Augmentation or dehumanization? *ACM Computing Surveys*, 13 (4):491–492, December 1981. CODEN CMSVAN. ISSN 0010-4892. See [247, 274].

Moran:1981:SFA

[274] Thomas P. Moran. Surveyor's forum: Augmentation or dehumanization? *ACM Computing Surveys*, 13(4):492–493, December 1981. CODEN CMSVAN. ISSN 0010-4892. See [247, 273].

Leverett:1981:SFI

[275] Bruce Leverett. Surveyor's forum: Interpreting experimental data. *ACM Computing Surveys*, 13(4):493–494, December 1981. CODEN CMSVAN. ISSN 0010-4892. See [249, 276].

Embley:1981:SFI

[276] David W. Embley and George Nagy. Surveyor's forum: Interpreting experimental data. *ACM Computing Surveys*, 13(4):494, December 1981. CODEN CMSVAN. ISSN 0010-4892. See [249, 275].

Goldberg:1982:AILa

[277] Adele Goldberg. About this issue .... *ACM Computing Surveys*, 14(1): 1–2, March 1982. CODEN CMSVAN. ISSN 0010-4892.

Brady:1982:CAI

[278] Michael Brady. Computational approaches to image understanding. *ACM Computing Surveys*, 14(1):3–71, March 1982. CODEN CMSVAN. ISSN 0010-4892.

Feuer:1982:CPL

[279] Alan R. Feuer and Narain H. Gehani. Comparison of the programming languages C and Pascal. *ACM Computing Surveys*, 14(1):73–92, March 1982. CODEN CMSVAN. ISSN 0010-4892. See also [303, 304].

Treleaven:1982:DDD

[280] Philip C. Treleaven, David R. Brownbridge, and Richard P. Hopkins. Data-driven and demand-driven computer architecture. *ACM Computing Surveys*, 14(1):93–143, March 1982. CODEN CMSVAN. ISSN 0010-4892.

Reed:1982:SFR

[281] David P. Reed. Surveyor's forum: Recovering an error. *ACM Computing Surveys*, 14(1):145–146, March 1982. CODEN CMSVAN. ISSN 0010-4892. See [255, 282].

Kohler:1982:SFR

[282] Walter H. Kohler. Surveyor's forum: Recovering an error. *ACM Computing Surveys*, 14(1):146–147, March 1982. CODEN CMSVAN. ISSN 0010-4892. See [255, 281].

Goldberg:1982:AILb

[283] Adele J. Goldberg. About this issue .... *ACM Computing Surveys*, 14 (2):149–150, June 1982. CODEN CMSVAN. ISSN 0010-4892.

Goldberg:1982:EP

[284] Adele J. Goldberg. Editorial policy. *ACM Computing Surveys*, 14(2): 151–157, June 1982. CODEN CMSVAN. ISSN 0010-4892.

Adrion:1982:VVT

[285] W. Richards Adrion, Martha A. Branstad, and John C. Cherniavsky. Validation, verification, and testing of computer software. *ACM Computing Surveys*, 14(2):159–192, June 1982. CODEN CMSVAN. ISSN 0010-4892.

Howden:1982:VSP

[286] William E. Howden. Validation of scientific programs. *ACM Computing Surveys*, 14(2):193–227, June 1982. CODEN CMSVAN. ISSN 0010-4892.

Dunlop:1982:CAF

[287] Douglas D. Dunlop and Victor R. Basili. A comparative analysis of functional correctness. *ACM Computing Surveys*, 14(2):229–244, June 1982. CODEN CMSVAN. ISSN 0010-4892.

Allen:1982:IDD

[288] Frank W. Allen, Mary E. S. Loomis, and Michael V. Mannino. The integrated Dictionary/Directory System. *ACM Computing Surveys*, 14 (2):245–286, June 1982. CODEN CMSVAN. ISSN 0010-4892.

Dowdy:1982:CMF

[289] Lawrence W. Dowdy and Derrell V. Foster. Comparative models of the file assignment problem. *ACM Computing Surveys*, 14(2):287–313, June 1982. CODEN CMSVAN. ISSN 0010-4892. See also [308, 309].

Bender:1982:SFT

[290] Heinz Bender. Surveyor's forum: Technical transactions. *ACM Computing Surveys*, 14(2):315–316, June 1982. CODEN CMSVAN. ISSN 0010-4892. See [256, 291, 292].

Gifford:1982:SFT

[291] David Gifford. Surveyor's forum: Technical transactions. *ACM Computing Surveys*, 14(2):316, June 1982. CODEN CMSVAN. ISSN 0010-4892. See [256, 290, 292].

Bernstein:1982:SFT

[292] Philip Bernstein and Nathan Goodman. Surveyor's forum: Technical transactions. *ACM Computing Surveys*, 14(2):317–318, June 1982. CODEN CMSVAN. ISSN 0010-4892. See [256, 290, 291].

Goldberg:1982:AILc

[293] Adele J. Goldberg. About this issue .... *ACM Computing Surveys*, 14 (3):319–320, September 1982. CODEN CMSVAN. ISSN 0010-4892.

Meyrowitz:1982:IESa

[294] Norman Meyrowitz and Andries Van Dam. Interactive editing systems: Part I. *ACM Computing Surveys*, 14(3):321–352, September 1982. CODEN CMSVAN. ISSN 0010-4892.

Meyrowitz:1982:IESb

[295] Norman Meyrowitz and Andries van Dam. Interactive editing systems: Part II. *ACM Computing Surveys*, 14(3):353–415, September 1982. CODEN CMSVAN. ISSN 0010-4892.

Furuta:1982:DFS

[296] Richard Furuta, Jeffrey Scofield, and Alan Shaw. Document formatting systems: Survey, concepts, and issues. *ACM Computing Surveys*, 14(3): 417–472, September 1982. CODEN CMSVAN. ISSN 0010-4892.

Smith:1982:CM

[297] Alan Jay Smith. Cache memories. *ACM Computing Surveys*, 14(3): 473–530, September 1982. CODEN CMSVAN. ISSN 0010-4892.

Goldberg:1982:AILd

[298] Adele J. Goldberg. About this issue .... *ACM Computing Surveys*, 14 (4):531–532, December 1982. CODEN CMSVAN. ISSN 0010-4892.

Marsland:1982:PSS

[299] T. A. Marsland and M. Campbell. Parallel search of strongly ordered game trees. *ACM Computing Surveys*, 14(4):533–551, December 1982. CODEN CMSVAN. ISSN 0010-4892.

Barnard:1982:CS

[300] Stephen T. Barnard and Martin A. Fischler. Computational stereo. *ACM Computing Surveys*, 14(4):553–572, December 1982. CODEN CMSVAN. ISSN 0010-4892.

Ganapathi:1982:RCC

[301] Mahadevan Ganapathi, Charles N. Fischer, and John L. Hennessy. Retargetable compiler code generation. *ACM Computing Surveys*, 14(4): 573–592, December 1982. CODEN CMSVAN. ISSN 0010-4892. See also [321–324].

Moret:1982:DTD

[302] Bernard M. E. Moret. Decision trees and diagrams. *ACM Computing Surveys*, 14(4):593–623, December 1982. CODEN CMSVAN. ISSN 0010-4892.

Peterson:1982:SFI

[303] James L. Peterson. Surveyor's forum: Idiomatic programming. *ACM Computing Surveys*, 14(4):625, December 1982. CODEN CMSVAN. ISSN 0010-4892. See [279, 304].

Feuer:1982:SFI

[304] Alan R. Feuer and Narain H. Gehani. Surveyor's forum: Idiomatic programming. *ACM Computing Surveys*, 14(4):625–626, December 1982. CODEN CMSVAN. ISSN 0010-4892. See [279, 303].

Wasserman:1983:AILa

[305] Anthony I. Wasserman. About this issue .... *ACM Computing Surveys*, 15(1):1–2, March 1983. CODEN CMSVAN. ISSN 0010-4892.

Andrews:1983:CNC

[306] Gregory R. Andrews and Fred B. Schneider. Concepts and notations for concurrent programming. *ACM Computing Surveys*, 15(1):3–43, March 1983. CODEN CMSVAN. ISSN 0010-4892. See also [329–331].

March:1983:TSD

[307] Salvatore T. March. Techniques for structuring database records. *ACM Computing Surveys*, 15(1):45–79, March 1983. CODEN CMSVAN. ISSN 0010-4892.

Kollias:1983:SFF

[308] J. (Yiannis) G. Kollias and Michalis Hatzopoulos. Surveyor's forum: The file assignment problem. *ACM Computing Surveys*, 15(1):81–82, March 1983. CODEN CMSVAN. ISSN 0010-4892. See [289, 309].

Dowdy:1983:SFF

[309] Lawrence W. Dowdy and Derrell V. Foster. Surveyor's forum: The file assignment problem. *ACM Computing Surveys*, 15(1):82, March 1983. CODEN CMSVAN. ISSN 0010-4892. See [289, 308].

Sharma:1983:SFI

[310] Govind Sharma. Surveyor's forum: Image models. *ACM Computing Surveys*, 15(1):83–84, March 1983. CODEN CMSVAN. ISSN 0010-4892. See also [269, 311].

Ahuja:1983:SFI

[311] Narendra Ahuja and B. J. Schachter. Surveyor's forum: Image models. *ACM Computing Surveys*, 15(1):84, March 1983. CODEN CMSVAN. ISSN 0010-4892. See [269, 310].

Wasserman:1983:AILb

[312] Anthony I. Wasserman. About this issue .... *ACM Computing Surveys*, 15(2):85–86, June 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasserman:1983:EP

[313] Anthony I. Wasserman. Editorial policy. *ACM Computing Surveys*, 15 (2):87–94, June 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Broomell:1983:CCH

[314] George Broomell and J. Robert Heath. Classification categories and historical development of circuit switching topologies. *ACM Computing Surveys*, 15(2):95–133, June 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Voydock:1983:SMH

[315] Victor L. Voydock and Stephen T. Kent. Security mechanisms in high-level network protocols. *ACM Computing Surveys*, 15(2):135–171, June 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasserman:1983:AILc

[316] Anthony I. Wasserman. About this issue .... *ACM Computing Surveys*, 15(3):173–174, September 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Abadir:1983:FTS

[317] Magdy S. Abadir and Hassan K. Reghbati. Functional testing of semiconductor random access memories. *ACM Computing Surveys*, 15(3):175–198, September 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Partsch:1983:PTS

[318] H. Partsch and R. Steinbrüggen. Program transformation systems. *ACM Computing Surveys*, 15(3):199–236, September 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Angluin:1983:IIT

[319] Dana Angluin and Carl H. Smith. Inductive inference: Theory and methods. *ACM Computing Surveys*, 15(3):237–269, September 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Lientz:1983:ISM

[320] Bennet P. Lientz. Issues in software maintenance. *ACM Computing Surveys*, 15(3):271–278, September 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wulf:1983:SFR

[321] William A. Wulf, Joe Newcomer, Bruce Leverett, Rick Cattell, and Paul Knueven. Surveyor's forum: Retargetable code generators. *ACM Com-*

puting Surveys, 15(3):279–280, September 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See [301, 322–324].

Ganapathi:1983:SFRa

[322] M. Ganapathi, J. L. Hennessy, and C. N. Fischer. Surveyor's forum: Retargetable code generators. *ACM Computing Surveys*, 15(3):280–281, September 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See [301, 321, 323, 324].

Fraser:1983:SFR

[323] Christopher W. Fraser. Surveyor's forum: Retargetable code generators. *ACM Computing Surveys*, 15(3):281–283, September 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See [301, 321, 322, 324].

Ganapathi:1983:SFRb

[324] M. Ganapathi, J. L. Hennessy, and C. N. Fischer. Surveyor's forum: Retargetable code generators. *ACM Computing Surveys*, 15(3):283–284, September 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See [301, 321–323].

Wasserman:1983:AILd

[325] Anthony I. Wasserman. About this issue .... *ACM Computing Surveys*, 15(4):285–286, December 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Haerder:1983:PTO

[326] Theo Haerder and Andreas Reuter. Principles of transaction oriented database recovery. *ACM Computing Surveys*, 15(4):287–317, December 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). Also published in/as: Res. R No. 50-82, April 1982. Reprinted in M. Stonebraker, Readings in Database Systems, Morgan Kaufmann, San Mateo, CA, 1988.

King:1983:CVD

[327] John Leslie King. Centralized versus decentralized computing:organizational considerations and management options. *ACM Computing Surveys*, 15(4):319–349, December 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Lee:1983:VRS

[328] D. L. Lee and F. H. Lochovsky. Voice response systems. *ACM Computing Surveys*, 15(4):351–374, December 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Atkins:1983:SFN

[329] M. Stella Atkins. Surveyor's forum: Notations for concurrent programming. *ACM Computing Surveys*, 15(4):375–376, December 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See [306, 330, 331].

Andrews:1983:SFN

[330] Gregory R. Andrews and Fred B. Schneider. Surveyor's forum: Notations for concurrent programming. *ACM Computing Surveys*, 15(4):376–377, December 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See [306, 329, 331].

Andrews:1983:CCN

[331] Gregory R. Andrews and Fred B. Schneider. Corrigenda: "Concepts and notations for concurrent programs". *ACM Computing Surveys*, 15 (4):377, December 1983. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See [306, 329, 330].

Wasserman:1984:AILa

[332] Anthony I. Wasserman. About this issue .... *ACM Computing Surveys*, 16(1):1–2, March 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Stallings:1984:LN

[333] William Stallings. Local networks. *ACM Computing Surveys*, 16(1):3–41, March 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kurose:1984:MAP

[334] James F. Kurose, Mischa Schwartz, and Yechiam Yemini. Multiple-access protocols and time-constrained communication. *ACM Computing Surveys*, 16(1):43–70, March 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kim:1984:HAS

[335] Won Kim. Highly available systems for database applications. *ACM Computing Surveys*, 16(1):71–98, March 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasserman:1984:AILb

[336] Anthony I. Wasserman. About this issue .... *ACM Computing Surveys*, 16(2):99–100, June 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasserman:1984:AAa

[337] Anthony I. Wasserman. About the authors .... *ACM Computing Surveys*, 16(2):101–102, June 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasserman:1984:EP

[338] Anthony I. Wasserman. Editorial policy. *ACM Computing Surveys*, 16 (2):103–110, June 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Jarke:1984:QOD

[339] Matthias Jarke and Jürgen Koch. Query optimization in database systems. *ACM Computing Surveys*, 16(2):111–152, June 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gallaire:1984:LDD

[340] Hervé Gallaire, Jack Minker, and Jean-Marie Nicolas. Logic and databases: a deductive approach. *ACM Computing Surveys*, 16(2):153–185, June 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Samet:1984:QRH

[341] Hanan Samet. The quadtree and related hierarchical data structures. *ACM Computing Surveys*, 16(2):187–260, June 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasserman:1984:ATIc

[342] Anthony I. Wasserman. About this issue .... *ACM Computing Surveys*, 16(3):261–262, September 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasserman:1984:AAb

[343] Anthony I. Wasserman. About the authors .... *ACM Computing Surveys*, 16(3):263–264, September 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shneiderman:1984:RTD

[344] Ben Shneiderman. Response time and display rate in human performance with computers. *ACM Computing Surveys*, 16(3):265–285, September 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bitton:1984:TPS

[345] Dina Bitton, David J. DeWitt, David K. Hsiao, and Jaishankar Menon. A taxonomy of parallel sorting. *ACM Computing Surveys*, 16(3):287–318, September 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Quinn:1984:PGA

[346] Michael J. Quinn and Narsingh Deo. Parallel graph algorithms. *ACM Computing Surveys*, 16(3):319–348, September 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasserman:1984:ATId

[347] Anthony I. Wasserman. About this issue .... *ACM Computing Surveys*, 16(4):349–350, December 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasserman:1984:AAc

[348] Anthony I. Wasserman. About the authors .... *ACM Computing Surveys*, 16(4):351, December 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Svobodova:1984:FSN

[349] Liba Svobodova. File servers for network-based distributed systems. *ACM Computing Surveys*, 16(4):353–398, December 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Yu:1984:DQP

[350] C. T. Yu and C. C. Chang. Distributed query processing. *ACM Computing Surveys*, 16(4):399–433, December 1984. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasserman:1985:ATIa

[351] Anthony I. Wasserman. About this issue .... *ACM Computing Surveys*, 17(1):1–2, March 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasserman:1985:AAa

[352] Anthony I. Wasserman. About the authors .... *ACM Computing Surveys*, 17(1):3–4, March 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gupta:1985:RRD

[353] Gopal K. Gupta, Ron Sacks-Davis, and Peter E. Tischer. A review of recent developments in solving ODEs. *ACM Computing Surveys*, 17(1):5–47, March 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/4079.html`.

Faloutsos:1985:AMT

[354] Christos Faloutsos. Access methods for text. *ACM Computing Surveys*, 17(1):49–74, March 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/4080.html`. Also published in/as: "Multiattribute Hashing Using Gray Codes", ACM SIGMOD, 1986.

Besl:1985:TDO

[355] Paul J. Besl and Ramesh C. Jain. Three-dimensional object recognition. *ACM Computing Surveys*, 17(1):75–145, March 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/4081.html`.

Abbott:1985:GEI

[356] Curtis Abbott. Guest Editor's introduction to the special issue on computer music. *ACM Computing Surveys*, 17(2):147–151, June 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasserman:1985:AAb

[357] Anthony I. Wasserman. About the authors .... *ACM Computing Surveys*, 17(2):153–154, June 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasserman:1985:EP

[358] Anthony I. Wasserman. Editorial policy. *ACM Computing Surveys*, 17 (2):155–162, June 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Roads:1985:RMA

[359] Curtis Roads. Research in music and artificial intelligence. *ACM Computing Surveys*, 17(2):163–190, June 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/4469.html`.

Gordon:1985:SAC

[360] John W. Gordon. System architectures for computer music. *ACM Computing Surveys*, 17(2):191–233, June 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/4996.html`.

Loy:1985:PLC

[361] Gareth Loy and Curtis Abbott. Programming languages for computer music synthesis, performance, and composition. *ACM Computing Surveys*, 17(2):235–265, June 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/4485.html`.

Pennycook:1985:CMI

[362] Bruce W. Pennycook. Computer-music interfaces: a survey. *ACM Computing Surveys*, 17(2):267–289, June 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/4470.html`.

Wasserman:1985:ATIb

[363] Anthony I. Wasserman. About this issue .... *ACM Computing Surveys*, 17(3):291–292, September 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasserman:1985:AAc

[364] Anthony I. Wasserman. About the authors .... *ACM Computing Surveys*, 17(3):293–294, September 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hester:1985:SOL

[365] James H. Hester and Daniel S. Hirschberg. Self-organizing linear search. *ACM Computing Surveys*, 17(3):295–311, September 1985. CODEN

CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/5507.html.

Jarke:1985:FCD

[366] Matthias Jarke and Yannis Vassiliou. A framework for choosing a database query language. *ACM Computing Surveys*, 17(3):313–340, September 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/5506.html.

Davidson:1985:CPN

[367] Susan B. Davidson, Hector Garcia-Molina, and Dale Skeen. Consistency in partitioned networks. *ACM Computing Surveys*, 17(3):341–370, September 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/5508.html. Also published in/as: University of Pennsylvania, TR No. Management Science, Journal of TIMS-Conference on Information Systems, sponsored by Machine Intelligence, eds: Meltzer, and Michie, vars. Publishers, TIMS, ACM SIGBDP-84-04, Aug. 1984. Also published in/as: Princeton University, TR EECS 320, 1984.

Wasserman:1985:ATIc

[368] Anthony I. Wasserman. About this issue .... *ACM Computing Surveys*, 17(4):375–376, December 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasserman:1985:AAd

[369] Anthony I. Wasserman. About the authors .... *ACM Computing Surveys*, 17(4):377–378, December 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Quarterman:1985:EUS

[370] John S. Quarterman, Abraham Silberschatz, and James L. Peterson. 4.2BSD and 4.3BSD as examples of the UNIX system. *ACM Computing Surveys*, 17(4):379–418, December 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/6043.html.

Tanenbaum:1985:DOS

[371] Andrew S. Tanenbaum and Robbert van Renesse. Distributed operating systems. *ACM Computing Surveys*, 17(4):419–470, December 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/6074.html.

Cardelli:1985:UTD

[372] Luca Cardelli and Peter Wegner. On understanding types, data abstraction, and polymorphism. *ACM Computing Surveys*, 17(4):471–522, December 1985. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/6042.html.

Wasserman:1986:ATIa

[373] Anthony I. Wasserman. About this issue .... *ACM Computing Surveys*, 18(1):1–2, March 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasserman:1986:AAa

[374] Anthony I. Wasserman. About the authors .... *ACM Computing Surveys*, 18(1):3–4, March 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Perrott:1986:SL

[375] R. H. Perrott and A. Zarea-Aliabadi. Supercomputer languages. *ACM Computing Surveys*, 18(1):5–22, March 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/6463.html.

Galil:1986:EAF

[376] Zvi Galil. Efficient algorithms for finding maximum matching in graphs. *ACM Computing Surveys*, 18(1):23–38, March 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/6502.html.

Misra:1986:DDE

[377] Jayadev Misra. Distributed discrete-event simulation. *ACM Computing Surveys*, 18(1):39–65, March 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/6485.html.

Chin:1986:MBR

[378] Roland T. Chin and Charles R. Dyer. Model-based recognition in robot vision. *ACM Computing Surveys*, 18(1):67–108, March 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/6464.html.

Wasserman:1986:ATIb

[379] Anthony I. Wasserman. About this issue .... *ACM Computing Surveys*, 18(2):113–114, June 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasserman:1986:AAb

[380] Anthony I. Wasserman. About the authors .... *ACM Computing Surveys*, 18(2):115–116, June 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasserman:1986:EP

[381] Anthony I. Wasserman. Editorial policy. *ACM Computing Surveys*, 18 (2):117–124, June 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Leveson:1986:SSW

[382] Nancy G. Leveson. Software safety: Why, what, and how. *ACM Computing Surveys*, 18(2):125–163, June 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/7528.html`.

Hirschheim:1986:EPV

[383] R. A. Hirschheim. The effect of *A Priori* views on the social implications of computing: The case of office automation. *ACM Computing Surveys*, 18(2):165–195, June 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/7476.html`.

Teorey:1986:LDM

[384] Toby J. Teorey, Dongqing Yang, and James P. Fry. A logical design methodology for relational databases using the extended entity-relationship model. *ACM Computing Surveys*, 18(2):197–222, June 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/7475.html`. See [401, 402].

March:1986:ATIa

[385] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 18(3):227–228, September 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1986:AAa

[386] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 18(3):229, September 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mili:1986:FMS

[387] Ali Mili, Jules Desharnais, and Jean Raymond Gagné. Formal models of stepwise refinement of programs. *ACM Computing Surveys*, 18 (3):231–276, September 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/28054.html. See also [403].

Ryder:1986:EAD

[388] Barbara G. Ryder and Marvin C. Paull. Elimination algorithms for data flow analysis. *ACM Computing Surveys*, 18(3):277–316, September 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/27649.html.

March:1986:ATIb

[389] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 18 (4):319, December 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1986:AAb

[390] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 18(4):321, December 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Batini:1986:CAM

[391] C. Batini, M. Lenzerini, and S. B. Navathe. A comparative analysis of methodologies for database schema integration. *ACM Computing Surveys*, 18(4):323–364, December 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/27634.html.

Veen:1986:DMA

[392] Arthur H. Veen. Dataflow machine architecture. *ACM Computing Surveys*, 18(4):365–396, December 1986. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/28055.html.

March:1987:ATIa

[393] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 19 (1):1, March 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1987:AAa

[394] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 19(1):3, March 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Lyytinen:1987:DPI

[395] Kalle Lyytinen. Different perspectives on information systems: Problems and solutions. *ACM Computing Surveys*, 19(1):5–46, March 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/28867.html.

Kemper:1987:AGM

[396] Alfons Kemper and Mechtild Wallrath. An analysis of geometric modeling in database systems. *ACM Computing Surveys*, 19(1):47–91, March 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/28866.html.

March:1987:ATIb

[397] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 19 (2):93, June 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1987:AAb

[398] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 19(2):95, June 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1987:EP

[399] Salvatore T. March. Editorial policy. *ACM Computing Surveys*, 19(2): 97–104, June 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Atkinson:1987:TPD

[400] Malcolm P. Atkinson and O. Peter Buneman. Types and persistence in database programming languages. *ACM Computing Surveys*, 19(2):105–190, June 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341

(electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/45066.html.

Segev:1987:SFT

[401] Arie Segev. Surveyor's forum: Transitive dependencies. *ACM Computing Surveys*, 19(2):191–192, June 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See [384, 402].

Teorey:1987:SFT

[402] Toby J. Teorey. Surveyor's forum: Transitive dependencies. *ACM Computing Surveys*, 19(2):193, June 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See [384, 401].

Mili:1987:CFM

[403] Ali Mili, Jules Desharnais, and Jean Raymond Gagné. Corrigendum: "Formal Models of Stepwise Refinements of Programs". *ACM Computing Surveys*, 19(2):195, June 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See [387].

March:1987:ATIc

[404] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 19(3):197–198, September 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1987:AAc

[405] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 19(3):199, September 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hull:1987:SDM

[406] Richard Hull and Roger King. Semantic database modeling: Survey, applications, and research issues. *ACM Computing Surveys*, 19(3):201–260, September 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/45073.html. Also published in/as: USC, TR-CRI 87-20, March 1987 (revised) and USC, TR-CRI 86-21, March 1986.

Lelewer:1987:DC

[407] Debra A. Lelewer and Daniel S. Hirschberg. Data compression. *ACM Computing Surveys*, 19(3):261–296, September 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/45074.html.

March:1987:ATId

[408] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 19 (4):299, December 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1987:AAd

[409] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 19(4):301, December 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Knapp:1987:DDD

[410] Edgar Knapp. Deadlock detection in distributed databases. *ACM Computing Surveys*, 19(4):303–328, December 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/46163.html.

Mills:1987:RTC

[411] Carol Bergfeld Mills and Linda J. Weldon. Reading text from computer screens. *ACM Computing Surveys*, 19(4):329–358, December 1987. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/46162.html.

March:1988:ATIa

[412] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 20 (1):1, March 1988. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1988:AAa

[413] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 20(1):3, March 1988. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Takagi:1988:QAP

[414] Hideaki Takagi. Queuing analysis of polling models. *ACM Computing Surveys*, 20(1):5–28, March 1988. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/62059.html.

Danforth:1988:TTO

[415] Scott Danforth and Chris Tomlinson. Type theories and object-oriented programming. *ACM Computing Surveys*, 20(1):29–72, March 1988. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/62060.html.

March:1988:ATIb

[416] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 20 (2):73, June 1988. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1988:AAb

[417] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 20(2):75, June 1988. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1988:EP

[418] Salvatore T. March. Editorial policy. *ACM Computing Surveys*, 20(2): 77–84, June 1988. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Enbody:1988:DHS

[419] R. J. Enbody and H. C. Du. Dynamic hashing schemes. *ACM Computing Surveys*, 20(2):85–113, June 1988. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kraemer:1988:CBS

[420] Kenneth L. Kraemer and John Leslie King. Computer-based systems for cooperative work and group decision making. *ACM Computing Surveys*, 20(2):115–146, June 1988. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/46158.html`.

March:1988:ATIc

[421] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 20 (3):149, September 1988. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1988:AAc

[422] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 20(3):151, September 1988. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Peckham:1988:SDM

[423] Joan Peckham and Fred Maryanski. Semantic data models. *ACM Computing Surveys*, 20(3):153–189, September 1988. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/62062.html`.

Mannino:1988:SPE

[424] Michael V. Mannino, Paicheng Chu, and Thomas Sager. Statistical profile estimation in database systems. *ACM Computing Surveys*, 20 (3):191–221, September 1988. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/62063.html`.

March:1988:ATId

[425] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 20(4):223–224, December 1988. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1988:AAd

[426] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 20(4):225, December 1988. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Johnson:1988:SST

[427] Allen M. Johnson, Jr. and Miroslaw Malek. Survey of software tools for evaluating reliability, availability, and serviceability. *ACM Computing Surveys*, 20(4):227–269, December 1988. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/50062.html`.

Samet:1988:HRC

[428] Hanan Samet. Hierarchical representations of collections of small rectangles. *ACM Computing Surveys*, 20(4):271–309, December 1988. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/50021.html`.

March:1989:ATIa

[429] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 21(1):1–2, March 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1989:AAa

[430] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 21(1):3, March 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hartson:1989:HCI

[431] H. Rex Hartson and Deborah Hix. Human-computer interface development: Concepts and systems for its management. *ACM Computing*

Surveys, 21(1):5–92, March 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/62031.html`.

Knight:1989:UMS

[432] Kevin Knight. Unification: a multidisciplinary survey. *ACM Computing Surveys*, 21(1):93–124, March 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/62030.html`.

March:1989:ATIb

[433] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 21(2):125–126, June 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1989:AAb

[434] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 21(2):127, June 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1989:EP

[435] Salvatore T. March. Editorial policy. *ACM Computing Surveys*, 21(2):129–136, June 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Abramson:1989:CST

[436] Bruce Abramson. Control strategies for two-player games. *ACM Computing Surveys*, 21(2):137–161, June 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/66444.html`.

Ellman:1989:EBL

[437] Thomas Ellman. Explanation-based learning: a survey of programs and perspectives. *ACM Computing Surveys*, 21(2):163–221, June 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/66445.html`.

Colbourn:1989:ACD

[438] Charles J. Colbourn and Paul C. van Oorschot. Applications of combinatorial designs in computer science. *ACM Computing Surveys*, 21(2):223–250, June 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/66446.html`. See also [460].

March:1989:ATIc

[439] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 21 (3):251, September 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wegner:1989:ISI

[440] Peter Wegner. Guest Editor's introduction to the special issue on programming language paradigms. *ACM Computing Surveys*, 21(3):253–258, September 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1989:AAc

[441] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 21(3):259–260, September 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bal:1989:PLD

[442] Henri E. Bal, Jennifer G. Steiner, and Andrew S. Tanenbaum. Programming languages for distributed computing systems. *ACM Computing Surveys*, 21(3):261–322, September 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/72552.html`.

Carriero:1989:HWP

[443] Nicholas Carriero and David Gelernter. How to write parallel programs: a guide to the perplexed. *ACM Computing Surveys*, 21(3):323–357, September 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/72553.html`.

Hudak:1989:CEA

[444] Paul Hudak. Conception, evolution, and application of functional programming languages. *ACM Computing Surveys*, 21(3):359–411, September 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/72554.html`.

Shapiro:1989:FCL

[445] Ehud Shapiro. The family of concurrent logic programming languages. *ACM Computing Surveys*, 21(3):413–510, September 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/72555.html`.

March:1989:ATId

[446] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 21(4):511–512, December 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1989:AAd

[447] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 21(4):513, December 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Adam:1989:SCM

[448] Nabil R. Adam and John C. Wortmann. Security-control methods for statistical databases: a comparative study. *ACM Computing Surveys*, 21(4):515–556, December 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/76895.html.

Bell:1989:MTC

[449] Timothy Bell, Ian H. Witten, and John G. Cleary. Modeling for text compression. *ACM Computing Surveys*, 21(4):557–591, December 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/76896.html.

McDowell:1989:DCP

[450] Charles E. McDowell and David P. Helmbold. Debugging concurrent programs. *ACM Computing Surveys*, 21(4):593–622, December 1989. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/76897.html.

March:1990:ATIa

[451] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 22(1):1–2, March 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1990:AAa

[452] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 22(1):3, March 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

vandeGoor:1990:ODF

[453] A. J. van de Goor and C. A. Verruijt. An overview of deterministic functional RAM chip testing. *ACM Computing Surveys*, 22(1):5–33, March

1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/78950.html.

Abbott:1990:RSF

[454] Russell J. Abbott. Resourceful systems for fault tolerance, reliability, and safety. *ACM Computing Surveys*, 22(1):35–68, March 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/78951.html. See also [478, 489, 490].

March:1990:ATIb

[455] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 22(2):69–70, June 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1990:AAb

[456] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 22(2):71, June 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1990:EP

[457] Salvatore T. March. Editorial policy. *ACM Computing Surveys*, 22(2):73–81, June 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Onvural:1990:SCQ

[458] Raif O. Onvural. Survey of closed queueing networks with blocking. *ACM Computing Surveys*, 22(2):83–121, June 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/78920.html.

Pawlikowski:1990:SSS

[459] Krzysztof Pawlikowski. Steady-state simulation of queueing processes: a survey of problems and solutions. *ACM Computing Surveys*, 22(2):123–170, June 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/78921.html. See also [472].

Mandl:1990:SF

[460] Robert Mandl. Surveyor's forum: "Applications of Combinatorial Designs in Computer Science". *ACM Computing Surveys*, 22(2):171, June

1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See [438].

March:1990:ATIc

[461] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 22 (3):173, September 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Elmagarmid:1990:ISI

[462] Ahmed K. Elmagarmid and Calton Pu. Introduction to the special issue on heterogeneous databases. *ACM Computing Surveys*, 22(3):175–178, September 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1990:AAc

[463] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 22(3):179–181, September 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sheth:1990:FDS

[464] Amit P. Sheth and James A. Larson. Federated database systems for managing distributed, heterogeneous, and autonomous databases. *ACM Computing Surveys*, 22(3):183–236, September 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/96604.html`. Also published in/as: Bellcore, TM-STS-016302, Jun.1990.

Thomas:1990:HDD

[465] Gomer Thomas, Glenn R. Thompson, Chin-Wan Chung, Edward Barkmeyer, Fred Carter, Marjorie Templeton, Stephen Fox, and Berl Hartman. Heterogeneous distributed database systems for production use. *ACM Computing Surveys*, 22(3):237–266, September 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/96607.html`.

Litwin:1990:IMA

[466] Witold Litwin, Leo Mark, and Nick Roussopoulos. Interoperability of multiple autonomous databases. *ACM Computing Surveys*, 22(3):267–293, September 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/96608.html`. Also published in/as: University of Maryland, Systems Research Center, TR-89-12 and CS TR-2188, March 1989.

March:1990:ATId

[467] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 22(4):295–296, December 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1990:AAd

[468] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 22(4):297, December 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Schneider:1990:IFT

[469] Fred B. Schneider. Implementing fault-tolerant services using the state machine approach: a tutorial. *ACM Computing Surveys*, 22(4):299–319, December 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/98167.html`.

Levy:1990:DFS

[470] Eliezer Levy and Abraham Silberschatz. Distributed file systems: Concepts and examples. *ACM Computing Surveys*, 22(4):321–374, December 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/98169.html`.

Katz:1990:TUF

[471] Randy H. Katz. Toward a unified framework for version modeling in engineering databases. *ACM Computing Surveys*, 22(4):375–408, December 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/98172.html`.

Pawlikowski:1990:CSS

[472] Krzysztof Pawlikowski. Corrigenda: “Steady-State Simulation of Queueing Processes: A Survey of Problems and Solutions”. *ACM Computing Surveys*, 22(4):409, December 1990. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See [459].

March:1991:ATIa

[473] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 23(1):1–2, March 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1991:AAa

[474] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 23(1):3, March 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Goldberg:1991:WEC

[475] David Goldberg. What every computer scientist should know about floating-point arithmetic. *ACM Computing Surveys*, 23(1):5–48, March 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/103163.html`. See also [491, 511, 512].

Andrews:1991:PPI

[476] Gregory R. Andrews. Paradigms for process interaction in distributed programs. *ACM Computing Surveys*, 23(1):49–90, March 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/103164.html`.

Chin:1991:DOB

[477] Roger S. Chin and Samuel T. Chanson. Distributed, object-based programming systems. *ACM Computing Surveys*, 23(1):91–124, March 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/103165.html`.

Sankar:1991:SFR

[478] S. Sankar and D. S. Rosenblum. Surveyor's forum: Runtime checking and debugging of formally specified programs. *ACM Computing Surveys*, 23(1):125–127, March 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/103166.html`. See [454, 489, 490].

March:1991:ATIb

[479] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 23(2):129, June 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1991:AAb

[480] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 23(2):131, June 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1991:EP

[481] Salvatore T. March. Editorial policy. *ACM Computing Surveys*, 23(2): 133–141, June 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shahookar:1991:VCP

[482] K. Shahookar and P. Mazumder. VLSI cell placement techniques. *ACM Computing Surveys*, 23(2):143–220, June 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/103725.html`.

Abeysundara:1991:HSL

[483] Bandula W. Abeysundara and Ahmed E. Kamal. High-speed local area networks and their performance: a survey. *ACM Computing Surveys*, 23(2):221–264, June 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/103726.html`.

March:1991:ATIc

[484] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 23(3):265–266, September 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1991:AAc

[485] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 23(3):267, September 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Barghouti:1991:CCA

[486] Naser S. Barghouti and Gail E. Kaiser. Concurrency control in advanced database applications. *ACM Computing Surveys*, 23(3):269–317, September 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/116875.html`.

Galil:1991:DSA

[487] Zvi Galil and Giuseppe F. Italiano. Data structures and algorithms for disjoint set union problems. *ACM Computing Surveys*, 23(3):319–344, September 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/116878.html`.

Aurenhammer:1991:VDS

[488] Franz Aurenhammer. Voronoi diagrams: a survey of a fundamental geometric data structure. *ACM Computing Surveys*, 23(3):345–405, September 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/116880.html.

Strigini:1991:SFR

[489] Lorenzo Strigini. Surveyor's forum: "Resourceful Systems for Fault Tolerance, Reliability, and Safety". *ACM Computing Surveys*, 23(3):407–409, September 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See [454, 478, 490].

Abbott:1991:SFR

[490] Russell Abbott. Surveyor's forum: "Resourceful Systems for Fault Tolerance, Reliability, and Safety". *ACM Computing Surveys*, 23(3):409–411, September 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See [454, 478, 489].

Goldberg:1991:CWE

[491] David Goldberg. Corrigendum: "What Every Computer Scientist Should Know About Floating-Point Arithmetic". *ACM Computing Surveys*, 23 (3):413, September 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See [475, 511, 512].

March:1991:ATId

[492] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 23(4):417–418, December 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1991:AAd

[493] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 23(4):419, December 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Stytz:1991:TDM

[494] M. R. Stytz, G. Frieder, and O. Frieder. Three-dimensional medical imaging: Algorithms and computer systems. *ACM Computing Surveys*, 23(4):421–499, December 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/125155.html.

McKenzie:1991:ERA

[495] L. Edwin McKenzie, Jr. and Richard Thomas Snodgrass. Evaluation of relational algebras incorporating the time dimension in databases. *ACM Computing Surveys*, 23(4):501–543, December 1991. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/125166.html.

March:1992:ATIa

[496] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 24(1):1–2, March 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1992:AAa

[497] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 24(1):3, March 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Suetens:1992:CSO

[498] Paul Suetens, Pascal Fua, and Andrew J. Hanson. Computational strategies for object recognition. *ACM Computing Surveys*, 24(1):5–61, March 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/128763.html.

Mishra:1992:JPR

[499] Priti Mishra and Margaret H. Eich. Join processing in relational databases. *ACM Computing Surveys*, 24(1):63–113, March 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/128764.html.

March:1992:EP

[500] Salvatore T. March. Editorial policy. *ACM Computing Surveys*, 24(2):117–125, June 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1992:ATIb

[501] Salvatore T. March. About this issue .... *ACM Computing Surveys*, 24(2):127–128, June 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

March:1992:AAb

[502] Salvatore T. March. About the authors .... *ACM Computing Surveys*, 24(2):129, June 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Krueger:1992:SR

[503] Charles W. Krueger. Software reuse. *ACM Computing Surveys*, 24(2): 131–183, June 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/130856.html`.

BrinchHansen:1992:HRL

[504] Per Brinch Hansen. Householder reduction of linear equations. *ACM Computing Surveys*, 24(2):185–194, June 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/130851.html`.

McGeoch:1992:AAS

[505] Catherine McGeoch. Analyzing algorithms by simulation: Variance reduction techniques and simulation speedups. *ACM Computing Surveys*, 24(2):195–212, June 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/130853.html`.

Muntz:1992:PN

[506] Richard R. Muntz. A personal note. *ACM Computing Surveys*, 24(3): 213–214, September 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Muntz:1992:ATIa

[507] Richard R. Muntz. About this issue .... *ACM Computing Surveys*, 24 (3):215, September 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Muntz:1992:AAa

[508] Richard R. Muntz. About the authors .... *ACM Computing Surveys*, 24 (3):217, September 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hwang:1992:GMP

[509] Yong K. Hwang and Narendra Ahuja. Gross motion planning — a survey. *ACM Computing Surveys*, 24(3):219–291, September 1992. CODEN

CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/136037.html.

Bryant:1992:SBM

[510] Randal E. Bryant. Symbolic Boolean manipulation with ordered binary-decision diagrams. *ACM Computing Surveys*, 24(3):293–318, September 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/136043.html.

Dunham:1992:SFW

[511] Charles B. Dunham. Surveyor's forum: "What Every Computer Scientist Should Know About Floating-Point Arithmetic". *ACM Computing Surveys*, 24(3):319, September 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See [475, 491, 512].

Wichmann:1992:SFW

[512] Brian A. Wichmann. Surveyor's forum: "What Every Computer Scientist Should Know About Floating-Point Arithmetic". *ACM Computing Surveys*, 24(3):319, September 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See [475, 491, 511].

Muntz:1992:ATIb

[513] Richard R. Muntz. About this issue .... *ACM Computing Surveys*, 24(4):321–322, December 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Muntz:1992:AAb

[514] Richard R. Muntz. About the authors .... *ACM Computing Surveys*, 24(4):323, December 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Brown:1992:SIR

[515] Lisa Gottesfeld Brown. A survey of image registration techniques. *ACM Computing Surveys*, 24(4):325–376, December 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/146374.html.

Kukich:1992:TAC

[516] Karen Kukich. Techniques for automatically correcting words in text. *ACM Computing Surveys*, 24(4):377–439, December 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/146380.html.

Estivill-Castro:1992:SAS

[517] Vladimir Estivill-Castro and Derick Wood. A survey of adaptive sorting algorithms. *ACM Computing Surveys*, 24(4):441–476, December 1992. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/146381.html`.

Muntz:1993:ATIa

[518] Richard R. Muntz. About this issue .... *ACM Computing Surveys*, 25(1): 1–2, March 1993. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Muntz:1993:AAa

[519] Richard R. Muntz. About the authors .... *ACM Computing Surveys*, 25(1):3, March 1993. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Arman:1993:MBO

[520] Farshid Arman and J. K. Aggarwal. Model-based object recognition in dense-range images — a review. *ACM Computing Surveys*, 25(1):5–43, March 1993. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/151255.html`.

Schneider:1993:SS

[521] Marco Schneider. Self-stabilization. *ACM Computing Surveys*, 25(1):45–67, March 1993. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/151256.html`.

Muntz:1993:ATIb

[522] Richard R. Muntz. About this issue .... *ACM Computing Surveys*, 25(2):69–70, June 1993. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Muntz:1993:AAb

[523] Richard R. Muntz. About the authors .... *ACM Computing Surveys*, 25(2):71–72, June 1993. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Graefe:1993:QET

[524] Goetz Graefe. Query evaluation techniques for large databases. *ACM Computing Surveys*, 25(2):73–170, June 1993. CODEN CMSVAN. ISSN

0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/152611.html.

Barborak:1993:CPF

[525] Michael Barborak, Miroslaw Malek, and Anton Dahbura. The consensus problem in fault-tolerant computing. *ACM Computing Surveys*, 25(2): 171–220, June 1993. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/152612.html.

Muntz:1993:ATIc

[526] Richard R. Muntz. About this issue .... *ACM Computing Surveys*, 25(3): 221–222, September 1993. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Muntz:1993:AAc

[527] Richard R. Muntz. About the authors .... *ACM Computing Surveys*, 25 (3):223, September 1993. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shankar:1993:IAR

[528] A. Udaya Shankar. An introduction to assertional reasoning for concurrent systems. *ACM Computing Surveys*, 25(3):225–262, September 1993. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/158441.html.

Norman:1993:MMC

[529] Michael G. Norman and Peter Thanisch. Models of machines and computation for mapping in multicomputers. *ACM Computing Surveys*, 25(3):263–302, September 1993. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/158908.html.

Lilja:1993:CCL

[530] David J. Lilja. Cache coherence in large-scale shared-memory multiprocessors: Issues and comparisons. *ACM Computing Surveys*, 25(3):303–338, September 1993. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/158907.html.

Nelson:1993:MPF

[531] Randolph D. Nelson. The mathematics of product form queuing networks. *ACM Computing Surveys*, 25(3):339–369, September 1993. CO-

DEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/158906.html.

Muntz:1993:ATId

[532] Richard R. Muntz. About this issue .... *ACM Computing Surveys*, 25(4): 371–372, December 1993. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Muntz:1993:AAd

[533] Richard R. Muntz. About the authors .... *ACM Computing Surveys*, 25(4):373, December 1993. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Baskerville:1993:ISS

[534] Richard Baskerville. Information systems security design methods: Implications for information systems development. *ACM Computing Surveys*, 25(4):375–414, December 1993. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/162127.html.

Eschermann:1993:SAH

[535] Bernhard Eschermann. State assignment for hardwired VLSI control units. *ACM Computing Surveys*, 25(4):415–436, December 1993. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/162132.html.

Brancheau:1993:MEU

[536] James C. Brancheau and Carol V. Brown. The management of end-user computing: Status and directions. *ACM Computing Surveys*, 25(4):437–482, December 1993. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/162138.html.

Gupta:1994:RSD

[537] Rajiv Gupta, Scott A. Smolka, and Shaji Bhaskar. On randomization in sequential and distributed algorithms. *ACM Computing Surveys*, 26(1): 7–86, March 1994. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/174667.html.

Malone:1994:ISC

[538] Thomas W. Malone and Kevin Crowston. The interdisciplinary study of coordination. *ACM Computing Surveys*, 26(1):87–119, March 1994.

CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/174668.html.

Lee:1994:PDM

[539] Sunggu Lee and Kang Geun Shin. Probabilistic diagnosis of multiprocessor systems. *ACM Computing Surveys*, 26(1):121–139, March 1994. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/174669.html.

Muntz:1994:ATI

[540] Richard R. Muntz. About this issue .... *ACM Computing Surveys*, 26 (2):141–142, June 1994. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Muntz:1994:

[541] Richard R. Muntz. About this issue .... *ACM Computing Surveys*, 26 (2):143–144, June 1994. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chen:1994:RHP

[542] Peter M. Chen, Edward K. Lee, Garth A. Gibson, Randy H. Katz, and David A. Patterson. RAID: High-performance, reliable secondary storage. *ACM Computing Surveys*, 26(2):145–185, June 1994. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/176981.html.

Harris:1994:SPS

[543] Tim J. Harris. A survey of PRAM simulation techniques. *ACM Computing Surveys*, 26(2):187–206, June 1994. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/176984.html.

Muntz:1994:AIa

[544] Richard R. Muntz. About this issue .... *ACM Computing Surveys*, 26 (3):207, September 1994. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Muntz:1994:AAa

[545] Richard R. Muntz. About the authors .... *ACM Computing Surveys*, 26(3):209–210, September 1994. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Landwehr:1994:TCP

[546] Carl E. Landwehr, Alan R. Bull, John P. McDermott, and William S. Choi. A taxonomy of computer program security flaws. *ACM Computing Surveys*, 26(3):211–254, September 1994. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/185412.html`.

Bailey:1994:PLS

[547] Mary L. Bailey, Jack V. Briner, Jr., and Roger D. Chamberlain. Parallel logic simulation of VLSI systems. *ACM Computing Surveys*, 26 (3):255–294, September 1994. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/185424.html`.

deKergommeaux:1994:PLP

[548] Jacques Chassin de Kergommeaux and Philippe Codognet. Parallel logic programming systems. *ACM Computing Surveys*, 26(3):295–336, September 1994. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/185453.html`.

Wegner:1994:ED

[549] Peter Wegner and Marvin Israel. Editorial directions. *ACM Computing Surveys*, 26(4):337–339, December 1994. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Muntz:1994:AIb

[550] Richard R. Muntz. About this issue. *ACM Computing Surveys*, 26(4): 341, December 1994. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Muntz:1994:AAb

[551] Richard R. Muntz. About the authors. *ACM Computing Surveys*, 26 (4):343, December 1994. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bacon:1994:CTH

[552] David F. Bacon, Susan L. Graham, and Oliver J. Sharp. Compiler transformations for high-performance computing. *ACM Computing Surveys*, 26(4):345–420, December 1994. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/toc/Abstracts/0360-0300/197406.html`.

Matousek:1994:GRS

[553] Jiří Matoušek. Geometric range searching. *ACM Computing Surveys*, 26(4):421–461, December 1994. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/197408.html.

Wegner:1995:AIa

[554] Peter Wegner and Marvin Israel. About this issue .... *ACM Computing Surveys*, 27(1):1–2, March 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hartmanis:1995:TAL

[555] Juris Hartmanis. Turing Award lecture: On computational complexity and the nature of computer science. *ACM Computing Surveys*, 27(1):7–16, March 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/214040.html.

Belady:1995:DPS

[556] Laszlo A. Belady. The disappearance of the "Pure" software industry. *ACM Computing Surveys*, 27(1):17–18, March 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/214043.html.

Brassard:1995:TAP

[557] Gilles Brassard. Time for another paradigm shift. *ACM Computing Surveys*, 27(1):19–21, March 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/214044.html.

Denning:1995:CTS

[558] Peter J. Denning. Can there be a science of information? *ACM Computing Surveys*, 27(1):23–25, March 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/214046.html.

Freeman:1995:ECS

[559] Peter A. Freeman. Effective computer science. *ACM Computing Surveys*, 27(1):27–29, March 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/214048.html.

Loui:1995:CSN

[560] Michael C. Loui. Computer science is a new engineering discipline. *ACM Computing Surveys*, 27(1):31–32, March 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/214049.html.

Plaice:1995:CSE

[561] John Plaice. Computer science is an experimental science. *ACM Computing Surveys*, 27(1):33, March 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/214050.html.

Savage:1995:WCS

[562] John E. Savage. Will computer science become irrelevant? *ACM Computing Surveys*, 27(1):35–37, March 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/214052.html.

Stewart:1995:SCS

[563] N. F. Stewart. Science and computer science. *ACM Computing Surveys*, 27(1):39–41, March 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/214088.html.

Ullman:1995:RTT

[564] Jeffrey D. Ullman. The role of theory today. *ACM Computing Surveys*, 27(1):43–44, March 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/214089.html.

Wegner:1995:IBE

[565] Peter Wegner. Interaction as a basis for empirical computer science. *ACM Computing Surveys*, 27(1):45–48, March 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/214092.html.

Weingarten:1995:GFC

[566] Fred Weingarten. Government funding and computing research priorities. *ACM Computing Surveys*, 27(1):49–54, March 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/214093.html.

Wulf:1995:WSE

[567] W. A. Wulf. Are we scientists or engineers? *ACM Computing Surveys*, 27(1):55–57, March 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/214096.html.

Hartmanis:1995:REC

[568] Juris Hartmanis. Response to the essays "On Computational Complexity and the Nature of Computer Science". *ACM Computing Surveys*, 27(1):59–61, March 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/214097.html.

Buhr:1995:MC

[569] Peter A. Buhr, Michel Fortier, and Michael H. Coffin. Monitor classification. *ACM Computing Surveys*, 27(1):63–107, March 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/214100.html.

Baeza-Yates:1995:FAR

[570] Ricardo A. Baeza-Yates. Fringe analysis revisited. *ACM Computing Surveys*, 27(1):109–119, March 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/214103.html.

Various:1995:STN

[571] Various. The scope and tutorial needs of the ACM SIGs. *ACM Computing Surveys*, 27(1):121–137, March 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wegner:1995:AIb

[572] Peter Wegner and Marvin Israel. About this issue. *ACM Computing Surveys*, 27(2):139–140, June 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Pitoura:1995:OOM

[573] Evaggelia Pitoura, Omran Bukhres, and Ahmed Elmagarmid. Object orientation in multidatabase systems. *ACM Computing Surveys*, 27(2):141–195, June 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/210378.html.

Paakki:1995:AGP

[574] Jukka Paakki. Attribute grammar paradigms — a high-level methodology in language implementation. *ACM Computing Surveys*, 27(2):196–255, June 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/197409.html.

Garlan:1995:RDS

[575] David Garlan. Research directions in software architecture. *ACM Computing Surveys*, 27(2):257–261, June 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/210388.html.

Nierstrasz:1995:RDS

[576] Oscar Nierstrasz and Theo Dirk Meijler. Research directions in software composition. *ACM Computing Surveys*, 27(2):262–264, June 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/210389.html.

Wiederhold:1995:MIS

[577] Gio Wiederhold. Mediation in information systems. *ACM Computing Surveys*, 27(2):265–267, June 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/210390.html.

Manola:1995:IIL

[578] Frank Manola. Interoperability issues in large-scale distributed object systems. *ACM Computing Surveys*, 27(2):268–270, June 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/210391.html.

Heiler:1995:SI

[579] Sandra Heiler. Semantic interoperability. *ACM Computing Surveys*, 27(2):271–273, June 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/210392.html.

Sutherland:1995:BOC

[580] Jeff Sutherland. Business objects in corporate information systems. *ACM Computing Surveys*, 27(2):274–276, June 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/210394.html.

Gallopoulos:1995:WPS

[581] Efstratios Gallopoulos, Elias N. Houstis, and John R. Rice. Workshop on problem-solving environments: Findings and recommendations. *ACM Computing Surveys*, 27(2):277–279, June 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/210396.html.

Rosenberg:1995:TPC

[582] Arnold L. Rosenberg. Thoughts on parallelism and concurrency in computing curricula. *ACM Computing Surveys*, 27(2):280–283, June 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/210399.html.

Metaxas:1995:FIP

[583] P. Takis Metaxas. Fundamental ideas for a parallel computing course. *ACM Computing Surveys*, 27(2):284–286, June 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/210404.html.

Moller:1995:CCB

[584] Faron Moller and Scott A. Smolka. On the computational complexity of bisimulation. *ACM Computing Surveys*, 27(2):287–289, June 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/210406.html.

Cytron:1995:SST

[585] Ron K. Cytron and Brent Hailpern. SIGPLAN scope and tutorial needs. *ACM Computing Surveys*, 27(2):290–291, June 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/210407.html.

Thomasian:1995:SFH

[586] Alexander Thomasian. Surveyors' forum — high-performance secondary memory. *ACM Computing Surveys*, 27(2):292–295, June 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/210409.html.

Wegner:1995:AIc

[587] Peter Wegner and Marvin Israel. About this issue. *ACM Computing Surveys*, 27(3):297, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Reddy:1995:GCA

[588] Raj Reddy. Grand challenges in AI. *ACM Computing Surveys*, 27 (3):301–303, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212097.html.

Ahuja:1995:DRM

[589] Narendra Ahuja. On detection and representation of multiscale low-level image structure. *ACM Computing Surveys*, 27(3):304–306, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212099.html.

Aloimonos:1995:SUR

[590] Yiannis Aloimonos, C. Fermüller, and A. Rosenfeld. Seeing and understanding: Representing the visual world. *ACM Computing Surveys*, 27(3):307–309, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212101.html.

Bajcsy:1995:SST

[591] Ruzena Bajcsy. Signal-to-symbol transformation and vice versa: From fundamental processes to representation. *ACM Computing Surveys*, 27 (3):310–313, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212103.html.

Brachman:1995:UBU

[592] Ronald J. Brachman and Hector J. Levesque. Undirected behavior without unbounded search. *ACM Computing Surveys*, 27(3):314–316, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212104.html.

Charniak:1995:NLL

[593] Eugene Charniak. Natural language learning. *ACM Computing Surveys*, 27(3):317–319, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212108.html.

Clancey:1995:AIN

[594] William J. Clancey. AI: Inventing a new kind of machine. *ACM Computing Surveys*, 27(3):320–322, September 1995. CODEN CMSVAN. ISSN

0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212110.html.

Cohn:1995:CQS

[595] A. G. Cohn. The challenge of qualitative spatial reasoning. *ACM Computing Surveys*, 27(3):323–325, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212112.html.

Dietterich:1995:OUM

[596] Tom Dietterich. Overfitting and undercomputing in machine learning. *ACM Computing Surveys*, 27(3):326–327, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212114.html.

Dubois:1995:WDF

[597] Didier Dubois and Henri Prade. What does fuzzy logic bring to AI? *ACM Computing Surveys*, 27(3):328–330, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212115.html.

Ginsberg:1995:EHA

[598] Matthew L. Ginsberg. Epistemological and heuristic adequacy revisited. *ACM Computing Surveys*, 27(3):331–333, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212117.html.

Kambhampati:1995:APP

[599] Subbarao Kambhampati. AI planning: a prospectus on theory and applications. *ACM Computing Surveys*, 27(3):334–336, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212118.html.

Korf:1995:SES

[600] Richard E. Korf. Space-efficient search algorithms. *ACM Computing Surveys*, 27(3):337–339, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212120.html.

Lesser:1995:MSE

[601] Victor R. Lesser. Multiagent systems: An emerging subdiscipline of AI. *ACM Computing Surveys*, 27(3):340–342, September 1995. CODEN

CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212121.html.

Lifschitz:1995:LCS

[602] Vladimir Lifschitz. The logic of common sense. *ACM Computing Surveys*, 27(3):343–345, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212122.html.

Loui:1995:MDS

[603] R. P. Loui. Models of deliberation in the social sciences. *ACM Computing Surveys*, 27(3):346–348, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212123.html.

Pitrat:1995:ASD

[604] Jacques Pitrat. AI systems are dumb because AI researchers are too clever. *ACM Computing Surveys*, 27(3):349–350, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212124.html.

Tate:1995:DLY

[605] Austin Tate. Don't leave your plan on the shelf. *ACM Computing Surveys*, 27(3):351–352, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212125.html.

Torasso:1995:RA

[606] Pietro Torasso, Luca Console, Luigi Portinale, and Daniele Theseider Dupré. On the role of abduction. *ACM Computing Surveys*, 27(3):353–355, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212126.html.

Waltz:1995:RD

[607] David Waltz and Simon Kasif. On reasoning from data. *ACM Computing Surveys*, 27(3):356–359, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212127.html.

Wellman:1995:EAA

[608] Michael P. Wellman. The economic approach to artificial intelligence. *ACM Computing Surveys*, 27(3):360–362, September 1995. CODEN

CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212128.html.

Yip:1995:IR

[609] Kenneth Yip, Feng Zhao, and Elisha Sacks. Imagistic reasoning. *ACM Computing Surveys*, 27(3):363–365, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212130.html.

Allan:1995:SP

[610] Vicki H. Allan, Reese B. Jones, Randall M. Lee, and Stephen J. Allan. Software pipelining. *ACM Computing Surveys*, 27(3):367–432, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212131.html.

Beauchemin:1995:COF

[611] S. S. Beauchemin and J. L. Barron. The computation of optical flow. *ACM Computing Surveys*, 27(3):433–467, September 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/toc/Abstracts/0360-0300/212141.html.

Greenlaw:1995:CG

[612] Raymond Greenlaw and Rossella Petreschi. Cubic graphs. *ACM Computing Surveys*, 27(4):471–495, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Prather:1995:DAH

[613] Ronald E. Prather. Design and analysis of hierarchical software metrics. *ACM Computing Surveys*, 27(4):497–518, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sarkar:1995:MSE

[614] Dilip Sarkar. Methods to speed up error back-propagation learning algorithm. *ACM Computing Surveys*, 27(4):519–542, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Anonymous:1995:CSS

[615] Anonymous. Computing surveys symposium on multimedia. *ACM Computing Surveys*, 27(4):543–544, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gudivada:1995:MSI

[616] Venkat N. Gudivada. Multimedia systems — an interdisciplinary perspective. *ACM Computing Surveys*, 27(4):545–548, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Fox:1995:MCC

[617] Edward A. Fox and Linda M. Kieffer. Multimedia curricula, courses, and knowledge modules. *ACM Computing Surveys*, 27(4):549–551, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Furht:1995:WIS

[618] Borko Furht. Where are information superhighways headed? *ACM Computing Surveys*, 27(4):554–556, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Preece:1995:SFE

[619] Jenny Preece and Ben Shneiderman. Survival of the fittest: The evolution of multimedia user interfaces. *ACM Computing Surveys*, 27(4):557–559, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Andre:1995:IMM

[620] Elisabeth André. Intellimedia: Making multimedia usable by exploiting AI methods. *ACM Computing Surveys*, 27(4):560–563, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Aref:1995:HEI

[621] Walid G. Aref, Ibrahim Kamel, and Daniel P. Lopresti. On handling electronic ink. *ACM Computing Surveys*, 27(4):564–567, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Baker:1995:NMA

[622] James E. Baker, Isabel F. Cruz, Giuseppe Liotta, and Roberto Tamassia. A new model for algorithm animation over the WWW. *ACM Computing Surveys*, 27(4):568–572, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chang:1995:EFC

[623] Shih-Fu Chang. Exploring functionalities in the compressed image/video domain. *ACM Computing Surveys*, 27(4):573–575, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Christodoulakis:1995:RDI

[624] Stavros Christodoulakis and Peter Triantafillou. Research and development issues for large-scale multimedia information systems. *ACM Computing Surveys*, 27(4):576–579, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Cowan:1995:AMD

[625] Crispin Cowan, Shanwei Cen, Jonathan Walpole, and Calton Pu. Adaptive methods for distributed video presentation. *ACM Computing Surveys*, 27(4):580–583, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Dimitrova:1995:MSV

[626] Nevenka Dimitrova. The myth of semantic video retrieval. *ACM Computing Surveys*, 27(4):584–586, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Flank:1995:RNL

[627] Sharon Flank. The role of natural-language processing in multimedia. *ACM Computing Surveys*, 27(4):587–589, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Garofalakis:1995:SIM

[628] Minos N. Garofalakis and Yannis E. Ioannidis. Scheduling issues in multimedia query optimization. *ACM Computing Surveys*, 27(4):590–592, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ghafoor:1995:MDM

[629] Arif Ghafoor. Multimedia database management systems. *ACM Computing Surveys*, 27(4):593–598, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hall:1995:RHM

[630] Wendy Hall. The role of hypermedia in multimedia information systems. *ACM Computing Surveys*, 27(4):599–601, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Li:1995:DDM

[631] Qing Li and Liu Sheng Huang. A dynamic data model for a video database management system. *ACM Computing Surveys*, 27(4):602–606,

December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Moffat:1995:IOM

[632] Alistair Moffat and Justin Zobel. Index organization for multimedia database systems. *ACM Computing Surveys*, 27(4):607–609, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mosse:1995:RRN

[633] Daniel Mossé. Resource reservations in networked multimedia systems. *ACM Computing Surveys*, 27(4):610–612, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Nahrstedt:1995:EEQ

[634] Klara Nahrstedt. End-to-end QoS guarantees in networked multimedia systems. *ACM Computing Surveys*, 27(4):613–616, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ozden:1995:RIM

[635] Banu Özden, Rajeev Rastogi, and Avi Silberschatz. Research issues in multimedia storage servers. *ACM Computing Surveys*, 27(4):617–620, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Picard:1995:CLS

[636] Rosalind W. Picard. Computer learning of subjectivity. *ACM Computing Surveys*, 27(4):621–623, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Roselli:1995:AIC

[637] Teresa Roselli. Artificial intelligence can improve hypermedia instructional technologies for learning. *ACM Computing Surveys*, 27(4):624–626, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Rus:1995:CMI

[638] Daniela Rus and Devika Subramanian. Customizing multimedia information access. *ACM Computing Surveys*, 27(4):627–629, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Samet:1995:GRI

[639] Hanan Samet. General research issues in multimedia database systems. *ACM Computing Surveys*, 27(4):630–632, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Schank:1995:MAE

[640] Roger C. Schank, Michael Korcuska, and Menachem Jona. Multimedia applications for education and training: Revolution or red herring? *ACM Computing Surveys*, 27(4):633–635, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shenoy:1995:IMS

[641] Prashant J. Shenoy, Pawan Goyal, and Harrick M. Vin. Issues in multimedia server design. *ACM Computing Surveys*, 27(4):636–639, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Staehli:1995:DPD

[642] Richard Staehli, Jonathan Walpole, and David Maier. Device and physical-data independence for multimedia presentations. *ACM Computing Surveys*, 27(4):640–642, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhang:1995:DVA

[643] HongJiang Zhang and Qi Tian. Digital video analysis and recognition for content-based access. *ACM Computing Surveys*, 27(4):643–644, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Anonymous:1995:CAI

[644] Anonymous. Contents: Author index: Vols. 23–27 (1991–1995). *ACM Computing Surveys*, 27(4):645–650, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Anonymous:1995:CSI

[645] Anonymous. Contents: Subject index: Vols. 23–27 (1991–1995). *ACM Computing Surveys*, 27(4):650–653, December 1995. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Abiteboul:1996:MPC

[646] Serge Abiteboul, Gabriel M. Kuper, Harry G. Mairson, Alexander A. Shvartsman, and Moshe Y. Vardi. In memoriam Paris C. Kanellakis.

ACM Computing Surveys, 28(1):3–15, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p3-abiteboul/; http://www.acm.org/pubs/toc/Abstracts/surveys/234318.html.

Reingold:1996:BTD

[647] Edward M. Reingold. Basic techniques for design and analysis of algorithms. *ACM Computing Surveys*, 28(1):19–21, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p19-reingold/; http://www.acm.org/pubs/toc/Abstracts/surveys/234321.html.

Tucker:1996:AAS

[648] Allen Tucker and Peter Wegner. ACM 50th-Anniversary Symposium: Perspectives in computer science. *ACM Computing Surveys*, 28(1):19–286, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Tamassia:1996:DS

[649] Roberto Tamassia. Data structures. *ACM Computing Surveys*, 28(1):23–26, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p23-tamassia/; http://www.acm.org/pubs/toc/Abstracts/surveys/234323.html.

Lee:1996:CG

[650] D. T. Lee. Computational geometry. *ACM Computing Surveys*, 28(1):27–31, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p27-lee/; http://www.acm.org/pubs/toc/Abstracts/surveys/234325.html.

Motwani:1996:RA

[651] Rajeev Motwani and Prabhakar Raghavan. Randomized algorithms. *ACM Computing Surveys*, 28(1):33–37, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p33-motwani/; http://www.acm.org/pubs/toc/Abstracts/surveys/234327.html.

Crochemore:1996:PMT

[652] Maxime Crochemore and Thierry Lecroq. Pattern-matching and text-compression algorithms. *ACM Computing Surveys*, 28(1):39–41,

March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p39-crochemore/; http://www.acm.org/pubs/toc/Abstracts/surveys/234331.html.

Khuller:1996:GNA

[653] Samir Khuller and Balaji Raghavachari. Graph and network algorithms. *ACM Computing Surveys*, 28(1):43–45, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p43-khuller/; http://www.acm.org/pubs/toc/Abstracts/surveys/234334.html.

Loui:1996:CCT

[654] Michael C. Loui. Computational complexity theory. *ACM Computing Surveys*, 28(1):47–49, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p47-loui/; http://www.acm.org/pubs/toc/Abstracts/surveys/234337.html.

Blelloch:1996:PA

[655] Guy E. Blelloch and Bruce M. Maggs. Parallel algorithms. *ACM Computing Surveys*, 28(1):51–54, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p51-blelloch/; http://www.acm.org/pubs/toc/Abstracts/surveys/234339.html.

Chandru:1996:COI

[656] Vijay Chandru and M. R. Rao. Combinatorial optimization: an integer programming perspective. *ACM Computing Surveys*, 28(1):55–58, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p55-chandru/; http://www.acm.org/pubs/toc/Abstracts/surveys/234341.html.

Lapaugh:1996:LAV

[657] Andrea S. Lapaugh. Layout algorithm for VLSI design. *ACM Computing Surveys*, 28(1):59–61, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p59-lapaugh/; http://www.acm.org/pubs/toc/Abstracts/surveys/234343.html.

Burger:1996:MS

[658] Doug Burger. Memory systems. *ACM Computing Surveys*, 28 (1):63–65, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p63-burger/; http://www.acm.org/pubs/toc/Abstracts/surveys/234974.html.

Flynn:1996:PA

[659] Michael J. Flynn and Kevin W. Rudd. Parallel architectures. *ACM Computing Surveys*, 28(1):67–70, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p67-flynn/; http://www.acm.org/pubs/toc/Abstracts/surveys/234345.html.

Quinlan:1996:LDT

[660] J. R. Quinlan. Learning decision tree classifiers. *ACM Computing Surveys*, 28(1):71–72, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p71-quinlan/; http://www.acm.org/pubs/toc/Abstracts/surveys/234346.html.

Jordan:1996:NN

[661] Michael I. Jordan and Christopher M. Bishop. Neural networks. *ACM Computing Surveys*, 28(1):73–75, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p73-jordan/; http://www.acm.org/pubs/toc/Abstracts/surveys/234348.html.

Forrest:1996:GA

[662] Stephanie Forrest. Genetic algorithms. *ACM Computing Surveys*, 28(1):77–80, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p77-forrest/; http://www.acm.org/pubs/toc/Abstracts/surveys/234350.html.

Lewis:1996:R

[663] F. L. Lewis, M. Fitzgerald, and K. Liu. Robotics. *ACM Computing Surveys*, 28(1):81–83, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p81-lewis/; http://www.acm.org/pubs/toc/Abstracts/surveys/234351.html.

Dean:1996:AP

[664] Thomas Dean. Automated planning. *ACM Computing Surveys*, 28 (1):85–87, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p85-dean/; http://www.acm.org/pubs/toc/Abstracts/surveys/234352.html.

Pearl:1996:DMU

[665] Judea Pearl. Decision making under uncertainty. *ACM Computing Surveys*, 28(1):89–92, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p89-pearl/; http://www.acm.org/pubs/toc/Abstracts/surveys/234354.html.

Cinnella:1996:NSR

[666] Pasquale Cinnella. Numerical simulations of reactive flows. *ACM Computing Surveys*, 28(1):93–96, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p93-cinnella/; http://www.acm.org/pubs/toc/Abstracts/surveys/234355.html.

Shang:1996:CE

[667] Joseph S. Shang. Computational electromagnetics. *ACM Computing Surveys*, 28(1):97–99, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p97-shang/; http://www.acm.org/pubs/toc/Abstracts/surveys/234357.html.

Kingsbury:1996:CB

[668] David T. Kingsbury. Computational biology. *ACM Computing Surveys*, 28(1):101–103, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p101-kingsbury/; http://www.acm.org/pubs/toc/Abstracts/surveys/234358.html.

Silberschatz:1996:DM

[669] Avi Silberschatz, Henry F. Korth, and S. Sudarshan. Data models. *ACM Computing Surveys*, 28(1):105–108, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p105-silberschatz/; http://www.acm.org/pubs/toc/Abstracts/surveys/234360.html.

Ceri:1996:RDS

[670] Stefano Ceri and Raghu Ramakrishnan. Rules in database systems. *ACM Computing Surveys*, 28(1):109–111, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p109-ceri/; http://www.acm.org/pubs/toc/Abstracts/surveys/234362.html.

Shasha:1996:TDH

[671] Dennis Shasha. Tuning databases for high performance. *ACM Computing Surveys*, 28(1):113–115, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p113-shasha/; http://www.acm.org/pubs/toc/Abstracts/surveys/234363.html.

Salzberg:1996:AM

[672] Betty Salzberg. Access methods. *ACM Computing Surveys*, 28(1):117–120, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p117-salzberg/; http://www.acm.org/pubs/toc/Abstracts/surveys/234365.html.

Ioannidis:1996:QO

[673] Yannis E. Ioannidis. Query optimization. *ACM Computing Surveys*, 28(1):121–123, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p121-ioannidis/; http://www.acm.org/pubs/toc/Abstracts/surveys/234367.html.

Ozsu:1996:DPD

[674] M. Tamer Özsu and Patrick Valduriez. Distributed and parallel database systems. *ACM Computing Surveys*, 28(1):125–128, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p125-ozsu/; http://www.acm.org/pubs/toc/Abstracts/surveys/234368.html.

Jajodia:1996:DSP

[675] Sushil Jajodia. Database security and privacy. *ACM Computing Surveys*, 28(1):129–131, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p129-jajodia/; http://www.acm.org/pubs/toc/Abstracts/surveys/234370.html.

Riloff:1996:TDI

[676] Ellen Riloff and Lee Hollaar. Text databases and information retrieval. *ACM Computing Surveys*, 28(1):133–135, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p133-riloff/; http://www.acm.org/pubs/toc/Abstracts/surveys/234371.html.

Bancilhon:1996:OD

[677] François Bancilhon. Object databases. *ACM Computing Surveys*, 28(1):137–140, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p137-bancilhon/; http://www.acm.org/pubs/toc/Abstracts/surveys/234373.html.

Melton:1996:SLS

[678] Jim Melton. SQL language summary. *ACM Computing Surveys*, 28(1):141–143, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p141-melton/; http://www.acm.org/pubs/toc/Abstracts/surveys/234374.html.

House:1996:OTD

[679] Donald H. House. Overview of three-dimensional computer graphics. *ACM Computing Surveys*, 28(1):145–148, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p145-house/; http://www.acm.org/pubs/toc/Abstracts/surveys/234375.html.

Rockwood:1996:GP

[680] A. P. Rockwood. Geometric primitives. *ACM Computing Surveys*, 28(1):149–151, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p149-rockwood/; http://www.acm.org/pubs/toc/Abstracts/surveys/234377.html.

Ebert:1996:AMT

[681] David S. Ebert. Advanced modeling techniques for computer graphics. *ACM Computing Surveys*, 28(1):153–156, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p153-

ebert/; http://www.acm.org/pubs/toc/Abstracts/surveys/234378.html.

Watt:1996:RTP

[682] Alan Watt. Rendering techniques: past, present and future. *ACM Computing Surveys*, 28(1):157–159, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p157-watt/; http://www.acm.org/pubs/toc/Abstracts/surveys/234380.html.

Thalmann:1996:CA

[683] Nadia Magnenat Thalmann and Daniel Thalmann. Computer animation. *ACM Computing Surveys*, 28(1):161–163, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p161-thalmann/; http://www.acm.org/pubs/toc/Abstracts/surveys/234381.html.

Kaufman:1996:VV

[684] Arie E. Kaufman. Volume visualization. *ACM Computing Surveys*, 28(1):165–167, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p165-kaufman/; http://www.acm.org/pubs/toc/Abstracts/surveys/234383.html.

Grudin:1996:OCD

[685] Jonathan Grudin. The organizational contexts of development and use. *ACM Computing Surveys*, 28(1):169–171, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p169-grudin/; http://www.acm.org/pubs/toc/Abstracts/surveys/234384.html.

Dzida:1996:IUS

[686] Wolfgang Dzida. International usability standards. *ACM Computing Surveys*, 28(1):173–175, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p173-dzida/; http://www.acm.org/pubs/toc/Abstracts/surveys/234386.html.

Jacob:1996:HCI

[687] Robert J. K. Jacob. Human-computer interaction: input devices. *ACM Computing Surveys*, 28(1):177–179, March 1996. CODEN

CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p177-jacob/; http://www.acm.org/pubs/toc/Abstracts/surveys/234387.html.

Ware:1996:MOD

[688] Colin Ware. Multimedia output devices and techniques. *ACM Computing Surveys*, 28(1):181–183, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p181-ware/; http://www.acm.org/pubs/toc/Abstracts/surveys/234389.html.

Ziegler:1996:IT

[689] Jürgen Ziegler. Interactive techniques. *ACM Computing Surveys*, 28(1):185–187, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p185-ziegler/; http://www.acm.org/pubs/toc/Abstracts/surveys/234392.html.

Myers:1996:UIS

[690] Brad A. Myers. User interface software technology. *ACM Computing Surveys*, 28(1):189–191, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p189-myers/; http://www.acm.org/pubs/toc/Abstracts/surveys/234394.html.

Rosson:1996:HFP

[691] Mary Beth Rosson. Human factors in programming and software development. *ACM Computing Surveys*, 28(1):193–195, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p193-rosson/; http://www.acm.org/pubs/toc/Abstracts/surveys/234396.html.

Selber:1996:OSS

[692] Stuart A. Selber, Johndan Johnson-Eilola, and Brad Mehlenbacher. Online support systems. *ACM Computing Surveys*, 28(1):197–200, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p197-selber/; http://www.acm.org/pubs/toc/Abstracts/surveys/234397.html.

Finkel:1996:OS

[693] Raphel A. Finkel. Operating systems. *ACM Computing Surveys*, 28(1):201–203, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p201-finkel/; http://www.acm.org/pubs/toc/Abstracts/surveys/234399.html.

Stankovic:1996:RTE

[694] John A. Stankovic. Real-time and embedded systems. *ACM Computing Surveys*, 28(1):205–208, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p205-stankovic/; http://www.acm.org/pubs/toc/Abstracts/surveys/234400.html.

Wills:1996:PSI

[695] Craig E. Wills. Process synchronization and IPC. *ACM Computing Surveys*, 28(1):209–211, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p209-wills/; http://www.acm.org/pubs/toc/Abstracts/surveys/234401.html.

Denning:1996:VM

[696] Peter J. Denning. Virtual memory. *ACM Computing Surveys*, 28(1):213–216, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p213-denning/; http://www.acm.org/pubs/toc/Abstracts/surveys/234403.html.

McKusick:1996:SSF

[697] Marshall Kirk McKusick. Secondary storage and filesystems. *ACM Computing Surveys*, 28(1):217–219, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p217-mckusick/; http://www.acm.org/pubs/toc/Abstracts/surveys/234404.html.

Stallings:1996:AHS

[698] William Stallings. Advances in high-speed networking. *ACM Computing Surveys*, 28(1):221–223, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p221-stallings/; http://www.acm.org/pubs/toc/Abstracts/surveys/234406.html.

Mullender:1996:DOS

[699] Sape J. Mullender. Distributed operating systems. *ACM Computing Surveys*, 28(1):225–227, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p225-mullender/; http://www.acm.org/pubs/toc/Abstracts/surveys/234407.html.

Doeppner:1996:DFS

[700] Thomas W. Doeppner, Jr. Distributed file systems and distributed memory. *ACM Computing Surveys*, 28(1):229–231, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p229-doeppner/; http://www.acm.org/pubs/toc/Abstracts/surveys/234409.html.

Chapin:1996:DMS

[701] Steve J. Chapin. Distributed and multiprocessor scheduling. *ACM Computing Surveys*, 28(1):233–235, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p233-chapin/; http://www.acm.org/pubs/toc/Abstracts/surveys/234410.html.

Siegel:1996:SSH

[702] Howard Jay Siegel, Henry G. Dietz, and John K. Antonio. Software support for heterogeneous computing. *ACM Computing Surveys*, 28(1):237–239, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p237-siegel/; http://www.acm.org/pubs/toc/Abstracts/surveys/234411.html.

Sandhu:1996:AAC

[703] Ravi Sandhu and Pierangela Samarati. Authentication, access control, and audit. *ACM Computing Surveys*, 28(1):241–243, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p241-sandhu/; http://www.acm.org/pubs/toc/Abstracts/surveys/234412.html.

Bruce:1996:PPL

[704] Kim B. Bruce. Progress in programming languages. *ACM Computing Surveys*, 28(1):245–247, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/

citations/journals/surveys/1996-28-1/p245-bruce/; http://www.acm.org/pubs/toc/Abstracts/surveys/234413.html.

Goldberg:1996:FPL

[705] Benjamin Goldberg. Functional programming languages. *ACM Computing Surveys*, 28(1):249–251, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p249-goldberg/; http://www.acm.org/pubs/toc/Abstracts/surveys/234414.html.

Hirshfield:1996:OOP

[706] Stuart Hirshfield and Raimund K. Ege. Object-oriented programming. *ACM Computing Surveys*, 28(1):253–255, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p253-hirshfield/; http://www.acm.org/pubs/toc/Abstracts/surveys/234415.html.

Cohen:1996:LPC

[707] Jacques Cohen. Logic programming and constraint logic programming. *ACM Computing Surveys*, 28(1):257–259, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p257-cohen/; http://www.acm.org/pubs/toc/Abstracts/surveys/234416.html.

Wolfe:1996:PC

[708] Michael Wolfe. Parallelizing compilers. *ACM Computing Surveys*, 28(1):261–262, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p261-wolfe/; http://www.acm.org/pubs/toc/Abstracts/surveys/234417.html.

Cardelli:1996:TS

[709] Luca Cardelli. Type systems. *ACM Computing Surveys*, 28(1):263–264, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p263-cardelli/; http://www.acm.org/pubs/toc/Abstracts/surveys/234418.html.

Schmidt:1996:PLS

[710] David A. Schmidt. Programming language semantics. *ACM Computing Surveys*, 28(1):265–267, March 1996. CODEN CMSVAN. ISSN 0360-

0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p265-schmidt/; http://www.acm.org/pubs/toc/Abstracts/surveys/234419.html.

Sommerville:1996:SPM

[711] Ian Sommerville. Software process models. *ACM Computing Surveys*, 28 (1):269–271, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p269-sommerville/; http://www.acm.org/pubs/toc/Abstracts/surveys/234420.html.

Holland:1996:OOD

[712] Ian M. Holland and Karl J. Lieberherr. Object-oriented design. *ACM Computing Surveys*, 28(1):273–275, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p273-holland/; http://www.acm.org/pubs/toc/Abstracts/surveys/234421.html.

Schach:1996:TPP

[713] Stephen R. Schach. Testing: principles and practice. *ACM Computing Surveys*, 28(1):277–279, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p277-schach/; http://www.acm.org/pubs/toc/Abstracts/surveys/234422.html.

Reiss:1996:STE

[714] Steven P. Reiss. Software tools and environments. *ACM Computing Surveys*, 28(1):281–284, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p281-reiss/; http://www.acm.org/pubs/toc/Abstracts/surveys/234423.html.

Wegner:1996:I

[715] Peter Wegner. Interoperability. *ACM Computing Surveys*, 28 (1):285–287, March 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-1/p285-wegner/; http://www.acm.org/pubs/toc/Abstracts/surveys/234424.html.

Hankin:1996:CSS

[716] Chris Hankin and Hanne Riis Nielson. Computing Surveys Symposium on Models of Programming Languages and Computation. *ACM Computing Surveys*, 28(2):293–294, June 1996. CODEN CMSVAN. ISSN 0360-

0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p293-hankin/; http://www.acm.org/pubs/toc/Abstracts/surveys/234729.html.

Agha:1996:LPP

[717] Gul A. Agha. Linguistic paradigms for programming complex distributed systems. *ACM Computing Surveys*, 28(2):295–296, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p295-agha/; http://www.acm.org/pubs/toc/Abstracts/surveys/234730.html.

Andreoli:1996:ICP

[718] Jean-Marc Andreoli and Remo Pareschi. Integrated computational paradigms for flexible client-server communication. *ACM Computing Surveys*, 28(2):297–299, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p297-andreoli/; http://www.acm.org/pubs/toc/Abstracts/surveys/234731.html.

Ciancarini:1996:CML

[719] Paolo Ciancarini. Coordination models and languages as software integrators. *ACM Computing Surveys*, 28(2):300–302, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p300-ciancarini/; http://www.acm.org/pubs/toc/Abstracts/surveys/234732.html.

Gilbert:1996:CCL

[720] David Gilbert. Can computational logic provide a paradigm for both the specification and implementation of concurrent systems? *ACM Computing Surveys*, 28(2):303–305, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p303-gilbert/; http://www.acm.org/pubs/toc/Abstracts/surveys/234733.html.

Hanus:1996:IFL

[721] Michael Hanus and Herbert Kuchen. Integration of functional and logic programming. *ACM Computing Surveys*, 28(2):306–308, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p306-hanus/; http://www.acm.org/pubs/toc/Abstracts/surveys/234734.html.

Mycroft:1996:IPP

[722] Alan Mycroft. On integration of programming paradigms. *ACM Computing Surveys*, 28(2):309–311, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p309-mycroft/; http://www.acm.org/pubs/toc/Abstracts/surveys/234735.html.

Reddy:1996:IFP

[723] U. S. Reddy. Imperative functional programming. *ACM Computing Surveys*, 28(2):312–314, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p312-reddy/; http://www.acm.org/pubs/toc/Abstracts/surveys/234736.html.

Volpano:1996:SDW

[724] Dennis Volpano and Geoffrey Smith. On the systematic design of Web languages. *ACM Computing Surveys*, 28(2):315–317, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p315-volpano/; http://www.acm.org/pubs/toc/Abstracts/surveys/234737.html.

Wadler:1996:LVS

[725] Philip Wadler. Lazy versus strict. *ACM Computing Surveys*, 28(2):318–320, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p318-wadler/; http://www.acm.org/pubs/toc/Abstracts/surveys/234738.html.

Benton:1996:RBF

[726] P. N. Benton. On the relationship between formal semantics and static analysis. *ACM Computing Surveys*, 28(2):321–323, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p321-benton/; http://www.acm.org/pubs/toc/Abstracts/surveys/234739.html.

Cousot:1996:AI

[727] Patrick Cousot. Abstract interpretation. *ACM Computing Surveys*, 28(2):324–328, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p324-cousot/; http://www.acm.org/pubs/toc/Abstracts/surveys/234740.html.

Danvy:1996:RBP

[728] Olivier Danvy, Nevin Hentze, and Karoline Malmkjær. Resource-bounded partial evaluation. *ACM Computing Surveys*, 28(2):329–332, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p329-danvy/; http://www.acm.org/pubs/toc/Abstracts/surveys/234741.html.

File:1996:UVA

[729] Gilberto Filé, Roberto Giacobazzi, and Francesco Ranzato. A unifying view of abstract domain design. *ACM Computing Surveys*, 28(2):333–336, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p333-file/; http://www.acm.org/pubs/toc/Abstracts/surveys/234742.html.

Jagannathan:1996:CFL

[730] Suresh Jagannathan and Andrew Wright. Compiling functional languages with flow analysis. *ACM Computing Surveys*, 28(2):337–339, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p337-jagannathan/; http://www.acm.org/pubs/toc/Abstracts/surveys/234743.html.

LeMetayer:1996:SOS

[731] Daniel Le Métayer and David Schmidt. Structural operational semantics as a basis for static program analysis. *ACM Computing Surveys*, 28(2):340–343, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p340-le_metayer/; http://www.acm.org/pubs/toc/Abstracts/surveys/234744.html.

Nielson:1996:ATE

[732] Flemming Nielson. Annotated type and effect systems. *ACM Computing Surveys*, 28(2):344–345, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p344-nielson/; http://www.acm.org/pubs/toc/Abstracts/surveys/234745.html.

Dam:1996:MAV

[733] Mads Dam. Modalities in analysis and verification. *ACM Computing Surveys*, 28(2):346–348, June 1996. CODEN CMSVAN.

ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p346-dam/ ; http://www.acm.org/pubs/toc/Abstracts/surveys/234746.html.

Cartwright:1996:PVT

[734] Robert Cartwright and Matthias Felleisen. Program verification through soft typing. *ACM Computing Surveys*, 28(2):349–351, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p349-cartwright/; http://www.acm.org/pubs/toc/Abstracts/surveys/234747.html.

Degano:1996:EOS

[735] Pierpaolo Degano and Corrado Priami. Enhanced operational semantics. *ACM Computing Surveys*, 28(2):352–354, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p352-degano/; http://www.acm.org/pubs/toc/Abstracts/surveys/234748.html.

Jay:1996:SC

[736] C. Barry Jay. Shape in computing. *ACM Computing Surveys*, 28(2):355–357, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p355-jay/; http://www.acm.org/pubs/toc/Abstracts/surveys/234749.html.

Palsberg:1996:TIO

[737] Jens Palsberg. Type inference for objects. *ACM Computing Surveys*, 28(2):358–359, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p358-palsberg/; http://www.acm.org/pubs/toc/Abstracts/surveys/234750.html.

Pettorossi:1996:RST

[738] Alberto Pettorossi and Maurizio Proietti. Rules and strategies for transforming functional and logic programs. *ACM Computing Surveys*, 28(2):360–414, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p360-pettorossi/; http://www.acm.org/pubs/toc/Abstracts/surveys/234529.html.

Frakes:1996:SRM

[739] William Frakes and Carol Terry. Software reuse: Metrics and models. *ACM Computing Surveys*, 28(2):415–435, June 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-2/p415-frakes/; http://www.acm.org/pubs/toc/Abstracts/surveys/234531.html.

Taivalsaari:1996:NI

[740] Antero Taivalsaari. On the notion of inheritance. *ACM Computing Surveys*, 28(3):438–479, September 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-3/p438-taivalsaari/.

Jones:1996:IPE

[741] Neil D. Jones. An introduction to partial evaluation. *ACM Computing Surveys*, 28(3):480–503, September 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-3/p480-jones/.

Gallian:1996:EDM

[742] Joseph A. Gallian. Error detection methods. *ACM Computing Surveys*, 28(3):504–517, September 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-3/p504-gallian/.

Soderquist:1996:APT

[743] Peter Soderquist and Miriam Leeser. Area and performance tradeoffs in floating-point divide and square-root implementations. *ACM Computing Surveys*, 28(3):518–564, September 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-3/p518-soderquist/.

Wegner:1996:ESD

[744] Peter Wegner and Jon Doyle. Editorial: Strategic directions in computing research. *ACM Computing Surveys*, 28(4):565–574, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p565-wegner/.

Anonymous:1996:AAI

[745] Anonymous. ACM 50th anniversary issue — strategic directions in computing research. *ACM Computing Surveys*, 28(4):565–845, December

1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Loui:1996:SDR

[746] Michael C. Loui, Anne Condon, Faith Fich, Greg N. Frederickson, Andrew V. Goldberg, David S. Johnson, Steven Mahney, Prabhakar Raghavan, John Savage, Alan L. Selman, and David B. Shmoys. Strategic directions in research in theory of computing. *ACM Computing Surveys*, 28(4): 575–590, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p575-loui/`.

Tamassia:1996:SDC

[747] Roberto Tamassia, Pankaj K. Agarwal, Nancy Amato, Danny Z. Chen, David Dobkin, Scot Drysdale, Steven Fortune, Michael T. Goodrich, John Hershberger, Joseph O'Rourke, Franco P. Preparata, Joerg-Rudiger Sack, Subhash Suri, Ioannis Tollis, Jeffrey S. Vitter, and Sue Whitesides. Strategic directions in computational geometry. *ACM Computing Surveys*, 28(4):591–606, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p591-tamassia/`.

Cleaveland:1996:SDC

[748] Rance Cleaveland, Scott A. Smolka, Rajeev Alur, Jos Baeten, Jan A. Bergstra, Eike Best, Rocco De Nicola, Helen Gill, Roberto Gorrieri, Mohamed G. Gouda, Jan Friso Groote, Tom A. Henzinger, C. A. R. Hoare, Maj. David Luginbuhl, Albert Meyer, Dale Miller, Jayadev Misra, Faron Moller, Ugo Montanari, Amir Pnueli, Sanjiva Prasad, Vaughan R. Pratt, Joseph Sifakis, Bernhard Steffen, Bent Thomsen, Frits Vaandrager, Moshe Vardi, and Pierre Wolper. Strategic directions in concurrency research. *ACM Computing Surveys*, 28(4):607–625, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p607-cleaveland/`.

Clarke:1996:FMS

[749] Edmund M. Clarke, Jeannette M. Wing, Rajeev Alur, Rance Cleaveland, David Dill, Allen Emerson, Stephen Garland, Steven German, John Guttag, Anthony Hall, Thomas Henzinger, Gerard Holzmann, Cliff Jones, Robert Kurshan, Nancy Leveson, Kenneth McMillan, J. Moore, Doron Peled, Amir Pnueli, John Rushby, Natarajan Shankar, Joseph Sifakis, Prasad Sistla, Bernhard Steffen, Pierre Wolper, Jim Woodcock, and Pamela Zave. Formal methods: state of the art and fu-

ture directions. *ACM Computing Surveys*, 28(4):626–643, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p626-clarke/.

Hankin:1996:SDR

[750] Chris Hankin, Hanne Riis Nielson, Jens Palsberg, et al. Strategic directions in research on programming languages. *ACM Computing Surveys*, 28(4):644–652, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p644-hankin/.

Doyle:1996:SDA

[751] Jon Doyle, Thomas Dean, et al. Strategic directions in artificial intelligence. *ACM Computing Surveys*, 28(4):653–670, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p653-doyle/.

Mudge:1996:SDC

[752] Trevor Mudge. Strategic directions in computer architecture. *ACM Computing Surveys*, 28(4):671–678, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p671-mudge/.

Clark:1996:SDN

[753] David Clark, Joseph Pasquale, et al. Strategic directions in networks and telecommunications. *ACM Computing Surveys*, 28(4):679–690, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p679-clark/.

Guerraoui:1996:SDO

[754] Rachid Guerraoui et al. Strategic directions in object-oriented programming. *ACM Computing Surveys*, 28(4):691–700, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p691-guerraoui/.

VanHentenryck:1996:SDC

[755] Pascal Van Hentenryck, Vijay Saraswat, et al. Strategic directions in constraint programming. *ACM Computing Surveys*, 28(4):701–726, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341

(electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p701-van_hentenryck/.

Gunter:1996:SDS

[756] Carl Gunter, John Mitchell, and David Notkin. Strategic directions in software engineering and programming languages. *ACM Computing Surveys*, 28(4):727–737, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p727-gunter/.

Osterweil:1996:SDS

[757] Leon Osterweil et al. Strategic directions in software quality. *ACM Computing Surveys*, 28(4):738–750, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p738-osterweil/.

Stankovic:1996:SDR

[758] John A. Stankovic et al. Strategic directions in real-time and embedded systems. *ACM Computing Surveys*, 28(4):751–763, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p751-stankovic/.

Silberschatz:1996:SDD

[759] Avi Silberschatz, Stan Zdonik, et al. Strategic directions in database systems — breaking out of the box. *ACM Computing Surveys*, 28(4):764–778, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p764-silberschatz/.

Gibson:1996:SDS

[760] Garth A. Gibson, Jeffrey Scott Vitter, John Wilkes, et al. Strategic directions in storage I/O issues in large-scale computing. *ACM Computing Surveys*, 28(4):779–793, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p779-gibson/.

Myers:1996:SDH

[761] Brad Myers, Jim Hollan, Isabel Cruz, Steve Bryson, Dick Bulterman, Tiziana Catarci, Wayne Citrin, Ephraim Glinert, Jonathan Grudin, Rob Jacob, Bonnie John, David Kurlander, Dan Olsen, Randy Pausch, Stuart Shieber, Ben Shneiderman, John Stasko, Gary Strong, and Kent

Wittenburg. Strategic directions in human-computer interaction. *ACM Computing Surveys*, 28(4):794–809, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p794-myers/.

Sameh:1996:CSE

[762] A. Sameh, G. Cybenko, M. Kalos, K. Neves, J. Rice, D. Sorensen, and F. Sullivan. Computational science and engineering. *ACM Computing Surveys*, 28(4):810–817, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p810-sameh/.

Adam:1996:SDE

[763] Nabil Adam, Yelena Yesha, et al. Strategic directions in electronic commerce and digital libraries: towards a digital agora. *ACM Computing Surveys*, 28(4):818–835, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p818-adam/.

Tucker:1996:SDC

[764] Allen B. Tucker et al. Strategic directions in computer science education. *ACM Computing Surveys*, 28(4):836–845, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4/p836-tucker/.

Anonymous:1996:AIV

[765] Anonymous. Author index: Vols. 24–28 (1992–1996). *ACM Computing Surveys*, 28(4):846–854, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Anonymous:1996:SIV

[766] Anonymous. Subject index: Vols. 24–28 (1992–1996). *ACM Computing Surveys*, 28(4):854–859, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Brachman:1996:UBU

[767] Ronald J. Brachman and Hector J. Levesque. Undirected behavior without unbounded search. *ACM Computing Surveys*, 28(4es):1:1–1:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a1-brachman/.

Dean:1996:ITP

[768] Thomas L. Dean. Integrating theory and practice in planning. *ACM Computing Surveys*, 28(4es):2:1–2:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a2-dean/`.

Dietterich:1996:ML

[769] Tom Dietterich. Machine learning. *ACM Computing Surveys*, 28(4es):3:1–3:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a3-dietterich/`.

Doyle:1996:CAI

[770] Jon Doyle. Cleaving (unto) artificial intelligence. *ACM Computing Surveys*, 28(4es):4:1–4:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a4-doyle/`.

Green:1996:FHS

[771] Cordell Green. Formality helps scalability and robustness. *ACM Computing Surveys*, 28(4es):5:1–5:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a5-green/`.

Grosz:1996:IIA

[772] Barbara J. Grosz. The importance of integration for AI. *ACM Computing Surveys*, 28(4es):6:1–6:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a6-grosz/`.

Horswill:1996:ISN

[773] Ian Horswill. Integrated systems and naturalistic tasks. *ACM Computing Surveys*, 28(4es):7:1–7:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a7-horswill/`.

Koller:1996:SRI

[774] Daphne Koller. Structured representations and intractability. *ACM Computing Surveys*, 28(4es):8:1–8:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a8-koller/`.

Pereira:1996:LCA

[775] Fernando Pereira. Language, computation and artificial intelligence. *ACM Computing Surveys*, 28(4es):9:1–9:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a9-pereira/.

Selman:1996:CCA

[776] Bart Selman. Computational challenges in artificial intelligence. *ACM Computing Surveys*, 28(4es):10:1–10:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a10-selman/.

Shoham:1996:OSB

[777] Yoav Shoham. The open scientific borders of AI, and the case of economics. *ACM Computing Surveys*, 28(4es):11:1–11:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a11-shoham/.

Shrobe:1996:TCD

[778] Howard E. Shrobe. Two challenging domains. *ACM Computing Surveys*, 28(4es):12:1–12:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a12-shrobe/.

Swartout:1996:FDK

[779] William R. Swartout. Future directions in knowledge-based systems. *ACM Computing Surveys*, 28(4es):13:1–13:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a13-swartout/.

Wellman:1996:EAA

[780] Michael P. Wellman. The economic approach to artificial intelligence. *ACM Computing Surveys*, 28(4es):14:1–14:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a14-wellman/.

Zilberstein:1996:RBR

[781] Shlomo Zilberstein. Resource-bounded reasoning in intelligent systems. *ACM Computing Surveys*, 28(4es):15:1–15:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a15-zilberstein/.

Agarwal:1996:SPG

[782] Pankaj K. Agarwal and Subhash Suri. Simple and practical geometric algorithms. *ACM Computing Surveys*, 28(4es):16:1–16:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a16-agarwal/.

Amato:1996:ECC

[783] Nancy M. Amato. Equipping CAD/CAM systems with geometric intelligence. *ACM Computing Surveys*, 28(4es):17:1–17:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a17-amato/.

Chen:1996:DAS

[784] Danny Z. Chen. Developing algorithms and software for geometric path planning problems. *ACM Computing Surveys*, 28(4es):18:1–18:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a18-chen/.

Tollis:1996:GDI

[785] Ioannis G. Tollis. Graph drawing and information visualization. *ACM Computing Surveys*, 28(4es):19:1–19:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a19-tollis/.

Vitter:1996:CIL

[786] Jeffrey S. Vitter. Communication issues in large-scale geometric computation. *ACM Computing Surveys*, 28(4es):20:1–20:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a20-vitter/.

Cybenko:1996:LSC

[787] George Cybenko. Large-scope computing: the industrial challenges. *ACM Computing Surveys*, 28(4es):21:1–21:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a21-cybenko/.

Kalos:1996:CCS

[788] Melvin Kalos. Challenges in computational science. *ACM Computing Surveys*, 28(4es):22:1–22:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a22-kalos/.

Neves:1996:TCC

[789] Kenneth Neves. Thoughts on CSE candidates for industrial positions. *ACM Computing Surveys*, 28(4es):23:1–23:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a23-neves/.

Rice:1996:CSO

[790] John R. Rice. Computational science as one driving force for all aspects of computing research. *ACM Computing Surveys*, 28(4es):24:1–24:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a24-rice/.

Sullivan:1996:TP

[791] Francis Sullivan. From theory to practice. *ACM Computing Surveys*, 28(4es):25:1–25:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a25-sullivan/.

Conte:1996:IPC

[792] Tom Conte. Importance of profiling and compatibility. *ACM Computing Surveys*, 28(4es):26:1–26:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a26-conte/.

Emer:1996:IVR

[793] Joel Emer. Incremental versus revolutionary research. *ACM Computing Surveys*, 28(4es):27:1–27:??, December 1996. CODEN CMSVAN. ISSN

0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a27-emer/.

Farrens:1996:DDC

[794] Matt Farrens. Distributed decentralized computing. *ACM Computing Surveys*, 28(4es):28:1–28:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a28-farrens/.

Grunwald:1996:EGP

[795] Dirk Grunwald. Embedded, general-purpose, and high-performance systems. *ACM Computing Surveys*, 28(4es):29:1–29:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a29-grunwald/.

Li:1996:ASH

[796] Kai Li. Applications, storage hierarchy, and integration. *ACM Computing Surveys*, 28(4es):30:1–30:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a30-li/.

Mills:1996:IPC

[797] Jack Mills. An industrial perspective on computer architecture. *ACM Computing Surveys*, 28(4es):31:1–31:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a31-mills/.

Nagle:1996:SBS

[798] David Nagle. Synergy between software and hardware. *ACM Computing Surveys*, 28(4es):32:1–32:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a32-nagle/.

Patt:1996:MCA

[799] Yale Patt. Microarchitecture, compilers and algorithms. *ACM Computing Surveys*, 28(4es):33:1–33:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a33-patt/.

Smith:1996:MNA

[800] Jim Smith. Multiscalar as a new architecture paradigm. *ACM Computing Surveys*, 28(4es):34:1–34:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a34-smith/.

Wang:1996:MAC

[801] Wen-Hann Wang. Microprocessor architecture challenges — the best is yet to come! *ACM Computing Surveys*, 28(4es):35:1–35:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a35-wang/.

Wood:1996:PCI

[802] David Wood. Problems, challenges and the importance of performance evaluation. *ACM Computing Surveys*, 28(4es):36:1–36:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a36-wood/.

Yung:1996:IPT

[803] Robert Yung. The importance of process technology to microarchitecture. *ACM Computing Surveys*, 28(4es):37:1–37:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a37-yung/.

Baeten:1996:SIC

[804] Jos C. M. Baeten and Jan A. Bergstra. Six issues concerning future directions in concurrency research. *ACM Computing Surveys*, 28(4es):39:1–39:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a39-baeten/.

Best:1996:SMD

[805] Eike Best. Some major dichotomies relating to future research in concurrency. *ACM Computing Surveys*, 28(4es):40:1–40:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a40-best/.

Cleaveland:1996:STS

[806] Rance Cleaveland. Semantic theories and system design. *ACM Computing Surveys*, 28(4es):41:1–41:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a41-cleaveland/.

Gorrieri:1996:PCT

[807] Roberto Gorrieri. On the power of concurrency theory. *ACM Computing Surveys*, 28(4es):42:1–42:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a42-gorrieri/.

Gouda:1996:NPB

[808] Mohamed G. Gouda. Network protocols between exact specifications and pragmatic implementations. *ACM Computing Surveys*, 28(4es):43:1–43:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a43-gouda/.

Groote:1996:CTW

[809] Jan Friso Groote. Concurrency theory will set standards for description and analysis of software. *ACM Computing Surveys*, 28(4es):44:1–44:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a44-groote/.

Hoare:1996:UTP

[810] C. A. R. Hoare. Unifying theories: a personal statement. *ACM Computing Surveys*, 28(4es):46:1–46:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a46-hoare/.

Luginbuhl:1996:ICS

[811] David Luginbuhl. Issues in concurrent systems research. *ACM Computing Surveys*, 28(4es):47:1–47:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a47-luginbuhl/.

Miller:1996:LFO

[812] Dale Miller. Logical foundations for open system design. *ACM Computing Surveys*, 28(4es):48:1–48:??, December 1996. CODEN CMSVAN.

ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a48-miller/.

Misra:1996:DM

[813] Jayadev Misra. A discipline of multiprogramming. *ACM Computing Surveys*, 28(4es):49:1–49:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a49-misra/.

Moller:1996:LCS

[814] Faron Moller. Logics for concurrency: structure versus automata. *ACM Computing Surveys*, 28(4es):50:1–50:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a50-moller/.

Montanari:1996:CC

[815] Ugo Montanari. Causal computing. *ACM Computing Surveys*, 28(4es):51:1–51:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a51-montanari/.

DeNicola:1996:CTP

[816] Rocco De Nicola and Scott A. Smolka. Concurrency: theory and practice. *ACM Computing Surveys*, 28(4es):52:1–52:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a52-de_nicola/.

Prasad:1996:MMC

[817] Sanjiva Prasad. Models for mobile computing agents. *ACM Computing Surveys*, 28(4es):53:1–53:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a53-prasad/.

Pratt:1996:CCO

[818] Vaughan R. Pratt. Concurrency concepts: an ongoing search. *ACM Computing Surveys*, 28(4es):54:1–54:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a54-pratt/.

Sifakis:1996:RDC

[819] Joseph Sifakis. Research directions for concurrency. *ACM Computing Surveys*, 28(4es):55:1–55:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a55-sifakis/.

Steffen:1996:MER

[820] Bernhard Steffen and Tiziana Margaria. Method engineering for real-life concurrent systems. *ACM Computing Surveys*, 28(4es):56:1–56:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a56-steffen/.

Thomsen:1996:PLA

[821] Bent Thomsen. Programming languages, analysis tools, and concurrency theory. *ACM Computing Surveys*, 28(4es):57:1–57:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a57-thomsen/.

Wolper:1996:WAS

[822] Pierre Wolper. Where is the algorithmic support? *ACM Computing Surveys*, 28(4es):58:1–58:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a58-wolper/.

Brodsky:1996:CDP

[823] Alexander Brodsky. Constraint databases: promising technology or just intellectual exercise? *ACM Computing Surveys*, 28(4es):59:1–59:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a59-brodsky/.

Codognet:1996:VCC

[824] Philippe Codognet. The virtuality of constraints and the constraints of virtuality. *ACM Computing Surveys*, 28(4es):60:1–60:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a60-codognet/.

Dechter:1996:BEU

[825] R. Dechter. Bucket elimination: a unifying framework for processing hard and soft constraints. *ACM Computing Surveys*, 28(4es):61:1–61:??, De-

cember 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a61-dechter/.

Dincbas:1996:CP

[826] M. Dincbas. Constraint programming. *ACM Computing Surveys*, 28 (4es):62:1–62:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a62-dincbas/.

Freuder:1996:PHG

[827] E. Freuder. In pursuit of the holy grail. *ACM Computing Surveys*, 28(4es):63:1–63:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a63-freuder/.

Hermenegildo:1996:SCC

[828] Manuel Hermenegildo. Some challenges for constraint programming. *ACM Computing Surveys*, 28(4es):64:1–64:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a64-hermenegildo/.

Jaffar:1996:CP

[829] J. Jaffar and R. Yap. Constraint programming 2000. *ACM Computing Surveys*, 28(4es):65:1–65:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a65-jaffar/.

Kasif:1996:TCB

[830] S. Kasif. Towards a constraint-based engineering framework for algorithm design and application. *ACM Computing Surveys*, 28(4es):66:1–66:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a66-kasif/.

Mackworth:1996:CBD

[831] Alan Mackworth. Constraint-based design of embedded intelligent systems. *ACM Computing Surveys*, 28(4es):67:1–67:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a67-mackworth/.

McAllester:1996:RNM

[832] D. McAllester. The rise of nonlinear mathematical programming. *ACM Computing Surveys*, 28(4es):68:1–68:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a68-mcallester/.

McAloon:1996:CBP

[833] Ken McAloon. Constraint-based programming. *ACM Computing Surveys*, 28(4es):69:1–69:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a69-mcaloon/.

Montanari:1996:CSP

[834] Ugo Montanari and Francesca Rossi. Constraint solving and programming: what's next? *ACM Computing Surveys*, 28(4es):70:1–70:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a70-montanari/.

Older:1996:CI

[835] William J. Older. CLP (intervals). *ACM Computing Surveys*, 28(4es):71:1–71:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a71-older/.

Puget:1996:FCP

[836] Jean-François Puget. Future of constraint programming. *ACM Computing Surveys*, 28(4es):72:1–72:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a72-puget/.

Ramakrishnan:1996:CD

[837] R. Ramakrishnan. Constraints in databases. *ACM Computing Surveys*, 28(4es):73:1–73:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a73-ramakrishnan/.

Saraswat:1996:CC

[838] Vijay Saraswat. Compositional computing. *ACM Computing Surveys*, 28(4es):74:1–74:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a74-saraswat/.

Smolka:1996:CO

[839] Gert Smolka. Constraints in OZ. *ACM Computing Surveys*, 28(4es): 75:1–75:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a75-smolka/.

VanHentenryck:1996:CPC

[840] Pascal Van Hentenryck. Constraint programming for combinatorial search problems. *ACM Computing Surveys*, 28(4es):76:1–76:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a76-van_hentenryck/.

Blakeley:1996:TDD

[841] José Blakeley. Thoughts on directions in database research. *ACM Computing Surveys*, 28(4es):77:1–77:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a77-blakeley/.

Dayal:1996:DTC

[842] Umeshwar Dayal. Database technology at a crossroads. *ACM Computing Surveys*, 28(4es):78:1–78:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a78-dayal/.

Jajodia:1996:MSP

[843] Sushil Jajodia. Managing security and privacy of information. *ACM Computing Surveys*, 28(4es):79:1–79:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a79-jajodia/.

Korth:1996:NFP

[844] Henry F. Korth. New focal points for research in database systems. *ACM Computing Surveys*, 28(4es):80:1–80:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a80-korth/.

Lohman:1996:YTY

[845] Guy M. Lohman. You think your DBMS is complex now…? *ACM Computing Surveys*, 28(4es):81:1–81:??, December 1996. CODEN CMSVAN.

ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a81-lohman/.

Lomet:1996:RRD

[846] David Lomet. A role for research in the database industry. *ACM Computing Surveys*, 28(4es):82:1–82:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a82-lomet/.

Maier:1996:RDS

[847] David Maier. Repackaging database systems. *ACM Computing Surveys*, 28(4es):83:1–83:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a83-maier/.

Manola:1996:TDS

[848] Frank Manola. Transforming the database system into an open service concept. *ACM Computing Surveys*, 28(4es):84:1–84:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a84-manola/.

Ozsu:1996:FDS

[849] M. Tamer Özsu. Future of database systems: changing applications and technological developments. *ACM Computing Surveys*, 28(4es):85:1–85:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a85-ozsu/.

Ramakrishnan:1996:SPD

[850] Raghu Ramakrishnan. Some promising directions for database research. *ACM Computing Surveys*, 28(4es):86:1–86:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a86-ramakrishnan/.

Ramamritham:1996:AOD

[851] Krithi Ramamritham. Application-oriented database support. *ACM Computing Surveys*, 28(4es):87:1–87:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a87-ramamritham/.

Schek:1996:IRF

[852] Hans-J. Schek. Improving the role of future database systems. *ACM Computing Surveys*, 28(4es):88:1–88:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a88-schek/.

Snodgrass:1996:IM

[853] Richard Thomas Snodgrass. The inefficiency of misalignment. *ACM Computing Surveys*, 28(4es):89:1–89:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a89-snodgrass/.

Ullman:1996:MDT

[854] Jeff Ullman. Moving database theory into database practice. *ACM Computing Surveys*, 28(4es):90:1–90:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a90-ullman/.

Widom:1996:IHD

[855] Jennifer Widom. Integrating heterogeneous databases: lazy or eager? *ACM Computing Surveys*, 28(4es):91:1–91:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a91-widom/.

Astrachan:1996:EGP

[856] Owen Astrachan. Education goals and priorities. *ACM Computing Surveys*, 28(4es):92:1–92:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a92-astrachan/.

Bruce:1996:TCS

[857] Kim Bruce. Thoughts on computer science education. *ACM Computing Surveys*, 28(4es):93:1–93:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a93-bruce/.

Cupper:1996:RCF

[858] Robert Cupper. A revised curriculum framework. *ACM Computing Surveys*, 28(4es):94:1–94:??, December 1996. CODEN CMSVAN. ISSN 0360-

0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a94-cupper/.

Denning:1996:BDU

[859] Peter Denning. Business designs of the university. *ACM Computing Surveys*, 28(4es):95:1–95:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a95-denning/.

Drysdale:1996:WSW

[860] Scot Drysdale. What should we teach? *ACM Computing Surveys*, 28(4es):96:1–96:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a96-drysdale/.

Kelemen:1996:FCN

[861] Charles Kelemen. First courses for nonmajors and public understanding of computer science. *ACM Computing Surveys*, 28(4es):97:1–97:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a97-kelemen/.

McGeoch:1996:RCW

[862] Catherine McGeoch. Research in the curriculum, and the Web. *ACM Computing Surveys*, 28(4es):98:1–98:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a98-mcgeoch/.

Patt:1996:FCF

[863] Yale Patt. First courses and fundamentals. *ACM Computing Surveys*, 28(4es):99:1–99:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a99-patt/.

Proulx:1996:FCS

[864] Richard Proulx and Richard Rosala. The future of computer science education. *ACM Computing Surveys*, 28(4es):100:1–100:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a100-proulx/.

Rada:1996:CVC

[865] Roy Rada. Calling for a virtual computing college. *ACM Computing Surveys*, 28(4es):101:1–101:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a101-rada/`.

Roberts:1996:DCS

[866] Eric Roberts. Directions in computer science education. *ACM Computing Surveys*, 28(4es):102:1–102:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a102-roberts/`.

Stein:1996:IPR

[867] Lynn Andrea Stein. Interactive programming: revolutionizing introductory computer science. *ACM Computing Surveys*, 28(4es):103:1–103:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a103-stein/`.

Tucker:1996:CCS

[868] Allen Tucker. Crisis in computer science education. *ACM Computing Surveys*, 28(4es):104:1–104:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a104-tucker/`.

Adam:1996:UAD

[869] Nabil R. Adam and Shamim Naqvi. Universal access in digital libraries. *ACM Computing Surveys*, 28(4es):105:1–105:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a105-adam/`.

Awerbuch:1996:MGN

[870] Baruch Awerbuch. Maximizing gross network product (GNP): resource management on the GII. *ACM Computing Surveys*, 28(4es):106:1–106:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a106-awerbuch/`.

Brodsky:1996:CDT

[871] Alex Brodsky. Constraint database technology for electronic trade with complex objectives. *ACM Computing Surveys*, 28(4es):107:1–107:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341

(electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a107-brodsky/.

Grossman:1996:DMC

[872] Robert Grossman. Database mining challenges for digital libraries. *ACM Computing Surveys*, 28(4es):108:1–108:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a108-grossman/.

Johnson:1996:PPI

[873] Jim Johnson. The physics of politics in the information age. *ACM Computing Surveys*, 28(4es):109:1–109:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a109-johnson/.

Blaustein:1996:FSP

[874] Barbara T. Blaustein, Catherine McCollum, and Arnon Rosenthal. Flexible security policies for digital libraries. *ACM Computing Surveys*, 28 (4es):110:1–110:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a110-blaustein/.

Neches:1996:FEC

[875] Anna-Lena Neches. The future of electronic commerce: a pragmatic view. *ACM Computing Surveys*, 28(4es):111:1–111:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a111-neches/.

Bennet:1996:ECP

[876] Karen Bennet and Jacob Slonim. The electronic commerce position paper. *ACM Computing Surveys*, 28(4es):112:1–112:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a112-bennet/.

Wolfson:1996:ICM

[877] Ouri Wolfson. Infrastructure and cost models for digital libraries. *ACM Computing Surveys*, 28(4es):113:1–113:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL

http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a113-wolfson/.

Wactlar:1996:NGE

[878] Howard D. Wactlar. The next generation electronic library — capturing the experience. *ACM Computing Surveys*, 28(4es):114:1–114:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a114-wactlar/.

Alur:1996:NSF

[879] Rajeev Alur. Next steps in formal verification. *ACM Computing Surveys*, 28(4es):115:1–115:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a115-alur/.

Clarke:1996:TPA

[880] Edmund Clarke and Jeannette M. Wing. Tools and partial analysis. *ACM Computing Surveys*, 28(4es):116:1–116:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a116-clarke/.

Cleaveland:1996:FSD

[881] Rance Cleaveland. Formality and software design. *ACM Computing Surveys*, 28(4es):117:1–117:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a117-cleaveland/.

German:1996:RGF

[882] Steven German. Research goals for formal methods. *ACM Computing Surveys*, 28(4es):118:1–118:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a118-german/.

Henzinger:1996:SMA

[883] Thomas A. Henzinger. Some myths about formal verification. *ACM Computing Surveys*, 28(4es):119:1–119:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a119-henzinger/.

Holzmann:1996:FMC

[884] Gerard Holzmann. On-the-fly model checking. *ACM Computing Surveys*, 28(4es):120:1–120:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a120-holzmann/`.

Jones:1996:FML

[885] Cliff Jones. Formal methods light. *ACM Computing Surveys*, 28 (4es):121:1–121:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a121-jones/`.

Peled:1996:UIF

[886] Doron Peled. User interfaces for formal methods. *ACM Computing Surveys*, 28(4es):122:1–122:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a122-peled/`.

Rushby:1996:EUF

[887] John Rushby. Enhancing the utility of formal methods. *ACM Computing Surveys*, 28(4es):123:1–123:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a123-rushby/`.

Sifakis:1996:SSQ

[888] Joseph Sifakis. Safety, security and quality. *ACM Computing Surveys*, 28(4es):124:1–124:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a124-sifakis/`.

Sistla:1996:HIM

[889] Prasad Sistla. Hybrid and incremental modelchecking techniques. *ACM Computing Surveys*, 28(4es):125:1–125:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a125-sistla/`.

Steffen:1996:TGF

[890] Bernhard Steffen and Tiziana Margaria. Tools get formal methods into practice. *ACM Computing Surveys*, 28(4es):126:1–126:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a126-steffen/`.

Wolper:1996:MF

[891] Pierre Wolper. The meaning of “formal”. *ACM Computing Surveys*, 28(4es):127:1–127:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a127-wolper/.

Woodcock:1996:SER

[892] Jim Woodcock. Software engineering research directions. *ACM Computing Surveys*, 28(4es):128:1–128:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a128-woodcock/.

Bryson:1996:INR

[893] Steve Bryson. Implications of near-real-time three-dimensional interfaces. *ACM Computing Surveys*, 28(4es):129:1–129:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a129-bryson/.

Bulterman:1996:MTS

[894] Dick C. A. Bulterman. Making the technology serve the user. *ACM Computing Surveys*, 28(4es):130:1–130:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a130-bulterman/.

Catarci:1996:DWN

[895] Tiziana Catarci. Databases and the Web: new requirements for an easy access. *ACM Computing Surveys*, 28(4es):131:1–131:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a131-catarci/.

Citrin:1996:SDV

[896] Wayne Citrin. Strategic directions in visual languages research. *ACM Computing Surveys*, 28(4es):132:1–132:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a132-citrin/.

Cruz:1996:TIV

[897] Isabel F. Cruz. Tailorable information visualization. *ACM Computing Surveys*, 28(4es):133:1–133:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a133-cruz/`.

Glinert:1996:AMI

[898] Ephraim P. Glinert, R. Lindsay Todd, and G. Bowden Wise. The adaptive multi-interface multimodal environment. *ACM Computing Surveys*, 28(4es):134:1–134:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a134-glinert/`.

Grudin:1996:EE

[899] Jonathan Grudin. The end of exile. *ACM Computing Surveys*, 28(4es):135:1–135:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a135-grudin/`.

Hollan:1996:SIH

[900] James D. Hollan. Strategic issues for human-computer interaction. *ACM Computing Surveys*, 28(4es):136:1–136:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a136-hollan/`.

Ioannidis:1996:VUI

[901] Yannis E. Ioannidis. Visual user interfaces for database systems. *ACM Computing Surveys*, 28(4es):137:1–137:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a137-ioannidis/`.

Jacob:1996:FID

[902] Robert J. K. Jacob. The future of input devices. *ACM Computing Surveys*, 28(4es):138:1–138:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a138-jacob/`.

John:1996:EUE

[903] Bonnie E. John. Evaluating usability evaluation techniques. *ACM Computing Surveys*, 28(4es):139:1–139:??, December 1996. CODEN

CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a139-john/.

Kurlander:1996:TUI

[904] David Kurlander. Thoughts on user interface processes and agendas. *ACM Computing Surveys*, 28(4es):140:1–140:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a140-kurlander/.

Myers:1996:PHU

[905] Brad A. Myers. Programmability and heuristics in the user interfaces. *ACM Computing Surveys*, 28(4es):141:1–141:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a141-myers/.

Olsen:1996:CRI

[906] Dan R. Olsen, Jr. Computational resources and the Internet. *ACM Computing Surveys*, 28(4es):142:1–142:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a142-olsen/.

Shieber:1996:CCI

[907] Stuart M. Shieber. A call for collaborative interfaces. *ACM Computing Surveys*, 28(4es):143:1–143:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a143-shieber/.

Shneiderman:1996:AGU

[908] Ben Shneiderman. Advanced graphic user interfaces: elastic and tightly coupled windows. *ACM Computing Surveys*, 28(4es):144:1–144:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a144-shneiderman/.

Stasko:1996:FRD

[909] John Stasko. Future research directions in human-computer interaction. *ACM Computing Surveys*, 28(4es):145:1–145:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341

(electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a145-stasko/.

Strong:1996:HCI

[910] Gary W. Strong. Human-centered information systems (HCIS). *ACM Computing Surveys*, 28(4es):146:1–146:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a146-strong/.

Wittenburg:1996:WIG

[911] Kent Wittenburg. The WWW information glut: implications for next-generation HCI technologies. *ACM Computing Surveys*, 28(4es):147:1–147:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a147-wittenburg/.

Aksit:1996:SCC

[912] M. Aksit. Separation and composition of concerns in the object-oriented model. *ACM Computing Surveys*, 28(4es):148:1–148:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a148-aksit/.

Black:1996:OOL

[913] A. P. Black. Object-oriented languages: the next generation. *ACM Computing Surveys*, 28(4es):149:1–149:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a149-black/.

Cardelli:1996:BEP

[914] L. Cardelli. Bad engineering properties of object-orient languages. *ACM Computing Surveys*, 28(4es):150:1–150:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a150-cardelli/.

Cointe:1996:RLM

[915] P. Cointe. Reflective languages and metalevel architectures. *ACM Computing Surveys*, 28(4es):151:1–151:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL

http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a151-cointe/.

Coplien:1996:BBO

[916] J. Coplien. Broadening beyond objects to patterns and to other paradigms. *ACM Computing Surveys*, 28(4es):152:1–152:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a152-coplien/.

Guerraoui:1996:DPA

[917] R. Guerraoui. Distributed programming abstractions. *ACM Computing Surveys*, 28(4es):153:1–153:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a153-guerraoui/.

Kiczales:1996:AOP

[918] G. Kiczales. Aspect-oriented programming. *ACM Computing Surveys*, 28(4es):154:1–154:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a154-kiczales/.

Lea:1996:SAI

[919] D. Lea. Specification, architecture, and interoperability. *ACM Computing Surveys*, 28(4es):155:1–155:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a155-lea/.

Lieberherr:1996:TPO

[920] K. Lieberherr. From transience to persistence in object-oriented programming: architectures and patterns. *ACM Computing Surveys*, 28(4es):156:1–156:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a156-lieberherr/.

Madsen:1996:SRD

[921] O. Madsen. Strategic research directions in object-oriented programming. *ACM Computing Surveys*, 28(4es):157:1–157:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a157-madsen/.

Magnusson:1996:TI

[922] B. Magnusson. Technology integration. *ACM Computing Surveys*, 28 (4es):158:1–158:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a158-magnusson/.

Meseguer:1996:WON

[923] José Meseguer. Why OOP needs new semantic foundations. *ACM Computing Surveys*, 28(4es):159:1–159:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a159-meseguer/.

Mossenbock:1996:TOO

[924] H. Mössenböck. Trends in object-oriented programming. *ACM Computing Surveys*, 28(4es):160:1–160:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a160-mossenbock/.

Palsberg:1996:CTO

[925] J. Palsberg. Compiler technology for object-oriented languages. *ACM Computing Surveys*, 28(4es):161:1–161:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a161-palsberg/.

Schmidt:1996:UDP

[926] D. Schmidt. Using design patterns to guide the development of reusable object-oriented software. *ACM Computing Surveys*, 28(4es):162:1–162:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a162-schmidt/.

Cardelli:1996:GC

[927] Luca Cardelli. Global computation. *ACM Computing Surveys*, 28 (4es):163:1–163:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a163-cardelli/.

Consel:1996:PAB

[928] Charles Consel. Program adaptation based on program transformation. *ACM Computing Surveys*, 28(4es):164:1–164:??, Decem-

ber 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a164-consel/.

Cousot:1996:PAA

[929] Patrick Cousot. Program analysis: the abstract interpretation perspective. *ACM Computing Surveys*, 28(4es):165:1–165:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a165-cousot/.

Hanus:1996:IDP

[930] Michael Hanus. Integration of declarative paradigms: benefits and challenges. *ACM Computing Surveys*, 28(4es):166:1–166:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a166-hanus/.

Metayer:1996:PAS

[931] Daniel Le Métayer. Program analysis for software engineering: new applications, new requirements, new tools. *ACM Computing Surveys*, 28(4es):167:1–167:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a167-le_metayer/.

Nielson:1996:PPA

[932] Flemming Nielson. Perspectives on program analysis. *ACM Computing Surveys*, 28(4es):168:1–168:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a168-nielson/.

Odersky:1996:CTS

[933] Martin Odersky. Challenges in type systems research. *ACM Computing Surveys*, 28(4es):169:1–169:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a169-odersky/.

Paige:1996:FDP

[934] Robert Paige. Future directions in program transformations. *ACM Computing Surveys*, 28(4es):170:1–170:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a170-paige/.

Pettorossi:1996:FDP

[935] Alberto Pettorossi and Maurizio Proietti. Future directions in program transformation. *ACM Computing Surveys*, 28(4es):171:1–171:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a171-pettorossi/.

Reynolds:1996:BM

[936] John Reynolds. Beyond ML. *ACM Computing Surveys*, 28(4es):172:1–172:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a172-reynolds/.

Riecke:1996:SDC

[937] Jon G. Riecke. Semantics: the description of computational structures. *ACM Computing Surveys*, 28(4es):173:1–173:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a173-riecke/.

Ryder:1996:FPA

[938] Barbara Ryder. The future of program analysis. *ACM Computing Surveys*, 28(4es):174:1–174:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a174-ryder/.

Schmidt:1996:NPF

[939] David A. Schmidt. On the need for a popular formal semantics. *ACM Computing Surveys*, 28(4es):175:1–175:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a175-schmidt/.

Volpano:1996:PSP

[940] Dennis Volpano. Provably secure programming languages for remote evaluation. *ACM Computing Surveys*, 28(4es):176:1–176:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a176-volpano/.

Wilhelm:1996:PAT

[941] Reinhard Wilhelm. Program analysis — a toolmaker's perspective. *ACM Computing Surveys*, 28(4es):177:1–177:??, December 1996. CO-

DEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a177-wilhelm/.

Burns:1996:BRT

[942] Alan Burns. Broadening real-time systems research. *ACM Computing Surveys*, 28(4es):178:1–178:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a178-burns/.

Jeffay:1996:TEC

[943] Kevin Jeffay. Technical and educational challenges for real-time computing. *ACM Computing Surveys*, 28(4es):179:1–179:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a179-jeffay/.

Jones:1996:CRT

[944] Mike Jones. Consumer real-time systems. *ACM Computing Surveys*, 28(4es):180:1–180:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a180-jones/.

Koob:1996:LSD

[945] Gary Koob. Large-scale distributed real-time systems. *ACM Computing Surveys*, 28(4es):181:1–181:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a181-koob/.

Lee:1996:FVT

[946] Insup Lee. Formal verification, testing and checking of real-time systems. *ACM Computing Surveys*, 28(4es):182:1–182:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a182-lee/.

Lehoczky:1996:AMR

[947] John Lehoczky. Analytical methods for real-time computing. *ACM Computing Surveys*, 28(4es):183:1–183:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a183-lehoczky/.

Liu:1996:VTP

[948] Jane Liu. Validation of timing properties. *ACM Computing Surveys*, 28(4es):184:1–184:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a184-liu/.

Mok:1996:FRT

[949] Al Mok. Firm real-time systems. *ACM Computing Surveys*, 28 (4es):185:1–185:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a185-mok/.

Ramamritham:1996:PDR

[950] Krithi Ramamritham. Predictability: demonstrating real-time properties. *ACM Computing Surveys*, 28(4es):186:1–186:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a186-ramamritham/.

Sha:1996:RTR

[951] Lui Sha. Real-time in the real world. *ACM Computing Surveys*, 28 (4es):187:1–187:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a187-sha/.

Stankovic:1996:PRT

[952] Jack Stankovic. The pervasiveness of real-time computing. *ACM Computing Surveys*, 28(4es):188:1–188:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a188-stankovic/.

vanTilborg:1996:RTR

[953] Andre van Tilborg. Real-time research in the Department of Defense. *ACM Computing Surveys*, 28(4es):189:1–189:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a189-van_tilborg/.

Abowd:1996:SEP

[954] Gregory Abowd. Software engineering and programming language considerations for ubiquitous computing. *ACM Computing Surveys*, 28

(4es):190:1–190:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a190-abowd/.

Chambers:1996:TRE

[955] Craig Chambers. Towards reusable, extensible components. *ACM Computing Surveys*, 28(4es):192:1–192:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a192-chambers/.

Clarke:1996:NFP

[956] Lori A. Clarke and Peri Tarr. New functionality for programming languages. *ACM Computing Surveys*, 28(4es):193:1–193:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a193-clarke/.

Griswold:1996:PLR

[957] William G. Griswold, Richard Wolski, Scott B. Baden, Stephen J. Fink, and Scott R. Kohn. Programming language requirements for the next millennium. *ACM Computing Surveys*, 28(4es):194:1–194:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a194-griswold/.

Harper:1996:RPL

[958] Robert Harper and Peter Lee. Research in programming languages for composability, safety, and performance. *ACM Computing Surveys*, 28(4es):195:1–195:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a195-harper/.

Hudak:1996:BDS

[959] Paul Hudak. Building domain-specific embedded languages. *ACM Computing Surveys*, 28(4es):196:1–196:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a196-hudak/.

Kamin:1996:CLT

[960] Sam Kamin. The challenge of language technology transfer. *ACM Computing Surveys*, 28(4es):197:1–197:??, December 1996. CODEN

CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a197-kamin/.

Moore:1996:RIR

[961] Melody M. Moore. Representation issues for reengineering interactive systems. *ACM Computing Surveys*, 28(4es):199:1–199:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a199-moore/.

Palsberg:1996:SEI

[962] Jens Palsberg. Software evolution and integration. *ACM Computing Surveys*, 28(4es):200:1–200:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a200-palsberg/.

Scherlis:1996:BC

[963] Bill Scherlis. Beyond coding. *ACM Computing Surveys*, 28(4es):201:1–201:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a201-scherlis/.

Wileden:1996:PLS

[964] Jack Wileden. Programming languages and software engineering: past, present and future. *ACM Computing Surveys*, 28(4es):202:1–202:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a202-wileden/.

Clarke:1996:HDW

[965] Lori A. Clarke. How do we improve software quality and how do we show that it matters? *ACM Computing Surveys*, 28(4es):203:1–203:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a203-clarke/.

DeMillo:1996:MCA

[966] Richard A. DeMillo. Mission-critical applications, commercial value and software quality. *ACM Computing Surveys*, 28(4es):204:1–204:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a204-demillo/.

McKeeman:1996:SCS

[967] William McKeeman. Separating concerns in software quality. *ACM Computing Surveys*, 28(4es):205:1–205:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a205-mckeeman/.

Miller:1996:GQM

[968] Edward F. Miller, Jr. Getting quality methods into practice. *ACM Computing Surveys*, 28(4es):206:1–206:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a206-miller/.

Choudhary:1996:LSF

[969] Alok Choudhary and David Kotz. Large-scale file systems with the flexibility of databases. *ACM Computing Surveys*, 28(4es):207:1–207:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a207-choudhary/.

Cormen:1996:BMP

[970] Thomas H. Cormen and Michael T. Goodrich. A bridging model for parallel computation, communication, and I/O. *ACM Computing Surveys*, 28(4es):208:1–208:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a208-cormen/.

Gibson:1996:SMN

[971] Garth A. Gibson and John Wilkes. Self-managing network-attached storage. *ACM Computing Surveys*, 28(4es):209:1–209:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a209-gibson/.

Muntz:1996:SLD

[972] Richard R. Muntz and Joseph Pasquale. System-level design issues for storage I/O. *ACM Computing Surveys*, 28(4es):210:1–210:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a210-muntz/.

Satyanarayanan:1996:AKM

[973] M. Satyanarayanan and Carla Schlatter Ellis. Adaptation: the key to mobile I/O. *ACM Computing Surveys*, 28(4es):211:1–211:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a211-satyanarayanan/.

Vengroff:1996:EAE

[974] Darren Erik Vengroff and Jeffrey Scott Vitter. I/O-efficient algorithms and environments. *ACM Computing Surveys*, 28(4es):212:1–212:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a212-vengroff/.

Green:1996:IWN

[975] Paul Green. The impact of the Web on networking research. *ACM Computing Surveys*, 28(4es):213:1–213:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a213-green/.

Kurose:1996:FDN

[976] Jim Kurose. Future directions in networking research. *ACM Computing Surveys*, 28(4es):214:1–214:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a214-kurose/.

Pasquale:1996:TIC

[977] Joseph Pasquale. Towards Internet computing. *ACM Computing Surveys*, 28(4es):215:1–215:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a215-pasquale/.

Angluin:1996:SCL

[978] Dana Angluin. A 1996 snapshot of computational learning theory. *ACM Computing Surveys*, 28(4es):216:1–216:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a216-angluin/.

Fich:1996:IIR

[979] Faith Fich. Infrastructure issues related to theory of computing research. *ACM Computing Surveys*, 28(4es):217:1–217:??, Decem-

ber 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a217-fich/.

Goldreich:1996:TCS

[980] Oded Goldreich and Avi Wigderson. Theory of computing: a scientific perspective. *ACM Computing Surveys*, 28(4es):218:1–218:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a218-goldreich/.

Harper:1996:MB

[981] Robert Harper and John Mitchell. ML and beyond. *ACM Computing Surveys*, 28(4es):219:1–219:??, December 1996. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1996-28-4es/a219-harper/.

Wegner:1997:ES

[982] Peter Wegner. Editorial statement. *ACM Computing Surveys*, 29(1):1–2, March 1997. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1997-29-1/p1-wegner/.

Reid:1997:SGI

[983] M. M. Reid, R. J. Millar, and N. D. Black. Second-generation image coding: An overview. *ACM Computing Surveys*, 29(1):3–29, March 1997. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1997-29-1/p3-reid/.

Walicki:1997:AAN

[984] Michał Walicki and Sigurd Meldal. Algebraic approaches to nondeterminism — an overview. *ACM Computing Surveys*, 29(1):30–81, March 1997. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1997-29-1/p30-walicki/.

Pong:1997:VTC

[985] Fong Pong and Michel Dubois. Verification techniques for cache coherence protocols. *ACM Computing Surveys*, 29(1):82–126, March 1997. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1997-29-1/p82-pong/.

Wegner:1997:AIL

[986] Peter Wegner. About this issue .... *ACM Computing Surveys*, 29(2):127, June 1997. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org:80/pubs/citations/journals/surveys/1997-29-2/p127-wegner/`.

Uhlig:1997:TDM

[987] Richard A. Uhlig and Trevor N. Mudge. Trace-driven memory simulation: a survey. *ACM Computing Surveys*, 29(2):128–170, June 1997. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org:80/pubs/citations/journals/surveys/1997-29-2/p128-uhlig/`. See erratum [996].

Paschos:1997:SAO

[988] Vangelis T. Paschos. A survey of approximately optimal solutions to some covering and packing problems. *ACM Computing Surveys*, 29(2):171–209, June 1997. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org:80/pubs/citations/journals/surveys/1997-29-2/p171-paschos/`.

Thorn:1997:PLM

[989] Tommy Thorn. Programming languages for mobile code. *ACM Computing Surveys*, 29(3):213–239, September 1997. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org:80/pubs/citations/journals/surveys/1997-29-3/p213-thorn/`. See erratum [996].

Wadler:1997:HDI

[990] Philip Wadler. How to declare an imperative. *ACM Computing Surveys*, 29(3):240–263, September 1997. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org:80/pubs/citations/journals/surveys/1997-29-3/p240-wadler/`.

Ji:1997:MIC

[991] Qiang Ji and Michael M. Marefat. Machine interpretation of CAD data for manufacturing applications. *ACM Computing Surveys*, 29(3):264–311, September 1997. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org:80/pubs/citations/journals/surveys/1997-29-3/p264-ji/`.

Zave:1997:CRE

[992] Pamela Zave. Classification of research efforts in requirements engineering. *ACM Computing Surveys*, 29(4):315–321, December 1997.

CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1997-29-4/p315-zave/.

Nwana:1997:CSE

[993] Hyacinth S. Nwana. Is computer science education in crisis? *ACM Computing Surveys*, 29(4):322–324, December 1997. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1997-29-4/p322-nwana/.

Weinhaus:1997:TMM

[994] Frederick M. Weinhaus and Venkat Devarajan. Texture mapping 3D models of real-world scenes. *ACM Computing Surveys*, 29(4):325–365, December 1997. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1997-29-4/p325-weinhaus/.

Zhu:1997:SUT

[995] Hong Zhu, Patrick A. V. Hall, and John H. R. May. Software unit test coverage and adequacy. *ACM Computing Surveys*, 29(4):366–427, December 1997. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1997-29-4/p366-zhu/.

Anonymous:1997:E

[996] Anonymous. Errata. *ACM Computing Surveys*, 29(4):428, December 1997. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1997-29-4/p428-errata/. See [987, 989].

Anonymous:1997:AIV

[997] Anonymous. Author index: Vols. 25–29 (1993–1997). *ACM Computing Surveys*, 29(4):429–437, December 1997. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1997-29-4/p429-author_index/.

Anonymous:1997:AI

[998] Anonymous. Author index. *ACM Computing Surveys*, 29(4):429–437, December 1997. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Anonymous:1997:SIV

[999] Anonymous. Subject index: Vols. 25–29 (1993–1997). *ACM Computing Surveys*, 29(4):437–442, December 1997. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1997-29-4/p437-subject_index/.

index:1997:SI

[1000] Subject index. Subject index. *ACM Computing Surveys*, 29(4):437–442, December 1997. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wegner:1998:AIa

[1001] Peter Wegner. About this issue. *ACM Computing Surveys*, 30(1): 1, March 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-1/p1-wegner/.

Lewandowski:1998:FCB

[1002] Scott M. Lewandowski. Frameworks for component-based client/server computing. *ACM Computing Surveys*, 30(1):3–27, March 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-1/p3-lewandowski/.

El-Yaniv:1998:CSO

[1003] Ran El-Yaniv. Competitive solutions for online financial problems. *ACM Computing Surveys*, 30(1):28–69, March 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-1/p28-el-yaniv/.

Thomasian:1998:CCM

[1004] Alexander Thomasian. Concurrency control: methods, performance, and analysis. *ACM Computing Surveys*, 30(1):70–119, March 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-1/p70-thomasian/.

Skillicorn:1998:MLP

[1005] David B. Skillicorn and Domenico Talia. Models and languages for parallel computation. *ACM Computing Surveys*, 30(2):123–169, June

1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-2/p123-skillicorn/.

Gaede:1998:MAM

[1006] Volker Gaede and Oliver Günther. Multidimensional access methods. *ACM Computing Surveys*, 30(2):170–231, June 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-2/p170-gaede/.

Conradi:1998:VMS

[1007] Reidar Conradi and Bernhard Westfechtel. Version models for software configuration management. *ACM Computing Surveys*, 30(2):232–282, June 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-2/p232-conradi/.

Anonymous:1998:CCS

[1008] Anonymous. Contents: Computing Surveys' Electronic Symposium on Partial Evaluating: http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/. *ACM Computing Surveys*, 30(3):283, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Anonymous:1998:E

[1009] Anonymous. Editorial. *ACM Computing Surveys*, 30(3):284, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wegner:1998:E

[1010] Peter Wegner and Marvin Israel. Editorial. *ACM Computing Surveys*, 30(3):284, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Danvy:1998:SPE

[1011] Olivier Danvy, Robert Glück, and Peter Thiemann. 1998 Symposium on Partial Evaluation. *ACM Computing Surveys*, 30(3):285–290, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Briot:1998:CDO

[1012] Jean-Pierre Briot, Rachid Guerraoui, and Klaus-Peter Lohr. Concurrency and distribution in object-oriented programming. *ACM Computing Surveys*, 30(3):291–329, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3/p291-briot/.

Abdullahi:1998:GCI

[1013] Saleh E. Abdullahi and Graem A. Ringwood. Garbage collecting the Internet: a survey of distributed garbage collection. *ACM Computing Surveys*, 30(3):330–373, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3/p330-abdullahi/.

Mohapatra:1998:WRT

[1014] Prasant Mohapatra. Wormhole routing techniques for directly connected multicomputer systems. *ACM Computing Surveys*, 30(3):374–410, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3/p374-mohapatra/.

Basin:1998:LFB

[1015] David Basin. Logical framework based program development. *ACM Computing Surveys*, 30(3es):1:1–1:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a1-basin/. Article 1.

Field:1998:EUF

[1016] J. Field, J. Heering, and T. B. Dinesh. Equations as a uniform framework for partial evaluation and abstract interpretation. *ACM Computing Surveys*, 30(3es):2:1–2:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a2-field/. Article 2.

Klimov:1998:PSV

[1017] Andrei Klimov. Program specialization vs. program composition. *ACM Computing Surveys*, 30(3es):3:1–3:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a3-klimov/. Article 3.

Leuschel:1998:SAP

[1018] Michael Leuschel, B. Martens, and D. de Schreye. Some achievements and prospects in partial deduction. *ACM Computing Surveys*, 30(3es):4:1–4:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a4-leuschel/. Article 4.

Mogensen:1998:IL

[1019] Torben Mogensen. Inherited limits. *ACM Computing Surveys*, 30 (3es):5:1–5:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a5-mogensen/. Article 5.

Pettorossi:1998:PSA

[1020] Alberto Pettorossi and Maurizio Proietti. Program specialization via algorithmic unfold/fold transformations. *ACM Computing Surveys*, 30 (3es):6:1–6:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a6-pettorossi/. Article 6.

Takano:1998:PTC

[1021] Akihiko Takano, Zhenjiang Hu, and Masato Takeichi. Program transformation in calculational form. *ACM Computing Surveys*, 30(3es):7:1–7:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a7-takano/. Article 7.

Wickline:1998:MTS

[1022] Philip Wickline, Peter Lee, Frank Pfenning, and Rowan Davies. Modal types as staging specifications for run-time code generation. *ACM Computing Surveys*, 30(3es):8:1–8:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a8-wickline/. Article 8.

Alpuente:1998:UVF

[1023] Maria Alpuente, Moreno Falaschi, and German Vidal. A unifying view of functional and logic program specialization. *ACM Computing Surveys*, 30(3es):9:1–9:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a9-alpuente/. Article 9.

Bugliesi:1998:OML

[1024] Michele Bugliesi, Anna Ciampolini, Evelina Lamma, and Paola Mello. Optimizing modular logic languages. *ACM Computing Surveys*, 30 (3es):10:1–10:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a10-bugliesi/. Article 10.

Etalle:1998:PEC

[1025] Sandro Etalle and Maurizio Gabbrieli. Partial evaluation of concurrent constraint languages. *ACM Computing Surveys*, 30(3es):11:1–11:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a11-etalle/. Article 11.

Gallagher:1998:RTA

[1026] J. P. Gallagher and L. Lafave. The role of trace abstractions in program specialization algorithms. *ACM Computing Surveys*, 30(3es):12:1–12:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a12-gallagher/. Article 12.

Hatcliff:1998:FPE

[1027] John Hatcliff. Foundations for partial evaluation of functional programs with computational effects. *ACM Computing Surveys*, 30(3es):13:1–13:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a13-hatcliff/. Article 13.

Hughes:1998:TS

[1028] John Hughes. Type specialization. *ACM Computing Surveys*, 30(3es):14:1–14:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a14-hughes/. Article 14.

Lafave:1998:EPA

[1029] L. Lafave and J. P. Gallagher. Extending the power of automatic constraint-based partial evaluators. *ACM Computing Surveys*, 30(3es):15:1–15:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a15-lafave/. Article 15.

Sagonas:1998:EPD

[1030] Konstantinos Sagonas and Michael Leuschel. Extending partial deduction to tabled execution: some results and open issues. *ACM Computing Surveys*, 30(3es):16:1–16:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a16-sagonas/. Article 16.

Blazy:1998:PEP

[1031] Sandrine Blazy and Philippe Facon. Partial evaluation for program comprehension. *ACM Computing Surveys*, 30(3es):17:1–17:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a17-blazy/. Article 17.

Cazenave:1998:SET

[1032] Tristan Cazenave. Synthesis of an efficient tactical theorem prover for the game of go. *ACM Computing Surveys*, 30(3es):18:1–18:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a18-cazenave/. Article 18.

Consel:1998:TSS

[1033] C. Consel, L. Hornof, R. Marlet, G. Muller, S. Thibault, E.-N. Volanschi, J. Lawall, and J. Noyé. Tempo: specializing systems applications and beyond. *ACM Computing Surveys*, 30(3es):19:1–19:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a19-consel/. Article 19.

Consel:1998:PES

[1034] C. Consel, L. Hornof, R. Marlet, G. Muller, S. Thibault, E.-N. Volanschi, J. Lawall, and J. Noyé. Partial evaluation for software engineering. *ACM Computing Surveys*, 30(3es):20:1–20:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a20-consel/. Article 20.

Draves:1998:PEM

[1035] Scott Draves. Partial evaluation for media processing. *ACM Computing Surveys*, 30(3es):21:1–21:??, September 1998. CODEN CMSVAN.

ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a21-draves/. Article 21.

Dwyer:1998:UPE

[1036] Matthew Dwyer, John Hatcliff, and Muhammad Nanda. Using partial evaluation to enable verification of concurrent software. *ACM Computing Surveys*, 30(3es):22:1–22:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a22-dwyer/. Article 22.

Leone:1998:DSF

[1037] Mark Leone and Peter Lee. Dynamic specialization in the Fabius system. *ACM Computing Surveys*, 30(3es):23:1–23:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a23-leone/. Article 23.

Waddell:1998:VPE

[1038] Oscar Waddell and R. Kent Dybvig. Visualizing partial evaluation. *ACM Computing Surveys*, 30(3es):24:1–24:??, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/a24-waddell/. Article 24.

Liou:1998:TIM

[1039] Yuan Chang Liou and Yih Nen Jeng. A transfinite interpolation method of grid generation based on multipoints. *ACM Computing Surveys*, 30 (3es):105–113, September 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-3es/p105-liou/.

Wegner:1998:AIb

[1040] Peter Wegner. About this issue.... *ACM Computing Surveys*, 30(4):411, December 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Agarwal:1998:EAG

[1041] Pankaj K. Agarwal and Micha Sharir. Efficient algorithms for geometric optimization. *ACM Computing Surveys*, 30(4):412–458, December

1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-4/p412-agarwal/`.

Wieringa:1998:SSO

[1042] Roel Wieringa. A survey of structured and object-oriented software specification methods and techniques. *ACM Computing Surveys*, 30 (4):459–527, December 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-4/p459-wieringa/`.

Crestani:1998:DRL

[1043] Fabio Crestani, Mounia Lalmas, Cornelis J. Van Rijsbergen, and Iain Campbell. "Is this document relevant? ... probably": a survey of probabilistic models in information retrieval. *ACM Computing Surveys*, 30(4):528–552, December 1998. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org:80/pubs/citations/journals/surveys/1998-30-4/p528-crestani/`.

Gartner:1999:FFT

[1044] Felix C. Gärtner. Fundamentals of fault-tolerant distributed computing in asynchronous environments. *ACM Computing Surveys*, 31(1):1–26, March 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1999-31-1/p1-gartner/`.

Liu:1999:DDL

[1045] Mengchi Liu. Deductive database languages: problems and solutions. *ACM Computing Surveys*, 31(1):27–62, March 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1999-31-1/p27-liu/`.

Paton:1999:ADS

[1046] Norman W. Paton and Oscar Díaz. Active database systems. *ACM Computing Surveys*, 31(1):63–103, March 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1999-31-1/p63-paton/`.

Mills:1999:IESa

[1047] Kevin L. Mills. Introduction to the Electronic Symposium on Computer-Supported Cooperative Work. *ACM Computing Surveys*, 31(2):105–115, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2/p105-mills/p105-mills.pdf; http://www.acm.org/pubs/articles/journals/surveys/1999-31-2es/a1-mills/a1-mills.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2/p105-mills/; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2/p105-mills/#abstract; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2/p105-mills/#indterms; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a1-mills/; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a1-mills/#abstract.

Anonymous:1999:TCE

[1048] Anonymous. Table of contents: Electronic symposium on computer-supported cooperative work. *ACM Computing Surveys*, 31(2):116, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). These articles are only available electronically, and are cited as volume 31, number 2es.

Jing:1999:CSC

[1049] Jin Jing, Abdelsalam Sumi Helal, and Ahmed Elmagarmid. Client-server computing in mobile environments. *ACM Computing Surveys*, 31 (2):117–157, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2/p117-jing/p117-jing.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2/p117-jing/; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2/p117-jing/#abstract; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2/p117-jing/#indterms.

Salzberg:1999:CAM

[1050] Betty Salzberg and Vassilis J. Tsotras. Comparison of access methods for time-evolving data. *ACM Computing Surveys*, 31(2):158–221, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2/p158-salzberg/p158-salzberg.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2/p158-salzberg/; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2/p158-salzberg/#abstract; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2/p158-salzberg/#indterms.

Mills:1999:IESb

[1051] Kevin L. Mills. Introduction to the Electronic Symposium on Computer-Supported Cooperative Work. *ACM Computing Surveys*, 31(2es):1:1–

1:??, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

McCanne:1999:MES

[1052] Steven McCanne, Eric Brewer, Randy Katz, Elan Amir, Yatin Chawathe, Todd Hodes, Ketan Mayer-Patel, Suchitra Raman, Cynthia Romer, Angela Schuett, Andrew Swan, Teck-Lee Tung, Tina Wong, and Kristin Wright. MASH: enabling scalable multipoint collaboration. *ACM Computing Surveys*, 31(2es):2:1–2:??, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2es/a2-mccanne/a2-mccanne.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a2-mccanne/.

Dao:1999:SMI

[1053] Son Dao, Eddie Shek, Asha Vellaikal, Richard R. Muntz, Lixia Zhang, Miodrag Potkonjak, and Ouri Wolfson. Semantic multicast: intelligently sharing collaborative sessions. *ACM Computing Surveys*, 31(2es):3:1–3:??, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2es/a3-dao/a3-dao.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a3-dao/; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a3-dao/#abstract; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a3-dao/#indterms.

Marsic:1999:DFM

[1054] Ivan Marsic. DISCIPLE: a framework for multimodal collaboration in heterogeneous environments. *ACM Computing Surveys*, 31(2es):4:1–4:??, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2es/a4-marsic/a4-marsic.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a4-marsic/; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a4-marsic/#abstract; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a4-marsic/#indterms.

Reed:1999:OVC

[1055] Daniel A. Reed and Simon M. Kaplan. Orbit/Virtue: collaboration and visualization toolkits. *ACM Computing Surveys*, 31(2es):5:1–5:??, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2es/a5-reed/a5-reed.pdf; http://

www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a5-reed/; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a5-reed/#indterms.

Martin:1999:CPA

[1056] Kevin Martin. Creation and performance analysis of user representations in collaborative virtual environments. *ACM Computing Surveys*, 31(2es):6:1–6:??, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2es/a6-martin/a6-martin.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a6-martin/; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a6-martin/#abstract.

Kubala:1999:RMR

[1057] Francis Kubala, Sean Colbath, Daben Liu, and John Makhoul. Rough'n'Ready: a meeting recorder and browser. *ACM Computing Surveys*, 31(2es):7:1–7:??, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2es/a7-kubala/a7-kubala.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a7-kubala/.

Payton:1999:DCD

[1058] David Payton, Mike Daily, and Kevin Martin. Dynamic collaborator discovery in information intensive environments. *ACM Computing Surveys*, 31(2es):8:1–8:??, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2es/a8-payton/a8-payton.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a8-payton/.

Wactlar:1999:IED

[1059] Howard D. Wactlar, Michael G. Christel, Alexander G. Hauptmann, and Yihong Gong. Informedia Experience-on-Demand: capturing, integrating and communicating experiences across people, time and space. *ACM Computing Surveys*, 31(2es):9:1–9:??, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2es/a9-wactlar/a9-wactlar.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a9-wactlar/; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a9-wactlar/#abstract.

Wolverton:1999:TBI

[1060] Michael Wolverton. Task-based information management. *ACM Computing Surveys*, 31(2es):10:1–10:??, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2es/a10-wolverton/a10-wolverton.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a10-wolverton/; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a10-wolverton/#abstract.

Morris:1999:IIC

[1061] James H. Morris, Christine M. Neuwirth, Susan Harkness Regli, Ravinder Chandhok, and Geoffrey C. Wenger. Interface issues in computer support for asynchronous communication. *ACM Computing Surveys*, 31(2es):11:1–11:??, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2es/a11-morris/a11-morris.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a11-morris/.

Jackson:1999:ISA

[1062] Larry S. Jackson and Ed Grossman. Integration of synchronous and asynchronous collaboration activities. *ACM Computing Surveys*, 31(2es):12:1–12:??, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2es/a12-jackson/a12-jackson.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a12-jackson/; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a12-jackson/#abstract.

Rees:1999:CMD

[1063] Jonathan Rees, Sarah Ferguson, and Sankar Virdhagriswaran. Consistency management for distributed collaboration. *ACM Computing Surveys*, 31(2es):13:1–13:??, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2es/a13-rees/a13-rees.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a13-rees/.

Thompson:1999:IAI

[1064] Craig Thompson, Paul Pazandak, Venu Vasudevan, Frank Manola, Mark Palmer, Gil Hansen, and Tom Bannon. Intermediary architecture: Interposing middleware object services between Web client and server. *ACM Computing Surveys*, 31(2es):14:1–14:??, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2es/a14-thompson/a14-thompson.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a14-thompson/; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a14-thompson/#abstract; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a14-thompson/#indterms.

Damianos:1999:ECS

[1065] Laurie Damianos, Lynette Hirschman, Robyn Kozierok, Jeffrey Kurtz, Andrew Greenberg, Kimberley Walls, Sharon Laskowski, and Jean Scholtz. Evaluation for collaborative systems. *ACM Computing Surveys*, 31(2es):15:1–15:??, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2es/a15-damianos/a15-damianos.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a15-damianos/.

Ranganathan:1999:RCD

[1066] M. Ranganathan, Laurent Andrey, Virginie Schaal, and Jean-Philippe Favreau. Re-configurable distributed scripting. *ACM Computing Surveys*, 31(2es):16:1–16:??, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2es/a16-ranganathan/a16-ranganathan.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a16-ranganathan/; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a16-ranganathan/#abstract.

Bayer:1999:MMM

[1067] Samuel Bayer, Laurie E. Damianos, Robyn Kozierok, and James Mokwa. The MITRE Multi-Modal Logger: its use in evaluation of collaborative systems. *ACM Computing Surveys*, 31(2es):17:1–17:??, June 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-2es/a17-bayer/a17-bayer.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a17-bayer/.

Kurtz:1999:MMN

[1068] Jeffrey L. Kurtz, Laurie E. Damianos, Robyn Kozierok, and Lynette Hirschman. The MITRE map navigation experiment. *ACM Computing Surveys*, 31(2es):18:1–18:??, June 1999. CODEN CMSVAN.

ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/articles/journals/surveys/1999-31-2es/a18-kurtz/a18-kurtz.pdf`; `http://www.acm.org/pubs/citations/journals/surveys/1999-31-2es/a18-kurtz/`.

Degano:1999:CSEa

[1069] P. Degano, R. Gorrieri, A. Marchetti-Spaccamela, and P. Wegner. Computing Surveys' Electronic Symposium on the Theory of Computation. *ACM Computing Surveys*, 31(3):223–225, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/1999-31-3es/a1-degano/`.

Anonymous:1999:STC

[1070] Anonymous. Symposium on the theory of computation: Table of contents. *ACM Computing Surveys*, 31(3):226, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/contents/journals/surveys/1999-31`.

Fraternali:1999:TAD

[1071] Piero Fraternali. Tools and approaches for developing data-intensive Web applications: a survey. *ACM Computing Surveys*, 31(3):227–263, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/articles/journals/surveys/1999-31-3/p227-fraternali/p227-fraternali.pdf`; `http://www.acm.org/pubs/citations/journals/surveys/1999-31-3/p227-fraternali/`; `http://www.acm.org/pubs/citations/journals/surveys/1999-31-3/p227-fraternali/#indterms`.

Jain:1999:DCR

[1072] A. K. Jain, M. N. Murty, and P. J. Flynn. Data clustering: a review. *ACM Computing Surveys*, 31(3):264–323, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/articles/journals/surveys/1999-31-3/p264-jain/p264-jain.pdf`; `http://www.acm.org/pubs/citations/journals/surveys/1999-31-3/p264-jain/`; `http://www.acm.org/pubs/citations/journals/surveys/1999-31-3/p264-jain/#indterms`.

Degano:1999:CSEb

[1073] P. Degano, R. Gorrieri, A. Marchetti-Spaccamela, and P. Wegner. Computing surveys' electronic symposium on the theory of computation. *ACM Computing Surveys*, 31(3es):1:1–1:??, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Noltemeier:1999:NDI

[1074] H. Noltemeier, H.-C. Wirth, and S. O. Krumke. Network design and improvement. *ACM Computing Surveys*, 31(3es):2:1–2:??, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Cattaneo:1999:AE

[1075] Giuseppe Cattaneo and Giuseppe Italiano. Algorithm engineering. *ACM Computing Surveys*, 31(3es):3:1–3:??, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-3es/a3-cattaneo/.

Albers:1999:LA

[1076] Susanne Albers and Stefano Leonardi. On-line algorithms. *ACM Computing Surveys*, 31(3es):4:1–4:??, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-3es/a4-albers/.

Hankin:1999:PAG

[1077] Chris Hankin and Pasquale Malacaria. Program analysis games. *ACM Computing Surveys*, 31(3es):5:1–5:??, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-3es/a5-hankin/.

Cousot:1999:DRA

[1078] Patric Cousot. Directions for research in approximate system analysis. *ACM Computing Surveys*, 31(3es):6:1–6:??, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-3es/a6-cousot/.

Bernardo:1999:LEP

[1079] Marco Bernardo. Let's evaluate performance algebraically. *ACM Computing Surveys*, 31(3es):7:1–7:??, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-3es/a7-bernardo/.

Hromkovic:1999:SCS

[1080] Juraj Hromkovič. Some contributions of the study of abstract communication complexity to other areas of computer science. *ACM Computing*

Surveys, 31(3es):8:1–8:??, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-3es/a8-hromkovic/.

Ehrig:1999:GRG

[1081] Hartmut Ehrig and Gabriele Taentzer. Graphical representation and graph transformation. *ACM Computing Surveys*, 31(3es):9:1–9:??, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-3es/a9-ehrig/.

Sannella:1999:AMS

[1082] Donald Sannella and Andrzei Tarlecki. Algebraic methods for specification and formal development of programs. *ACM Computing Surveys*, 31(3es):10:1–10:??, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-3es/a10-sannella/.

Miller:1999:FAS

[1083] Dale Miller and Catuscia Palmidessi. Foundational aspects of syntax. *ACM Computing Surveys*, 31(3es):11:1–11:??, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-3es/a11-miller/.

Giammarresi:1999:EFL

[1084] Dora Giammarresi and Antonio Restivo. Extending formal language hierarchies to higher dimensions. *ACM Computing Surveys*, 31(3es):12:1–12:??, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-3es/a12-giammarresi/.

Priami:1999:OMT

[1085] Corrado Priami. Operational methods in theoretical computer science. *ACM Computing Surveys*, 31(3es):13:1–13:??, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-3es/a13-priami/.

Honda:1999:SSR

[1086] Kohei Honda. Semantics study and reality of computing. *ACM Computing Surveys*, 31(3es):14:1–14:??, September 1999. CODEN CMSVAN.

ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-3es/a14-honda/.

Freivalds:1999:HSF

[1087] Rusins Freivalds. How to simulate free will in a computational device. *ACM Computing Surveys*, 31(3es):15:1–15:??, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-3es/a15-freivalds/.

Wiedermann:1999:SMG

[1088] Jiri Wiedermann. Simulating the mind: a gauntlet thrown to computer science. *ACM Computing Surveys*, 31(3es):16:1–16:??, September 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-3es/a16-wiedermann/.

Ashman:1999:CSEa

[1089] Helen Ashman and Rosemary Michelle Simpson. Computing Surveys' Electronic Symposium on Hypertext and Hypermedia: Editorial. *ACM Computing Surveys*, 31(4):325–334, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/1999-31-4es/a1-ashman/a1-ashman.pdf; http://www.acm.org/pubs/citations/journals/surveys/1999-31-4/p325-ashman/; http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a1-ashman/.

Antoniou:1999:TDL

[1090] Grigoris Antoniou. A tutorial on default logics. *ACM Computing Surveys*, 31(4):337–359, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4/p337-antoniou/.

Iren:1999:TLT

[1091] Sami Iren, Paul D. Amer, and Phillip T. Conrad. The transport layer: tutorial and survey. *ACM Computing Surveys*, 31(4):360–404, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4/p360-iren/.

Kwok:1999:SSA

[1092] Yu-Kwong Kwok and Ishfaq Ahmad. Static scheduling algorithms for allocating directed task graphs to multiprocessors. *ACM Computing Sur-*

veys, 31(4):406–471, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4/p406-kwok/.

Ashman:1999:CSEb

[1093] Helen Ashman and Rosemary Michelle Simpson. Computing Surveys' Electronic Symposium on Hypertext and Hypermedia: Editorial. *ACM Computing Surveys*, 31(4es):1:1–1:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wiil:1999:HRD

[1094] Uffe K. Wiil, Peter J. Nürnberg, and John J. Leggett. Hypermedia research directions: an infrastructure perspective. *ACM Computing Surveys*, 31(4es):2:1–2:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a2-wiil/.

Treloar:1999:AHH

[1095] Andrew E. Treloar. Applying hypertext and hypermedia to scholarly journals enables both product and process innovation. *ACM Computing Surveys*, 31(4es):3:1–3:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a3-treloar/.

Tudhope:1999:SIH

[1096] Douglas Tudhope and Daniel Cunliffe. Semantically indexed hypermedia: linking information disciplines. *ACM Computing Surveys*, 31(4es):4:1–4:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a4-tudhope/.

Kleinberg:1999:HAC

[1097] Jon M. Kleinberg. Hubs, authorities, and communities. *ACM Computing Surveys*, 31(4es):5:1–5:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a5-kleinberg/.

Mukherjea:1999:IVH

[1098] Sougata Mukherjea. Information visualization for hypermedia systems. *ACM Computing Surveys*, 31(4es):6:1–6:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a6-mukherjea/.

Oinas-Kukkonen:1999:FCH

[1099] Harri Oinas-Kukkonen. Flexible CASE and hypertext. *ACM Computing Surveys*, 31(4es):7:1–7:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a7-oinas-kukkonen/.

Rossi:1999:DHA

[1100] Gustavo Rossi, Fernando Daniel Lyardet, and Daniel Schwabe. Developing hypermedia applications with methods and patterns. *ACM Computing Surveys*, 31(4es):8:1–8:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a8-rossi/.

Carr:1999:EHL

[1101] Leslie Carr, Wendy Hall, and David De Roure. The evolution of hypertext link services. *ACM Computing Surveys*, 31(4es):9:1–9:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a9-carr/.

Lewis:1999:SL

[1102] Paul H. Lewis, Wendy Hall, Leslie A. Carr, and David De Roure. The significance of linking. *ACM Computing Surveys*, 31(4es):10:1–10:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a10-lewis/.

Reich:1999:WYB

[1103] Siegfried Reich, Leslie Carr, David De Roure, and Wendy Hall. Where have you been from here? Trials in hypertext systems. *ACM Computing Surveys*, 31(4es):11:1–11:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a11-reich/.

DeBra:1999:AHS

[1104] Paul De Bra, Peter Brusilovsky, and Geert-Jan Houben. Adaptive hypermedia: from systems to framework. *ACM Computing Surveys*, 31(4es):12:1–12:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a12-de_bra/.

Li:1999:ICS

[1105] Wen-Syan Li and K. Selçuk Candan. Integrating content search with structure analysis for hypermedia retrieval and management. *ACM Computing Surveys*, 31(4es):13:1–13:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a13-li/.

Shipman:1999:SHA

[1106] Frank M. Shipman, III and Catherine C. Marshall. Spatial hypertext: an alternative to navigational and semantic links. *ACM Computing Surveys*, 31(4es):14:1–14:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a14-shipman/.

Bodner:1999:DHQ

[1107] Richard Bodner and Mark Chignell. Dynamic hypertext: querying and linking. *ACM Computing Surveys*, 31(4es):15:1–15:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a15-bodner/.

Kopak:1999:FLT

[1108] Richard W. Kopak. Functional link typing in hypertext. *ACM Computing Surveys*, 31(4es):16:1–16:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a16-kopak/.

Chakrabarti:1999:RRA

[1109] Soumen Chakrabarti. Recent results in automatic Web resource discovery. *ACM Computing Surveys*, 31(4es):17:1–17:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a17-chakrabarti/.

Furner:1999:ILC

[1110] Jonathan Furner, David Ellis, and Peter Willett. Inter-linker consistency in the manual construction of hypertext documents. *ACM Computing Surveys*, 31(4es):18:1–18:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a18-furner/.

Bernstein:1999:SPH

[1111] Mark Bernstein. Structural patterns and hypertext rhetoric. *ACM Computing Surveys*, 31(4es):19:1–19:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a19-bernstein/.

Anderson:1999:SSE

[1112] Kenneth M. Anderson. Supporting software engineering with open hypermedia. *ACM Computing Surveys*, 31(4es):20:1–20:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a20-anderson/.

DeRose:1999:XL

[1113] Steven J. DeRose. XML linking. *ACM Computing Surveys*, 31(4es):21:1–21:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a21-derose/.

Green:1999:LSA

[1114] Stephen J. Green. Lexical semantics and automatic hypertext construction. *ACM Computing Surveys*, 31(4es):22:1–22:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a22-green/.

Hardman:1999:HLT

[1115] Lynda Hardman, Jacco van Ossenbruggen, Lloyd Rutledge, and Dick C. A. Bulterman. Hypermedia: the link with time. *ACM Computing Surveys*, 31(4es):23:1–23:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a23-hardman/.

Vitali:1999:VH

[1116] Fabio Vitali. Versioning hypermedia. *ACM Computing Surveys*, 31(4es):24:1–24:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a24-vitali/.

Benford:1999:TDV

[1117] Steve Benford, Ian Taylor, David Brailsford, Boriana Koleva, Mike Craven, Mike Fraser, Gail Reynard, and Chris Greenhalgh. Three dimensional visualization of the World Wide Web. *ACM Computing Surveys*, 31(4es):25:1–25:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a25-benford/.

Quentin-Baxter:1999:QED

[1118] Megan Quentin-Baxter. Quantitative evidence for differences between learners making use of passive hypermedia learning environments. *ACM Computing Surveys*, 31(4es):26:1–26:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a26-quentin-baxter/.

Wilkinson:1999:ALG

[1119] Ross Wilkinson and Alan F. Smeaton. Automatic link generation. *ACM Computing Surveys*, 31(4es):27:1–27:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a27-wilkinson/.

Davis:1999:HLI

[1120] Hugh C. Davis. Hypertext link integrity. *ACM Computing Surveys*, 31(4es):28:1–28:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a28-davis/.

Bieber:1999:HDP

[1121] Michael Bieber and Joonhee Yoo. Hypermedia: a design philosophy. *ACM Computing Surveys*, 31(4es):29:1–29:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a29-bieber/.

Brailsford:1999:SHD

[1122] David F. Brailsford. Separable hyperstructure and delayed link binding. *ACM Computing Surveys*, 31(4es):30:1–30:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a30-brailsford/.

Vitali:1999:HWW

[1123] Fabio Vitali and Michael Bieber. Hypermedia on the Web: what will it take? *ACM Computing Surveys*, 31(4es):31:1–31:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a31-vitali/.

Bieber:1999:HF

[1124] Michael Bieber, Harri Oinas-Kukkonen, and V. Balasubramanian. Hypertext functionality. *ACM Computing Surveys*, 31(4es):32:1–32:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a32-bieber/.

Nelson:1999:XSN

[1125] Theodor Holm Nelson. Xanalogical structure, needed now more than ever: parallel documents, deep links to content, deep versioning, and deep re-use. *ACM Computing Surveys*, 31(4es):33:1–33:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a33-nelson/.

Verbyla:1999:UL

[1126] Janet Verbyla. Unlinking the link. *ACM Computing Surveys*, 31(4es):34:1–34:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a34-verbyla/.

Cailliau:1999:HWH

[1127] Robert Cailliau and Helen Ashman. Hypertext in the Web — a history. *ACM Computing Surveys*, 31(4es):35:1–35:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a35-cailliau/.

vanDam:1999:EUR

[1128] Andries van Dam. Education: the unfinished revolution. *ACM Computing Surveys*, 31(4es):36:1–36:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a36-van_dam/.

Nelson:1999:URX

[1129] Theodor Holm Nelson. The unfinished revolution and Xanadu. *ACM Computing Surveys*, 31(4es):37:1–37:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a37-nelson/.

Engelbart:1999:BOC

[1130] Douglas Engelbart and Jeff Ruilifson. Bootstrapping our collective intelligence. *ACM Computing Surveys*, 31(4es):38:1–38:??, December 1999. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/1999-31-4es/a38-engelbart/.

Bellini:2000:TLR

[1131] P. Bellini, R. Mattolini, and P. Nesi. Temporal logics for real-time system specification. *ACM Computing Surveys*, 32(1):12–42, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/2000-32-1/p12-bellini/p12-bellini.pdf; http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p12-bellini/.

Hasselbring:2000:PLS

[1132] Wilhelm Hasselbring. Programming languages and systems for prototyping concurrent applications. *ACM Computing Surveys*, 32(1):43–79, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/2000-32-1/p43-hasselbring/p43-hasselbring.pdf; http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p43-hasselbring/.

Sarkar:2000:BHC

[1133] Palash Sarkar. A brief history of cellular automata. *ACM Computing Surveys*, 32(1):80–107, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/2000-32-1/p80-sarkar/p80-sarkar.pdf; http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p80-sarkar/.

Fayad:2000:ICS

[1134] Mohamed E. Fayad. Introduction to the Computing Surveys' Electronic Symposium on Object-Oriented Application Frameworks. *ACM Computing Surveys*, 32(1es):1:1–1:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/2000-32-1/p1-fayad/p1-fayad.pdf; http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p1-fayad/. Article No. 4.

Brugali:2000:FPL

[1135] Davide Brugali and Katia Sycara. Frameworks and pattern languages: an intriguing relationship. *ACM Computing Surveys*, 32(1es):2:1–2:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p2-brugali/`. Article No. 2.

Bosch:2000:OOF

[1136] Jan Bosch, Peter Molin, Michael Mattsson, and PerOlof Bengtsson. Object-oriented framework-based software development: problems and experiences. *ACM Computing Surveys*, 32(1es):3:1–3:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p3-bosch/`. Article No. 3.

Fayad:2000:EFG

[1137] Mohamed E. Fayad and David S. Hamu. Enterprise frameworks: guidelines for selection. *ACM Computing Surveys*, 32(1es):4:1–4:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p4-fayad/`. Article No. 4.

Baumer:2000:DDF

[1138] Dirk Bäumer, Guido Gryczan, Rolf Knoll, Carola Lilienthal, Dirk Riehle, and Heinz Züllighoven. Domain-driven framework layering in large systems. *ACM Computing Surveys*, 32(1es):5:1–5:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p5-baumer/`. Article No. 5.

Pree:2000:FSL

[1139] Wolfgang Pree and Kai Koskimies. Framelets — small and loosely coupled frameworks. *ACM Computing Surveys*, 32(1es):6:1–6:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p6-pree/`.

Wang:2000:BTR

[1140] Yingwu Wang, Dilip Patel, Graham King, Ian Court, Geoff Staples, Maraget Ross, and Mohamad Fayad. On built-in test reuse in object-oriented framework design. *ACM Computing Surveys*, 32(1es):7:1–7:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p7-wang/. Article No. 7.

Hedin:2000:RLC

[1141] Görel Hedin and Jørgen Lindskov Knudsen. On the role of language constructs for framework design. *ACM Computing Surveys*, 32(1es): 8:1–8:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p8-hedin/. Article No. 8.

Carey:2000:DDD

[1142] James E. Carey and Brent A. Carlson. Deferring design decisions in an application framework. *ACM Computing Surveys*, 32(1es):9:1–9:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p9-carey/. Article No. 9.

Riehle:2000:PDR

[1143] Dirk Riehle, Roger Brudermann, Thomas Gross, and Kai-Uwe Mätzel. Pattern density and role modeling of an object transport service. *ACM Computing Surveys*, 32(1es):10:1–10:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p10-riehle/. Article No. 10.

Aksit:2000:DOO

[1144] Mehmet Aksit, Francesco Marcelloni, and Bedir Tekinerdogan. Developing object-oriented frameworks using domain models. *ACM Computing Surveys*, 32(1es):11:1–11:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p11-aksit/. Article No. 11.

Succi:2000:FED

[1145] Giancarlo Succi, Andrea Valerio, Tullio Vernazza, Massimo Fenaroli, and Paolo Predonzani. Framework extraction with domain analysis. *ACM Computing Surveys*, 32(1es):12:1–12:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p12-succi/. Article No. 12.

Roy:2000:FAC

[1146] Pierre Roy, Anne Liret, and François Pachet. The framework approach for constraint satisfaction. *ACM Computing Surveys*, 32(1es):13:1–13:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p13-roy/. Article No. 13.

Soundarajan:2000:DFB

[1147] Neelam Soundarajan. Documenting framework behavior. *ACM Computing Surveys*, 32(1es):14:1–14:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p14-soundarajan/. Article No. 14.

Butler:2000:FFD

[1148] Greg Butler, Rudolf K. Keller, and Hafedh Mili. A framework for framework documentation. *ACM Computing Surveys*, 32(1es):15:1–15:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p15-butler/. Article No. 15.

Silva:2000:FDU

[1149] António Rito Silva, Francisco Assis Rosa, and Teresa Gonçalves. Framework description using concern-specific design patterns composition. *ACM Computing Surveys*, 32(1es):16:1–16:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p16-silva/. Article No. 16.

Froehlich:2000:COO

[1150] Garry Froehlich, H. James Hoover, and Paul G. Sorenson. Choosing an object-oriented domain framework. *ACM Computing Surveys*, 32(1es):17:1–17:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p17-froehlich/.

Bansiya:2000:EFA

[1151] Jagdish Bansiya. Evaluating framework architecture structural stability. *ACM Computing Surveys*, 32(1es):18:1–18:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p18-bansiya/. Article No. 18.

Maamar:2000:OSA

[1152] Zakaria Maamar and Bernard Moulin. An overview of software agent-oriented frameworks. *ACM Computing Surveys*, 32(1es):19:1–19:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p19-maamar/. Article No. 19.

Kendall:2000:AFI

[1153] Elizabeth A. Kendall, P. V. Murali Krishna, C. B. Suresh, and Chira G. V. Pathak. An application framework for intelligent and mobile agents. *ACM Computing Surveys*, 32(1es):20:1–20:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p20-kendall/. Article No. 20.

Brugali:2000:TAO

[1154] Davide Brugali and Katia Sycara. Towards agent oriented application frameworks. *ACM Computing Surveys*, 32(1es):21:1–21:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p21-brugali/. Article No. 21.

Garbinato:2000:OFR

[1155] Benoît Garbinato and Rachid Guerraoui. An open framework for reliable distributed computing. *ACM Computing Surveys*, 32(1es):22:1–22:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p22-garbinato/. Article No. 22.

Michaloski:2000:OSF

[1156] John Michaloski, Sushil Birla, C. Jerry Yen, Richard Igou, and George Weinert. An open system framework for component-based CNC machines. *ACM Computing Surveys*, 32(1es):23:1–23:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p23-michaloski/. Article No. 23.

Fuentes:2000:TOM

[1157] Lidia Fuentes and Josée M. Troya. Towards an open multimedia service framework. *ACM Computing Surveys*, 32(1es):24:1–24:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p24-fuentes/. Article No. 24.

Johnson:2000:SFP

[1158] Verlyn Johnson. The San Francisco Project: Business process components and infrastructure. *ACM Computing Surveys*, 32(1es):25:1–25:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p25-johnson/`. Article No. 25.

Capobianchi:2000:FAS

[1159] Riccardo Capobianchi, Alberto Coen-Porisini, Dino Mandrioli, and Angelo Morzenti. A framework architecture for supervision and control systems. *ACM Computing Surveys*, 32(1es):26:1–26:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p26-capobianchi/`. Article No. 26.

Kappel:2000:FWM

[1160] Gerti Kappel, Stefan Rausch-Schott, and Werner Retschitzegger. A framework for workflow management systems based on objects, rules and roles. *ACM Computing Surveys*, 32(1es):27:1–27:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p27-kappel/`.

Koch:2000:AFG

[1161] Michael Koch and Jürgen Koch. Application of frameworks in groupware — the Iris group editor environment. *ACM Computing Surveys*, 32(1es): 28:1–28:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p28-koch/`.

Pal:2000:FIC

[1162] Partha Pratim Pal. A framework for isolating connection exception management. *ACM Computing Surveys*, 32(1es):29:1–29:10, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p29-pal/`.

pratimPal:2000:FIC

[1163] Partha pratim Pal. A framework for isolating connection exception management. *ACM Computing Surveys*, 32(1es):29:1–29:??, 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). Article No. 29.

Rossi:2000:NBO

[1164] Gustavo Rossi, Alejandra Garrido, and Daniel Schwabe. Navigating between objects. Lessons from an object-oriented framework perspective. *ACM Computing Surveys*, 32(1es):30:1–30:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p30-rossi/. Article No. 30.

Jezequel:2000:OOF

[1165] J.-M. Jézéquel. An object-oriented framework for data parallelism. *ACM Computing Surveys*, 32(1es):31:1–31:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p31-jezequel/. Article No. 31.

Kannan:2000:PSF

[1166] Raman Kannan. PAcceptor and SConnector frameworks: combining concurrency and communication. *ACM Computing Surveys*, 32(1es):32:1–32:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p32-kannan/. Article No. 32.

Buchner:2000:HFC

[1167] Jürgen Buchner. HotDoc: a framework for compound documents. *ACM Computing Surveys*, 32(1es):33:1–33:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p33-buchner/. Article No. 33.

Demeyer:2000:CFD

[1168] Serge Demeyer, Koen De Hondt, and Patrick Steyaert. Consistent framework documentation with computed links and framework contracts. *ACM Computing Surveys*, 32(1es):34:1–34:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p34-demeyer/. Article No. 34.

Whelan:2000:EIS

[1169] Peter T. Whelan. Experiences and issues with SEMATECH's CIM framework. *ACM Computing Surveys*, 32(1es):35:1–35:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p35-whelan/. Article No. 35.

Harinath:2000:EOO

[1170] Raja Harinath, Jaideep Srivastava, Jim Richardson, and Mark Foresti. Experiences with an object oriented framework for distributed control applications. *ACM Computing Surveys*, 32(1es):36:1–36:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p36-harinath/. Article No. 36.

Al-Shaer:2000:AOO

[1171] Ehab Al-Shaer, Mohamed Fayed, and Hussein Abdel-Wahab. Adaptive object-oriented filtering framework for event management applications. *ACM Computing Surveys*, 32(1es):37:1–37:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p37-al-shaer/. Article No. 37.

Luckas:2000:EFF

[1172] Volker Luckas and Ralf Dörner. Experience form the future — using object-orientation concepts for 3D visualization and validation of industrial scenarios. *ACM Computing Surveys*, 32(1es):38:1–38:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p38-luckas/.

Schmidt:2000:DFH

[1173] Douglas C. Schmidt and James C. Hu. Developing flexible and high-performance Web servers with frameworks and patterns. *ACM Computing Surveys*, 32(1es):39:1–39:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p39-schmidt/. Article No. 39.

Ebner:2000:FMF

[1174] Ezra Ebner, Weiguang Shao, and Wei-Tek Tsai. The five-module framework for Internet application development. *ACM Computing Surveys*, 32(1es):40:1–40:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p40-ebner/. Article No. 40.

Constantinides:2000:DAO

[1175] Constantinos A. Constantinides, Atef Bader, Tzilla H. Elrad, P. Netinant, and Mohamed E. Fayad. Designing an aspect-oriented framework in an object-oriented environment. *ACM Computing Surveys*, 32(1es): 41:1–41:??, March 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/citations/journals/surveys/2000-32-1/p41-constantinides/. Article No. 41.

Coello:2000:USG

[1176] Carlos A. Coello. An updated survey of GA-based multiobjective optimization techniques. *ACM Computing Surveys*, 32(2):109–143, June 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/2000-32-2/p109-coello/p109-coello.pdf; http://www.acm.org/pubs/citations/journals/surveys/2000-32-2/p109-coello/.

Kobayashi:2000:IRW

[1177] Mei Kobayashi and Koichi Takeda. Information retrieval on the Web. *ACM Computing Surveys*, 32(2):144–173, June 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/2000-32-2/p144-kobayashi/p144-kobayashi.pdf; http://www.acm.org/pubs/citations/journals/surveys/2000-32-2/p144-kobayashi/.

Vanderwiel:2000:DPM

[1178] Steven P. Vanderwiel and David J. Lilja. Data prefetch mechanisms. *ACM Computing Surveys*, 32(2):174–199, June 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/2000-32-2/p174-vanderwiel/p174-vanderwiel.pdf; http://www.acm.org/pubs/citations/journals/surveys/2000-32-2/p174-vanderwiel/.

Ashman:2000:EDA

[1179] Helen Ashman. Electronic document addressing: dealing with change. *ACM Computing Surveys*, 32(3):201–212, September 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/2000-32-3/p201-ashman/p201-ashman.pdf; http://www.acm.org/pubs/citations/journals/surveys/2000-32-3/p201-ashman/.

Kazi:2000:TOH

[1180] Iffat H. Kazi, Howard H. Chen, Berdenia Stanley, and David J. Lilja. Techniques for obtaining high performance in Java programs. *ACM Computing Surveys*, 32(3):213–240, September 2000. CODEN CMSVAN.

ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/2000-32-3/p213-kazi/p213-kazi.pdf; http://www.acm.org/pubs/citations/journals/surveys/2000-32-3/p213-kazi/.

Milojicic:2000:PM

[1181] Dejan S. Milojíčić, Fred Douglis, Yves Paindaveine, Richard Wheeler, and Songnian Zhou. Process migration. *ACM Computing Surveys*, 32(3): 241–299, September 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/2000-32-3/p241-miloiic/p241-miloiic.pdf; http://www.acm.org/pubs/citations/journals/surveys/2000-32-3/p241-miloiic/.

Rieffel:2000:IQC

[1182] Eleanor Rieffel and Wolfgang Polak. An introduction to quantum computing for non-physicists. *ACM Computing Surveys*, 32(3):300–335, September 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/2000-32-3/p300-rieffel/p300-rieffel.pdf; http://www.acm.org/pubs/citations/journals/surveys/2000-32-3/p300-rieffel/.

Chesnevar:2000:LMA

[1183] Carlos Iván Chesñevar, Ana Gabriela Maguitman, and Ronald Prescott Loui. Logical models of argument. *ACM Computing Surveys*, 32(4): 337–383, December 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/2000-32-4/p337-chesnevar/p337-chesnevar.pdf; http://www.acm.org/pubs/citations/journals/surveys/2000-32-4/p337-chesnevar/.

Hilbert:2000:EUI

[1184] David M. Hilbert and David F. Redmiles. Extracting usability information from user interface events. *ACM Computing Surveys*, 32(4): 384–421, December 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/2000-32-4/p384-hilbert/p384-hilbert.pdf; http://www.acm.org/pubs/citations/journals/surveys/2000-32-4/p384-hilbert/.

Kossmann:2000:SAD

[1185] Donald Kossmann. The state of the art in distributed query processing. *ACM Computing Surveys*, 32(4):422–469, December 2000. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/2000-32-4/p422-kossmann/p422-kossmann.pdf; http://www.acm.org/pubs/citations/journals/surveys/2000-32-4/p422-kossmann/.

Greiner:2001:ER

[1186] Russell Greiner, Christian Darken, and N. Iwan Santoso. Efficient reasoning. *ACM Computing Surveys*, 33(1):1–30, March 2001. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/2001-33-1/p1-greiner/p1-greiner.pdf; http://www.acm.org/pubs/citations/journals/surveys/2001-33-1/p1-greiner/.

Navarro:2001:GTA

[1187] Gonzalo Navarro. A guided tour to approximate string matching. *ACM Computing Surveys*, 33(1):31–88, March 2001. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/2001-33-1/p31-navarro/p31-navarro.pdf; http://www.acm.org/pubs/citations/journals/surveys/2001-33-1/p31-navarro/.

Weihe:2001:SEP

[1188] Karsten Weihe. A software engineering perspective on algorithmics. *ACM Computing Surveys*, 33(1):89–134, March 2001. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL http://www.acm.org/pubs/articles/journals/surveys/2001-33-1/p89-weihe/p89-weihe.pdf; http://www.acm.org/pubs/citations/journals/surveys/2001-33-1/p89-weihe/.

Degano:2001:EOS

[1189] Pierpaolo Degano and Corrado Priami. Enhanced operational semantics: a tool for describing and analyzing concurrent systems. *ACM Computing Surveys*, 33(2):135–176, June 2001. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Littlewood:2001:MSD

[1190] Bev Littlewood, Peter Popov, and Lorenzo Strigini. Modeling software design diversity: a review. *ACM Computing Surveys*, 33(2):177–208, June 2001. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Vitter:2001:EMA

[1191] Jeffrey Scott Vitter. External memory algorithms and data structures: dealing with **massive data**. *ACM Computing Surveys*, 33(2):209–271, June 2001. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chavez:2001:SMS

[1192] Edgar Chávez, Gonzalo Navarro, Ricardo Baeza-Yates, and José Luis Marroquín. Searching in metric spaces. *ACM Computing Surveys*, 33(3): 273–321, September 2001. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bohm:2001:SHD

[1193] Christian Böhm, Stefan Berchtold, and Daniel A. Keim. Searching in high-dimensional spaces: Index structures for improving the performance of multimedia databases. *ACM Computing Surveys*, 33(3):322–373, September 2001. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Dantsin:2001:CEP

[1194] Evgeny Dantsin, Thomas Eiter, Georg Gottlob, and Andrei Voronkov. Complexity and expressive power of logic programming. *ACM Computing Surveys*, 33(3):374–425, September 2001. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chockler:2001:GCS

[1195] Gregory V. Chockler, Idit Keidar, and Roman Vitenberg. Group communication specifications: a comprehensive study. *ACM Computing Surveys*, 33(4):427–469, December 2001. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ivory:2001:SAA

[1196] Melody Y. Ivory and Marti A. Hearst. The state of the art in automating usability evaluation of user interfaces. *ACM Computing Surveys*, 33(4): 470–516, December 2001. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hartel:2001:FSJ

[1197] Pieter H. Hartel and Luc Moreau. Formalizing the safety of Java, the Java Virtual Machine, and Java card. *ACM Computing Surveys*, 33(4):

517–558, December 2001. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sebastiani:2002:MLA

[1198] Fabrizio Sebastiani. Machine learning in automated text categorization. *ACM Computing Surveys*, 34(1):1–47, March 2002. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Meng:2002:BEE

[1199] Weiyi Meng, Clement Yu, and King-Lup Liu. Building efficient and effective metasearch engines. *ACM Computing Surveys*, 34(1):48–89, March 2002. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

McTear:2002:SDT

[1200] Michael F. McTear. Spoken dialogue technology: enabling the conversational user interface. *ACM Computing Surveys*, 34(1):90–169, March 2002. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Compton:2002:RCS

[1201] Katherine Compton and Scott Hauck. Reconfigurable computing: a survey of systems and software. *ACM Computing Surveys*, 34(2):171–210, June 2002. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Petitjean:2002:SMR

[1202] Sylvain Petitjean. A survey of methods for recovering quadrics in triangle meshes. *ACM Computing Surveys*, 34(2):211–262, June 2002. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Cardellini:2002:SAL

[1203] Valeria Cardellini, Emiliano Casalicchio, Michele Colajanni, and Philip S. Yu. The state of the art in locally distributed Web-server systems. *ACM Computing Surveys*, 34(2):263–311, June 2002. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Diaz:2002:SGL

[1204] Josep Díaz, Jordi Petit, and Maria Serna. A survey of graph layout problems. *ACM Computing Surveys*, 34(3):313–356, September 2002. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Elaarag:2002:ITP

[1205] Hala Elaarag. Improving TCP performance over mobile networks. *ACM Computing Surveys*, 34(3):357–374, September 2002. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Elnozahy:2002:SRR

[1206] E. N. (Mootaz) Elnozahy, Lorenzo Alvisi, Yi-Min Wang, and David B. Johnson. A survey of rollback-recovery protocols in message-passing systems. *ACM Computing Surveys*, 34(3):375–408, September 2002. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Leontiev:2002:TSO

[1207] Yuri Leontiev, M. Tamer Özsu, and Duane Szafron. On type systems for object-oriented database programming languages. *ACM Computing Surveys*, 34(4):409–449, December 2002. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Denys:2002:SCO

[1208] G. Denys, F. Piessens, and F. Matthijs. A survey of customizability in operating systems research. *ACM Computing Surveys*, 34(4):450–468, December 2002. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Dhyani:2002:SWM

[1209] Devanshu Dhyani, Wee Keong Ng, and Sourav S. Bhowmick. A survey of Web metrics. *ACM Computing Surveys*, 34(4):469–503, December 2002. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Rothe:2002:SFC

[1210] Jörg Rothe. Some facets of complexity theory and cryptography: a five-lecture tutorial. *ACM Computing Surveys*, 34(4):504–549, December 2002. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Agarwal:2002:AIM

[1211] Pankaj K. Agarwal, Leonidas J. Guibas, Herbert Edelsbrunner, Jeff Erickson, Michael Isard, Sariel Har-Peled, John Hershberger, Christian Jensen, Lydia Kavraki, Patrice Koehl, Ming Lin, Dinesh Manocha, Dimitris Metaxas, Brian Mirtich, David Mount, S. Muthukrishnan, Dinesh Pai, Elisha Sacks, Jack Snoeyink, Subhash Suri, and Ouri Wolefson. Algorithmic issues in modeling motion. *ACM Computing Surveys*, 34(4):

550–572, December 2002. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Dedrick:2003:ITE

[1212] Jason Dedrick, Vijay Gurbaxani, and Kenneth L. Kraemer. Information technology and economic performance: a critical review of the empirical evidence. *ACM Computing Surveys*, 35(1):1–28, March 2003. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ungerer:2003:SPE

[1213] Theo Ungerer, Borut Robič, and Jurij Šilc. A survey of processors with explicit multithreading. *ACM Computing Surveys*, 35(1):29–63, March 2003. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Scott:2003:VPA

[1214] William R. Scott, Gerhard Roth, and Jean-François Rivest. View planning for automated three-dimensional object reconstruction and inspection. *ACM Computing Surveys*, 35(1):64–96, March 2003. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Aycock:2003:BHJ

[1215] John Aycock. A brief history of just-in-time. *ACM Computing Surveys*, 35(2):97–113, June 2003. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Eugster:2003:MFP

[1216] Patrick Th. Eugster, Pascal A. Felber, Rachid Guerraoui, and Anne-Marie Kermarrec. The many faces of publish/subscribe. *ACM Computing Surveys*, 35(2):114–131, June 2003. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Robinson:2003:RIM

[1217] William N. Robinson, Suzanne D. Pawlowski, and Vecheslav Volkov. Requirements interaction management. *ACM Computing Surveys*, 35(2):132–190, June 2003. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Purao:2003:PMO

[1218] Sandeep Purao and Vijay Vaishnavi. Product metrics for object-oriented systems. *ACM Computing Surveys*, 35(2):191–221, June 2003. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Beszdes:2003:SCS

[1219] Árpád Beszédes, Rudolf Ferenc, Tibor Gyimóthy, André Dolenc, and Konsta Karsisto. Survey of code-size reduction methods. *ACM Computing Surveys*, 35(3):223–267, September 2003. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Blum:2003:MCO

[1220] Christian Blum and Andrea Roli. Metaheuristics in combinatorial optimization: Overview and conceptual comparison. *ACM Computing Surveys*, 35(3):268–308, September 2003. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Rafaeli:2003:SKM

[1221] Sandro Rafaeli and David Hutchison. A survey of key management for secure group communication. *ACM Computing Surveys*, 35(3):309–329, September 2003. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Westermann:2003:AXD

[1222] Utz Westermann and Wolfgang Klas. An analysis of XML database solutions for the management of MPEG-7 media descriptions. *ACM Computing Surveys*, 35(4):331–373, December 2003. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Podlipnig:2003:SWC

[1223] Stefan Podlipnig and Laszlo Böszörmenyi. A survey of Web cache replacement strategies. *ACM Computing Surveys*, 35(4):374–398, December 2003. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhao:2003:FRL

[1224] W. Zhao, R. Chellappa, P. J. Phillips, and A. Rosenfeld. Face recognition: a literature survey. *ACM Computing Surveys*, 35(4):399–458, December 2003. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Johnston:2004:ADP

[1225] Wesley M. Johnston, J. R. Paul Hanna, and Richard J. Millar. Advances in dataflow programming languages. *ACM Computing Surveys*, 36(1):1–34, March 2004. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kherfi:2004:IRW

[1226] M. L. Kherfi, D. Ziou, and A. Bernardi. Image retrieval from the World Wide Web: Issues, techniques, and systems. *ACM Computing Surveys*, 36(1):35–67, March 2004. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Harris:2004:LDL

[1227] Mitchell A. Harris and Edward M. Reingold. Line drawing, leap years, and Euclid. *ACM Computing Surveys*, 36(1):68–80, March 2004. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kirbas:2004:RVE

[1228] Cemil Kirbas and Francis Quek. A review of vessel extraction techniques and algorithms. *ACM Computing Surveys*, 36(2):81–121, June 2004. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Cohen:2004:BIC

[1229] Jacques Cohen. Bioinformatics — an introduction for computer scientists. *ACM Computing Surveys*, 36(2):122–158, June 2004. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Samet:2004:OBI

[1230] Hanan Samet. Object-based and image-based object representations. *ACM Computing Surveys*, 36(2):159–217, June 2004. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Pleisch:2004:AFT

[1231] Stefan Pleisch and André Schiper. Approaches to fault-tolerant and transactional mobile agent execution—an algorithmic view. *ACM Computing Surveys*, 36(3):219–262, September 2004. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Formica:2004:IPC

[1232] Anna Formica and Michele Missikoff. Inheritance processing and conflicts in structural generalization hierarchies. *ACM Computing Surveys*, 36(3): 263–290, September 2004. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sivasubramanian:2004:RWH

[1233] Swaminathan Sivasubramanian, Michal Szymaniak, Guillaume Pierre, and Maarten van Steen. Replication for Web hosting systems. *ACM*

Computing Surveys, 36(3):291–334, September 2004. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Androutsellis-Theotokis:2004:SPP

[1234] Stephanos Androutsellis-Theotokis and Diomidis Spinellis. A survey of peer-to-peer content distribution technologies. *ACM Computing Surveys*, 36(4):335–371, December 2004. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Defago:2004:TOB

[1235] Xavier Défago, André Schiper, and Péter Urbán. Total order broadcast and multicast algorithms: Taxonomy and survey. *ACM Computing Surveys*, 36(4):372–421, December 2004. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bar-Yehuda:2004:LRU

[1236] Reuven Bar-Yehuda, Keren Bendel, Ari Freund, and Dror Rawitz. Local ratio: a unified framework for approximation algorithms. In Memoriam: Shimon Even 1935–2004. *ACM Computing Surveys*, 36(4):422–463, December 2004. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bose:2005:LRS

[1237] Rajendra Bose and James Frew. Lineage retrieval for scientific data processing: a survey. *ACM Computing Surveys*, 37(1):1–28, March 2005. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Tolone:2005:ACC

[1238] William Tolone, Gail-Joon Ahn, Tanusree Pai, and Seng-Phil Hong. Access control in collaborative systems. *ACM Computing Surveys*, 37(1): 29–41, March 2005. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Saito:2005:OR

[1239] Yasushi Saito and Marc Shapiro. Optimistic replication. *ACM Computing Surveys*, 37(1):42–81, March 2005. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kelleher:2005:LBP

[1240] Caitlin Kelleher and Randy Pausch. Lowering the barriers to programming: a taxonomy of programming environments and languages for novice programmers. *ACM Computing Surveys*, 37(2):83–137, June 2005. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gal:2005:ADS

[1241] Eran Gal and Sivan Toledo. Algorithms and data structures for flash memories. *ACM Computing Surveys*, 37(2):138–163, June 2005. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Santi:2005:TCW

[1242] Paolo Santi. Topology control in wireless ad hoc and sensor networks. *ACM Computing Surveys*, 37(2):164–194, June 2005. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Venkatachalam:2005:PRT

[1243] Vasanth Venkatachalam and Michael Franz. Power reduction techniques for microprocessor systems. *ACM Computing Surveys*, 37(3):195–237, September 2005. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Taylor:2005:STP

[1244] David E. Taylor. Survey and taxonomy of packet classification techniques. *ACM Computing Surveys*, 37(3):238–275, September 2005. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Eichelberg:2005:SAE

[1245] Marco Eichelberg, Thomas Aden, Jörg Riesmeier, Asuman Dogac, and Gokce B. Laleci. A survey and analysis of Electronic Healthcare Record standards. *ACM Computing Surveys*, 37(4):277–315, December 2005. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mernik:2005:WHD

[1246] Marjan Mernik, Jan Heering, and Anthony M. Sloane. When and how to develop domain-specific languages. *ACM Computing Surveys*, 37(4): 316–344, December 2005. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bustos:2005:FBS

[1247] Benjamin Bustos, Daniel A. Keim, Dietmar Saupe, Tobias Schreck, and Dejan V. Vranić. Feature-based similarity search in 3D object databases. *ACM Computing Surveys*, 37(4):345–387, December 2005. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bjerregaard:2006:SRP

[1248] Tobias Bjerregaard and Shankar Mahadevan. A survey of research and practices of Network-on-Chip. *ACM Computing Surveys*, 38(1):1:1–1:51, March 2006. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chakrabarti:2006:GML

[1249] Deepayan Chakrabarti and Christos Faloutsos. Graph mining: Laws, generators, and algorithms. *ACM Computing Surveys*, 38(1):2:1–2:69, March 2006. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Venugopal:2006:TDG

[1250] Srikumar Venugopal, Rajkumar Buyya, and Kotagiri Ramamohanarao. A taxonomy of Data Grids for distributed data sharing, management, and processing. *ACM Computing Surveys*, 38(1):3:1–3:53, March 2006. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Turmo:2006:AIE

[1251] Jordi Turmo, Alicia Ageno, and Neus Català. Adaptive information extraction. *ACM Computing Surveys*, 38(2):4:1–4:47, March 2006. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ceglar:2006:AM

[1252] Aaron Ceglar and John F. Roddick. Association mining. *ACM Computing Surveys*, 38(2):5:1–5:42, March 2006. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zobel:2006:IFT

[1253] Justin Zobel and Alistair Moffat. Inverted files for text search engines. *ACM Computing Surveys*, 38(2):6:1–6:56, March 2006. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ma:2006:HSR

[1254] Jing Ma and Jeffrey V. Nickerson. Hands-on, simulated, and remote laboratories: a comparative literature review. *ACM Computing Surveys*, 38(3):7:1–7:24, September 2006. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Miller:2006:STL

[1255] Alice Miller, Alastair Donaldson, and Muffy Calder. Symmetry in temporal logic model checking. *ACM Computing Surveys*, 38(3):8:1–8:36, September 2006. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Geng:2006:IMD

[1256] Liqiang Geng and Howard J. Hamilton. Interestingness measures for data mining: a survey. *ACM Computing Surveys*, 38(3):9:1–9:32, September 2006. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Graefe:2006:ISD

[1257] Goetz Graefe. Implementing sorting in database systems. *ACM Computing Surveys*, 38(3):10:1–10:37, September 2006. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Frost:2006:RNL

[1258] Richard A. Frost. Realization of natural language interfaces using lazy functional programming. *ACM Computing Surveys*, 38(4):11:1–11:54, December 2006. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bordeaux:2006:PSC

[1259] Lucas Bordeaux, Youssef Hamadi, and Lintao Zhang. Propositional satisfiability and constraint programming: a comparative survey. *ACM Computing Surveys*, 38(4):12:1–12:54, December 2006. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Yilmaz:2006:OTS

[1260] Alper Yilmaz, Omar Javed, and Mubarak Shah. Object tracking: a survey. *ACM Computing Surveys*, 38(4):13:1–13:45, December 2006. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

VanDerMerwe:2007:SPP

[1261] Johann Van Der Merwe, Dawoud Dawoud, and Stephen McDonald. A survey on peer-to-peer key management for mobile ad hoc networks. *ACM Computing Surveys*, 39(1):1:1–1:45, April 2007. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Navarro:2007:CFT

[1262] Gonzalo Navarro and Veli Mäkinen. Compressed full-text indexes. *ACM Computing Surveys*, 39(1):2:1–2:61, April 2007. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Peng:2007:SNB

[1263] Tao Peng, Christopher Leckie, and Kotagiri Ramamohanarao. Survey of network-based defense mechanisms countering the DoS and DDoS problems. *ACM Computing Surveys*, 39(1):3:1–3:42, April 2007. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Puglisi:2007:TSA

[1264] Simon J. Puglisi, W. F. Smyth, and Andrew H. Turpin. A taxonomy of suffix array construction algorithms. *ACM Computing Surveys*, 39 (2):4:1–4:31, July 2007. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zheng:2007:SRI

[1265] Dong Zheng, Yan Liu, Jiying Zhao, and Abdulmotaleb El Saddik. A survey of RST invariant image watermarking algorithms. *ACM Computing Surveys*, 39(2):5:1–5:91, July 2007. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bruss:2007:QCS

[1266] Dagmar Bruss, Gábor Erdélyi, Tim Meyer, Tobias Riege, and Jörg Rothe. Quantum cryptography: a survey. *ACM Computing Surveys*, 39(2):6:1–6:27, July 2007. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Uludag:2007:ATA

[1267] Suleyman Uludag, King-Shan Lui, Klara Nahrstedt, and Gregory Brewster. Analysis of Topology Aggregation techniques for QoS routing. *ACM Computing Surveys*, 39(3):7:1–7:31, September 2007. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Truran:2007:AAT

[1268] Mark Truran, James Goulding, and Helen Ashman. Autonomous authoring tools for hypertext. *ACM Computing Surveys*, 39(3):8:1–8:30, September 2007. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Nakamura:2007:IFW

[1269] Eduardo F. Nakamura, Antonio A. F. Loureiro, and Alejandro C. Frery. Information fusion for wireless sensor networks: Methods, models, and classifications. *ACM Computing Surveys*, 39(3):9:1–9:55, September 2007. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Katifori:2007:OVM

[1270] Akrivi Katifori, Constantin Halatsis, George Lepouras, Costas Vassilakis, and Eugenia Giannopoulou. Ontology visualization methods — a survey.

ACM Computing Surveys, 39(4):10:1–10:43, November 2007. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Thomas:2007:GRN

[1271] David B. Thomas, Wayne Luk, Philip H. W. Leong, and John D. Villasenor. Gaussian random number generators. *ACM Computing Surveys*, 39(4):11:1–11:38, November 2007. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Morfonios:2007:RID

[1272] Konstantinos Morfonios, Stratis Konakas, Yannis Ioannidis, and Nikolaos Kotsis. ROLAP implementations of the data cube. *ACM Computing Surveys*, 39(4):12:1–12:53, November 2007. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Angles:2008:SGD

[1273] Renzo Angles and Claudio Gutierrez. Survey of graph database models. *ACM Computing Surveys*, 40(1):1:1–1:39, February 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Fabbri:2008:EDT

[1274] Ricardo Fabbri, Luciano Da F. Costa, Julio C. Torelli, and Odemir M. Bruno. 2D Euclidean distance transform algorithms: a comparative survey. *ACM Computing Surveys*, 40(1):2:1–2:44, February 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ramsin:2008:PCR

[1275] Raman Ramsin and Richard F. Paige. Process-centered review of object oriented software development methodologies. *ACM Computing Surveys*, 40(1):3:1–3:89, February 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Vosloo:2008:SCW

[1276] Iwan Vosloo and Derrick G. Kourie. Server-centric Web frameworks: an overview. *ACM Computing Surveys*, 40(2):4:1–4:33, April 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Datta:2008:IRI

[1277] Ritendra Datta, Dhiraj Joshi, Jia Li, and James Z. Wang. Image retrieval: Ideas, influences, and trends of the new age. *ACM Computing Surveys*, 40(2):5:1–5:60, April 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

DeFlorio:2008:SLS

[1278] Vincenzo De Florio and Chris Blondia. A survey of linguistic structures for application-level fault tolerance. *ACM Computing Surveys*, 40(2):6:1–6:37, April 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Huebscher:2008:SAC

[1279] Markus C. Huebscher and Julie A. McCann. A survey of autonomic computing — degrees, models, and applications. *ACM Computing Surveys*, 40(3):7:1–7:28, August 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Lopez:2008:SMT

[1280] Adam Lopez. Statistical machine translation. *ACM Computing Surveys*, 40(3):8:1–8:49, August 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chapin:2008:ATM

[1281] Peter C. Chapin, Christian Skalka, and X. Sean Wang. Authorization in trust management: Features and foundations. *ACM Computing Surveys*, 40(3):9:1–9:48, August 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Miltchev:2008:DAC

[1282] Stefan Miltchev, Jonathan M. Smith, Vassilis Prevelakis, Angelos Keromytis, and Sotiris Ioannidis. Decentralized access control in distributed file systems. *ACM Computing Surveys*, 40(3):10:1–10:30, August 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ilyas:2008:STQ

[1283] Ihab F. Ilyas, George Beskales, and Mohamed A. Soliman. A survey of top-k query processing techniques in relational database systems. *ACM Computing Surveys*, 40(4):11:1–11:58, October 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Biasotti:2008:DSG

[1284] S. Biasotti, L. De Floriani, B. Falcidieno, P. Frosini, D. Giorgi, C. Landi, L. Papaleo, and M. Spagnuolo. Describing shapes by geometrical-topological properties of real functions. *ACM Computing Surveys*, 40(4):12:1–12:87, October 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bleiholder:2008:DF

[1285] Jens Bleiholder and Felix Naumann. Data fusion. *ACM Computing Surveys*, 41(1):1:1–1:41, December 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Cockburn:2008:ROZ

[1286] Andy Cockburn, Amy Karlson, and Benjamin B. Bederson. A review of overview+detail, zooming, and focus+context interfaces. *ACM Computing Surveys*, 41(1):2:1–2:31, December 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Benedikt:2008:XL

[1287] Michael Benedikt and Christoph Koch. XPath leashed. *ACM Computing Surveys*, 41(1):3:1–3:54, December 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Borie:2008:SPR

[1288] Richard B. Borie, R. Gary Parker, and Craig A. Tovey. Solving problems on recursively constructed graphs. *ACM Computing Surveys*, 41(1):4:1–4:51, December 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Onieva:2008:MNS

[1289] Jose A. Onieva, Jianying Zhou, and Javier Lopez. Multiparty nonrepudiation: a survey. *ACM Computing Surveys*, 41(1):5:1–5:43, December 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Smith-Miles:2008:CDP

[1290] Kate A. Smith-Miles. Cross-disciplinary perspectives on meta-learning for algorithm selection. *ACM Computing Surveys*, 41(1):6:1–6:25, December 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Abidi:2008:SAM

[1291] Besma R. Abidi, Nash R. Aragam, Yi Yao, and Mongi A. Abidi. Survey and analysis of multimodal sensor planning and integration for wide area surveillance. *ACM Computing Surveys*, 41(1):7:1–7:36, December 2008. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Brown:2009:CIC

[1292] Nathan Brown. Chemoinformatics — an introduction for computer scientists. *ACM Computing Surveys*, 41(2):8:1–8:38, February 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hierons:2009:UFS

[1293] Robert M. Hierons, Kirill Bogdanov, Jonathan P. Bowen, Rance Cleaveland, John Derrick, Jeremy Dick, Marian Gheorghe, Mark Harman, Kalpesh Kapoor, Paul Krause, Gerald Lüttgen, Anthony J. H. Simons, Sergiy Vilkomir, Martin R. Woodward, and Hussein Zedan. Using formal specifications to support testing. *ACM Computing Surveys*, 41(2): 9:1–9:76, February 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Navigli:2009:WSD

[1294] Roberto Navigli. Word sense disambiguation: a survey. *ACM Computing Surveys*, 41(2):10:1–10:69, February 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Iriberri:2009:LCP

[1295] Alicia Iriberri and Gondy Leroy. A life-cycle perspective on online community success. *ACM Computing Surveys*, 41(2):11:1–11:29, February 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Qi:2009:WPC

[1296] Xiaoguang Qi and Brian D. Davison. Web page classification: Features and algorithms. *ACM Computing Surveys*, 41(2):12:1–12:31, February 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Furia:2009:CTL

[1297] Carlo A. Furia, Matteo Pradella, and Matteo Rossi. Comments on temporal logics for real-time system specification. *ACM Computing Surveys*, 41(2):13:1–13:5, February 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sockut:2009:ORD

[1298] Gary H. Sockut and Balakrishna R. Iyer. Online reorganization of databases. *ACM Computing Surveys*, 41(3):14:1–14:136, July 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chandola:2009:ADS

[1299] Varun Chandola, Arindam Banerjee, and Vipin Kumar. Anomaly detection: a survey. *ACM Computing Surveys*, 41(3):15:1–15:58, July 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Batini:2009:MDQ

[1300] Carlo Batini, Cinzia Cappiello, Chiara Francalanci, and Andrea Maurino. Methodologies for data quality assessment and improvement. *ACM Computing Surveys*, 41(3):16:1–16:52, July 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Carpineto:2009:SWC

[1301] Claudio Carpineto, Stanislaw Osiński, Giovanni Romano, and Dawid Weiss. A survey of Web clustering engines. *ACM Computing Surveys*, 41 (3):17:1–17:38, July 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hoare:2009:PSI

[1302] C. A. R. Hoare and Jayadev Misra. Preface to special issue on software verification. *ACM Computing Surveys*, 41(4):18:1–18:3, October 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Woodcock:2009:FMP

[1303] Jim Woodcock, Peter Gorm Larsen, Juan Bicarregui, and John Fitzgerald. Formal methods: Practice and experience. *ACM Computing Surveys*, 41(4):19:1–19:36, October 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shankar:2009:ADV

[1304] Natarajan Shankar. Automated deduction for verification. *ACM Computing Surveys*, 41(4):20:1–20:56, October 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Jhala:2009:SMC

[1305] Ranjit Jhala and Rupak Majumdar. Software model checking. *ACM Computing Surveys*, 41(4):21:1–21:54, October 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hoare:2009:VSI

[1306] C. A. R. Hoare, Jayadev Misra, Gary T. Leavens, and Natarajan Shankar. The verified software initiative: a manifesto. *ACM Comput-*

ing Surveys, 41(4):22:1–22:8, October 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hoffman:2009:SAD

[1307] Kevin Hoffman, David Zage, and Cristina Nita-Rotaru. A survey of attack and defense techniques for reputation systems. *ACM Computing Surveys*, 42(1):1:1–1:31, December 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chen:2009:RLC

[1308] Hubie Chen. A rendezvous of logic, complexity, and algebra. *ACM Computing Surveys*, 42(1):2:1–2:32, December 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kirke:2009:SCS

[1309] Alexis Kirke and Eduardo Reck Miranda. A survey of computer systems for expressive music performance. *ACM Computing Surveys*, 42(1):3:1–3:41, December 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Muir:2009:IGE

[1310] James A. Muir and Paul C. Van Oorschot. Internet geolocation: Evasion and counterevasion. *ACM Computing Surveys*, 42(1):4:1–4:23, December 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Edman:2009:AES

[1311] Matthew Edman and Bülent Yener. On anonymity in an electronic society: a survey of anonymous communication systems. *ACM Computing Surveys*, 42(1):5:1–5:35, December 2009. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Furia:2010:MTC

[1312] Carlo A. Furia, Dino Mandrioli, Angelo Morzenti, and Matteo Rossi. Modeling time in computing: a taxonomy and a comparative survey. *ACM Computing Surveys*, 42(2):6:1–6:59, February 2010. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Haslhofer:2010:STA

[1313] Bernhard Haslhofer and Wolfgang Klas. A survey of techniques for achieving metadata interoperability. *ACM Computing Surveys*, 42(2): 7:1–7:37, February 2010. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Yu:2010:SMS

[1314] Zhiwen Yu and Yuichi Nakamura. Smart meeting systems: a survey of state-of-the-art and open issues. *ACM Computing Surveys*, 42(2): 8:1–8:20, February 2010. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Abella:2010:EM

[1315] Jaume Abella and Xavier Vera. Electromigration for microarchitects. *ACM Computing Surveys*, 42(2):9:1–9:18, February 2010. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Salfner:2010:SOF

[1316] Felix Salfner, Maren Lenk, and Miroslaw Malek. A survey of online failure prediction methods. *ACM Computing Surveys*, 42(3):10:1–10:42, March 2010. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kabak:2010:SAE

[1317] Yildiray Kabak and Asuman Dogac. A survey and analysis of electronic business document standards. *ACM Computing Surveys*, 42(3): 11:1–11:31, March 2010. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ilarri:2010:LDQ

[1318] Sergio Ilarri, Eduardo Mena, and Arantza Illarramendi. Location-dependent query processing: Where we are and where we are heading. *ACM Computing Surveys*, 42(3):12:1–12:73, March 2010. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Cardoso:2010:CRC

[1319] João M. P. Cardoso, Pedro C. Diniz, and Markus Weinhardt. Compiling for reconfigurable computing: a survey. *ACM Computing Surveys*, 42 (4):13:1–13:65, June 2010. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Fung:2010:PPD

[1320] Benjamin C. M. Fung, Ke Wang, Rui Chen, and Philip S. Yu. Privacy-preserving data publishing: a survey of recent developments. *ACM Computing Surveys*, 42(4):14:1–14:53, June 2010. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gao:2010:VSV

[1321] Wen Gao, Yonghong Tian, Tiejun Huang, and Qiang Yang. Vlogging: a survey of videoblogging technology on the Web. *ACM Computing Surveys*, 42(4):15:1–15:57, June 2010. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Cannataro:2010:PPI

[1322] Mario Cannataro, Pietro H. Guzzi, and Pierangelo Veltri. Protein-to-protein interactions: Technologies, databases, and algorithms. *ACM Computing Surveys*, 43(1):1:1–1:36, November 2010. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Diesburg:2010:SCD

[1323] Sarah M. Diesburg and An-I Andy Wang. A survey of confidential data storage and deletion methods. *ACM Computing Surveys*, 43(1):2:1–2:37, November 2010. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mabroukeh:2010:TSP

[1324] Nizar R. Mabroukeh and C. I. Ezeife. A taxonomy of sequential pattern mining algorithms. *ACM Computing Surveys*, 43(1):3:1–3:41, November 2010. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mili:2010:BPM

[1325] Hafedh Mili, Guy Tremblay, Guitta Bou Jaoude, Éric Lefebvre, Lamia Elabed, and Ghizlane El Boussaidi. Business process modeling languages: Sorting through the alphabet soup. *ACM Computing Surveys*, 43(1): 4:1–4:56, November 2010. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kurian:2010:SDA

[1326] Jinu Kurian and Kamil Sarac. A survey on the design, applications, and enhancements of application-layer overlay networks. *ACM Computing Surveys*, 43(1):5:1–5:34, November 2010. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chaovalit:2011:DWT

[1327] Pimwadee Chaovalit, Aryya Gangopadhyay, George Karabatis, and Zhiyuan Chen. Discrete wavelet transform-based time series analysis and mining. *ACM Computing Surveys*, 43(2):6:1–6:37, January 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Viana:2011:OSF

[1328] Aline Carneiro Viana, Stephane Maag, and Fatiha Zaidi. One step forward: Linking wireless self-organizing network validation techniques with formal testing approaches. *ACM Computing Surveys*, 43(2):7:1–7:36, January 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Urdaneta:2011:SDS

[1329] Guido Urdaneta, Guillaume Pierre, and Maarten Van Steen. A survey of DHT security techniques. *ACM Computing Surveys*, 43(2):8:1–8:49, January 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Freiling:2011:FDA

[1330] Felix C. Freiling, Rachid Guerraoui, and Petr Kuznetsov. The failure detector abstraction. *ACM Computing Surveys*, 43(2):9:1–9:40, January 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Parsons:2011:ABG

[1331] Simon Parsons, Juan A. Rodriguez-Aguilar, and Mark Klein. Auctions and bidding: a guide for computer scientists. *ACM Computing Surveys*, 43(2):10:1–10:59, January 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Nie:2011:SCT

[1332] Changhai Nie and Hareton Leung. A survey of combinatorial testing. *ACM Computing Surveys*, 43(2):11:1–11:29, January 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Jie:2011:RGA

[1333] Wei Jie, Junaid Arshad, Richard Sinnott, Paul Townend, and Zhou Lei. A review of grid authentication and authorization technologies and support for federated access control. *ACM Computing Surveys*, 43(2):12:1–12:26, January 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Magnien:2011:IRF

[1334] Clémence Magnien, Matthieu Latapy, and Jean-Loup Guillaume. Impact of random failures and attacks on Poisson and power-law random networks. *ACM Computing Surveys*, 43(3):13:1–13:31, April 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Beatty:2011:CTC

[1335] Patricia Beatty, Ian Reay, Scott Dick, and James Miller. Consumer trust in e-commerce Web sites: a meta-study. *ACM Computing Surveys*, 43 (3):14:1–14:46, April 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mcgill:2011:RAL

[1336] Kathleen Mcgill and Stephen Taylor. Robot algorithms for localization of multiple emission sources. *ACM Computing Surveys*, 43(3):15:1–15:25, April 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Aggarwal:2011:HAA

[1337] J. K. Aggarwal and M. S. Ryoo. Human activity analysis: a review. *ACM Computing Surveys*, 43(3):16:1–16:43, April 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Karimi:2011:MTS

[1338] Sarvnaz Karimi, Falk Scholer, and Andrew Turpin. Machine transliteration survey. *ACM Computing Surveys*, 43(3):17:1–17:46, April 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ducournau:2011:IST

[1339] Roland Ducournau. Implementing statically typed object-oriented programming languages. *ACM Computing Surveys*, 43(3):18:1–18:48, April 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mottola:2011:PWS

[1340] Luca Mottola and Gian Pietro Picco. Programming wireless sensor networks: Fundamental concepts and state of the art. *ACM Computing Surveys*, 43(3):19:1–19:51, April 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

VanBakel:2011:SIT

[1341] Steffen Van Bakel. Strict intersection types for the Lambda Calculus. *ACM Computing Surveys*, 43(3):20:1–20:49, April 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ko:2011:SAE

[1342] Andrew J. Ko, Robin Abraham, Laura Beckwith, Alan Blackwell, Margaret Burnett, Martin Erwig, Chris Scaffidi, Joseph Lawrance, Henry

Lieberman, Brad Myers, Mary Beth Rosson, Gregg Rothermel, Mary Shaw, and Susan Wiedenbeck. The state of the art in end-user software engineering. *ACM Computing Surveys*, 43(3):21:1–21:44, April 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Duarte:2011:SCB

[1343] Elias P. Duarte, Jr., Roverli P. Ziwich, and Luiz C. P. Albini. A survey of comparison-based system-level diagnosis. *ACM Computing Surveys*, 43 (3):22:1–22:56, April 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Deng:2011:WFD

[1344] Yuhui Deng. What is the future of disk drives, death or rebirth? *ACM Computing Surveys*, 43(3):23:1–23:27, April 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

McLeod:2011:FAS

[1345] Laurie McLeod and Stephen G. MacDonell. Factors that affect software systems development project outcomes: a survey of research. *ACM Computing Surveys*, 43(4):24:1–24:56, October 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Algergawy:2011:XDC

[1346] Alsayed Algergawy, Marco Mesiti, Richi Nayak, and Gunter Saake. XML data clustering: an overview. *ACM Computing Surveys*, 43(4):25:1–25:41, October 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Rocha:2011:VUC

[1347] Anderson Rocha, Walter Scheirer, Terrance Boult, and Siome Goldenstein. Vision of the unseen: Current trends and challenges in digital image and video forensics. *ACM Computing Surveys*, 43(4):26:1–26:42, October 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Damas:2011:FIC

[1348] Sergio Damas, Oscar Cordón, Oscar Ibáñez, Jose Santamaría, Inmaculada Alemán, Miguel Botella, and Fernando Navarro. Forensic identification by computer-aided craniofacial superimposition: a survey. *ACM Computing Surveys*, 43(4):27:1–27:27, October 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wimmer:2011:SUB

[1349] Manuel Wimmer, Andrea Schauerhuber, Gerti Kappel, Werner Retschitzegger, Wieland Schwinger, and Elizabeth Kapsammer. A survey on UML-based aspect-oriented design modeling. *ACM Computing Surveys*, 43(4):28:1–28:33, October 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sohel:2011:GDM

[1350] Ferdous A. Sohel, Gour C. Karmakar, Laurence S. Dooley, and Mohammed Bennamoun. Geometric distortion measurement for shape coding: a contemporary review. *ACM Computing Surveys*, 43(4):29:1–29:22, October 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Anders:2011:CPS

[1351] Torsten Anders and Eduardo R. Miranda. Constraint programming systems for modeling music theories and composition. *ACM Computing Surveys*, 43(4):30:1–30:38, October 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Parris:2011:PAF

[1352] Matthew G. Parris, Carthik A. Sharma, and Ronald F. Demara. Progress in autonomous fault recovery of field programmable gate arrays. *ACM Computing Surveys*, 43(4):31:1–31:30, October 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wang:2011:CPS

[1353] Bang Wang. Coverage problems in sensor networks: a survey. *ACM Computing Surveys*, 43(4):32:1–32:53, October 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Falessi:2011:DMT

[1354] Davide Falessi, Giovanni Cantone, Rick Kazman, and Philippe Kruchten. Decision-making techniques for software architecture design: a comparative survey. *ACM Computing Surveys*, 43(4):33:1–33:28, October 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Skopal:2011:NSS

[1355] Tomáš Skopal and Benjamin Bustos. On nonmetric similarity search problems in complex domains. *ACM Computing Surveys*, 43(4):34:1–34:50, October 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Davis:2011:SHR

[1356] Robert I. Davis and Alan Burns. A survey of hard real-time scheduling for multiprocessor systems. *ACM Computing Surveys*, 43(4):35:1–35:44, October 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sadri:2011:AIS

[1357] Fariba Sadri. Ambient intelligence: a survey. *ACM Computing Surveys*, 43(4):36:1–36:66, October 2011. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Carpineto:2012:SAQ

[1358] Claudio Carpineto and Giovanni Romano. A survey of automatic query expansion in information retrieval. *ACM Computing Surveys*, 44(1):1:1–1:50, January 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhang:2012:CSP

[1359] David Zhang, Wangmeng Zuo, and Feng Yue. A comparative study of palmprint recognition algorithms. *ACM Computing Surveys*, 44(1):2:1–2:37, January 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Nielson:2012:FLP

[1360] Hanne Riis Nielson, Flemming Nielson, and Henrik Pilegaard. Flow Logic for process calculi. *ACM Computing Surveys*, 44(1):3:1–3:39, January 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Song:2012:SPT

[1361] Songbo Song, Hassnaa Moustafa, and Hossam Afifi. A survey on personalized TV and NGN services through context-awareness. *ACM Computing Surveys*, 44(1):4:1–4:18, January 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wojcik:2012:FOA

[1362] Robert Wójcik and Andrzej Jajszczyk. Flow oriented approaches to QoS assurance. *ACM Computing Surveys*, 44(1):5:1–5:37, January 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Egele:2012:SAD

[1363] Manuel Egele, Theodoor Scholte, Engin Kirda, and Christopher Kruegel. A survey on automated dynamic malware-analysis techniques and tools. *ACM Computing Surveys*, 44(2):6:1–6:42, February 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Crowston:2012:FLO

[1364] Kevin Crowston, Kangning Wei, James Howison, and Andrea Wiggins. Free/ libre open-source software development: What we know and what we do not know. *ACM Computing Surveys*, 44(2):7:1–7:35, February 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Antunes:2012:SDC

[1365] Pedro Antunes, Valeria Herskovic, Sergio F. Ochoa, and Jose A. Pino. Structuring dimensions for collaborative systems evaluation. *ACM Computing Surveys*, 44(2):8:1–8:28, February 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Caruana:2012:SEA

[1366] Godwin Caruana and Maozhen Li. A survey of emerging approaches to spam filtering. *ACM Computing Surveys*, 44(2):9:1–9:27, February 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Midtgaard:2012:CFA

[1367] Jan Midtgaard. Control-flow analysis of functional programs. *ACM Computing Surveys*, 44(3):10:1–10:33, June 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shahriar:2012:MPS

[1368] Hossain Shahriar and Mohammad Zulkernine. Mitigating program security vulnerabilities: Approaches and challenges. *ACM Computing Surveys*, 44(3):11:1–11:46, June 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Silva:2012:VPS

[1369] Josep Silva. A vocabulary of program slicing-based techniques. *ACM Computing Surveys*, 44(3):12:1–12:41, June 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kong:2012:RTM

[1370] Joonho Kong, Sung Woo Chung, and Kevin Skadron. Recent thermal management techniques for microprocessors. *ACM Computing Surveys*, 44(3):13:1–13:42, June 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Islam:2012:RRA

[1371] Syed M. S. Islam, Mohammed Bennamoun, Robyn A. Owens, and Rowan Davies. A review of recent advances in 3D ear- and expression-invariant face biometrics. *ACM Computing Surveys*, 44(3):14:1–14:34, June 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Cugola:2012:PFI

[1372] Gianpaolo Cugola and Alessandro Margara. Processing flows of information: From data stream to complex event processing. *ACM Computing Surveys*, 44(3):15:1–15:62, June 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hatcliff:2012:BIS

[1373] John Hatcliff, Gary T. Leavens, K. Rustan M. Leino, Peter Müller, and Matthew Parkinson. Behavioral interface specification languages. *ACM Computing Surveys*, 44(3):16:1–16:58, June 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Younan:2012:RCC

[1374] Yves Younan, Wouter Joosen, and Frank Piessens. Runtime countermeasures for code injection attacks against C and C++ programs. *ACM Computing Surveys*, 44(3):17:1–17:28, June 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Budzisz:2012:TSS

[1375] Lukasz Budzisz, Johan Garcia, Anna Brunstrom, and Ramon Ferrús. A taxonomy and survey of SCTP research. *ACM Computing Surveys*, 44(4):18:1–18:36, August 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Biddle:2012:GPL

[1376] Robert Biddle, Sonia Chiasson, and P. C. Van Oorschot. Graphical passwords: Learning from the first twelve years. *ACM Computing Surveys*, 44(4):19:1–19:41, August 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wong:2012:OLT

[1377] Wilson Wong, Wei Liu, and Mohammed Bennamoun. Ontology learning from text: a look back and into the future. *ACM Computing Surveys*, 44(4):20:1–20:36, August 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Liu:2012:SSM

[1378] Huaiyu Liu, Mic Bowman, and Francis Chang. Survey of state melding in virtual worlds. *ACM Computing Surveys*, 44(4):21:1–21:25, August 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gonnet:2012:REE

[1379] Pedro Gonnet. A review of error estimation in adaptive quadrature. *ACM Computing Surveys*, 44(4):22:1–22:36, August 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sengul:2012:SAS

[1380] Cigdem Sengul, Aline Carneiro Viana, and Artur Ziviani. A survey of adaptive services to cope with dynamics in wireless self-organizing networks. *ACM Computing Surveys*, 44(4):23:1–23:35, August 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bellavista:2012:SCD

[1381] Paolo Bellavista, Antonio Corradi, Mario Fanelli, and Luca Foschini. A survey of context data distribution for mobile ubiquitous systems. *ACM Computing Surveys*, 44(4):24:1–24:45, August 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wang:2012:ATS

[1382] Meng Wang, Bingbing Ni, Xian-Sheng Hua, and Tat-Seng Chua. Assistive tagging: a survey of multimedia tagging with human-computer joint exploration. *ACM Computing Surveys*, 44(4):25:1–25:24, August 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Cittadini:2012:SIR

[1383] Luca Cittadini, Giuseppe Di Battista, and Massimo Rimondini. On the stability of interdomain routing. *ACM Computing Surveys*, 44(4):26:1–26:40, August 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhou:2012:TTC

[1384] Dong Zhou, Mark Truran, Tim Brailsford, Vincent Wade, and Helen Ashman. Translation techniques in cross-language information retrieval. *ACM Computing Surveys*, 45(1):1:1–1:44, November 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bernardi:2012:DMA

[1385] Simona Bernardi, José Merseguer, and Dorina C. Petriu. Dependability modeling and analysis of software systems specified with UML. *ACM Computing Surveys*, 45(1):2:1–2:48, November 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Avancha:2012:PMT

[1386] Sasikanth Avancha, Amit Baxi, and David Kotz. Privacy in mobile technology for personal healthcare. *ACM Computing Surveys*, 45(1):3:1–3:54, November 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhuravlev:2012:SST

[1387] Sergey Zhuravlev, Juan Carlos Saez, Sergey Blagodurov, Alexandra Fedorova, and Manuel Prieto. Survey of scheduling techniques for addressing shared resources in multicore processors. *ACM Computing Surveys*, 45(1):4:1–4:28, November 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Al-Hafeedh:2012:CIB

[1388] Anisa Al-Hafeedh, Maxime Crochemore, Lucian Ilie, Evguenia Kopylova, W. F. Smyth, German Tischler, and Munina Yusufu. A comparison of index-based Lempel–Ziv LZ77 factorization algorithms. *ACM Computing Surveys*, 45(1):5:1–5:17, November 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Danev:2012:PLI

[1389] Boris Danev, Davide Zanetti, and Srdjan Capkun. On physical-layer identification of wireless devices. *ACM Computing Surveys*, 45(1):6:1–6:29, November 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhao:2012:SPM

[1390] Yi Zhi Zhao, Chunyan Miao, Maode Ma, Jing Bing Zhang, and Cyril Leung. A survey and projection on medium access control protocols for wireless sensor networks. *ACM Computing Surveys*, 45(1):7:1–7:37, November 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hawe:2012:ABS

[1391] Glenn I. Hawe, Graham Coates, Duncan T. Wilson, and Roger S. Crouch. Agent-based simulation for large-scale emergency response: a survey of usage and implementation. *ACM Computing Surveys*, 45(1):8:1–8:51, November 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Uthra:2012:QRW

[1392] R. Annie Uthra and S. V. Kasmir Raja. QoS routing in wireless sensor networks — a survey. *ACM Computing Surveys*, 45(1):9:1–9:12, November 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mendes-Moreira:2012:EAR

[1393] João Mendes-Moreira, Carlos Soares, Alípio Mário Jorge, and Jorge Freire De Sousa. Ensemble approaches for regression: a survey. *ACM Computing Surveys*, 45(1):10:1–10:40, November 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Harman:2012:SBS

[1394] Mark Harman, S. Afshin Mansouri, and Yuanyuan Zhang. Search-based software engineering: Trends, techniques and applications. *ACM Computing Surveys*, 45(1):11:1–11:61, November 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Esling:2012:TSD

[1395] Philippe Esling and Carlos Agon. Time-series data mining. *ACM Computing Surveys*, 45(1):12:1–12:34, November 2012. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Faro:2013:EOS

[1396] Simone Faro and Thierry Lecroq. The exact online string matching problem: a review of the most recent results. *ACM Computing Surveys*, 45(2):13:1–13:42, February 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kritikakou:2013:SAC

[1397] Angeliki Kritikakou, Francky Catthoor, Vasilios Kelefouras, and Costas Goutis. A systematic approach to classify design-time global scheduling techniques. *ACM Computing Surveys*, 45(2):14:1–14:30, February 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Attene:2013:PMR

[1398] Marco Attene, Marcel Campen, and Leif Kobbelt. Polygon mesh repairing: an application perspective. *ACM Computing Surveys*, 45(2): 15:1–15:33, February 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Lomax:2013:SCS

[1399] Susan Lomax and Sunil Vadera. A survey of cost-sensitive decision tree induction algorithms. *ACM Computing Surveys*, 45(2):16:1–16:35, February 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Pearce:2013:VIS

[1400] Michael Pearce, Sherali Zeadally, and Ray Hunt. Virtualization: Issues, security threats, and solutions. *ACM Computing Surveys*, 45(2):17:1–17:39, February 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Acevedo-Mosqueda:2013:BAM

[1401] Maria Elena Acevedo-Mosqueda, Cornelio Yáñez-Márquez, and Marco Antonio Acevedo-Mosqueda. Bidirectional Associative Memories: Different approaches. *ACM Computing Surveys*, 45(2):18:1–18:30, February 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mooney:2013:SPM

[1402] Carl H. Mooney and John F. Roddick. Sequential pattern mining — approaches and algorithms. *ACM Computing Surveys*, 45(2):19:1–19:39, February 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Koskela:2013:PGM

[1403] Timo Koskela, Otso Kassinen, Erkki Harjula, and Mika Ylianttila. P2P group management systems: a conceptual analysis. *ACM Computing Surveys*, 45(2):20:1–20:25, February 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Saeedi:2013:SOR

[1404] Mehdi Saeedi and Igor L. Markov. Synthesis and optimization of reversible circuits — a survey. *ACM Computing Surveys*, 45(2):21:1–21:34, February 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Abaza:2013:SEB

[1405] Ayman Abaza, Arun Ross, Christina Hebert, Mary Ann F. Harrison, and Mark S. Nixon. A survey on ear biometrics. *ACM Computing Surveys*, 45(2):22:1–22:35, February 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Parvez:2013:OAH

[1406] Mohammad Tanvir Parvez and Sabri A. Mahmoud. Offline Arabic handwritten text recognition: a survey. *ACM Computing Surveys*, 45(2): 23:1–23:35, February 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Suomela:2013:SLA

[1407] Jukka Suomela. Survey of local algorithms. *ACM Computing Surveys*, 45(2):24:1–24:40, February 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Manshaei:2013:GTM

[1408] Mohammad Hossein Manshaei, Quanyan Zhu, Tansu Alpcan, Tamer Bacsar, and Jean-Pierre Hubaux. Game theory meets network security and privacy. *ACM Computing Surveys*, 45(3):25:1–25:39, June 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Stanier:2013:IRI

[1409] James Stanier and Des Watson. Intermediate representations in imperative compilers: a survey. *ACM Computing Surveys*, 45(3):26:1–26:27, June 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hoseini-Tabatabaei:2013:SSB

[1410] Seyed Amir Hoseini-Tabatabaei, Alexander Gluhak, and Rahim Tafazolli. A survey on smartphone-based systems for opportunistic user context recognition. *ACM Computing Surveys*, 45(3):27:1–27:51, June 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Colombo:2013:RWL

[1411] Christian Colombo and Gordon J. Pace. Recovery within long-running transactions. *ACM Computing Surveys*, 45(3):28:1–28:35, June 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zilberberg:2013:PCM

[1412] Omer Zilberberg, Shlomo Weiss, and Sivan Toledo. Phase-change memory: an architectural perspective. *ACM Computing Surveys*, 45(3):29:1–29:33, June 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gomes:2013:DCP

[1413] João V. Gomes, Pedro R. M. Inácio, Manuela Pereira, Mário M. Freire, and Paulo P. Monteiro. Detection and classification of peer-to-peer traffic: a survey. *ACM Computing Surveys*, 45(3):30:1–30:40, June 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Serban:2013:SIA

[1414] Floarea Serban, Joaquin Vanschoren, Jörg-Uwe Kietz, and Abraham Bernstein. A survey of intelligent assistants for data analysis. *ACM Computing Surveys*, 45(3):31:1–31:35, June 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zang:2013:SCT

[1415] Wei Zang and Ann Gordon-Ross. A survey on cache tuning from a power/energy perspective. *ACM Computing Surveys*, 45(3):32:1–32:49, June 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bostoen:2013:PRT

[1416] Tom Bostoen, Sape Mullender, and Yolande Berbers. Power-reduction techniques for data-center storage systems. *ACM Computing Surveys*, 45 (3):33:1–33:38, June 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Dionisio:2013:VWM

[1417] John David N. Dionisio, William G. Burns III, and Richard Gilbert. 3D virtual worlds and the metaverse: Current status and future possibilities. *ACM Computing Surveys*, 45(3):34:1–34:38, June 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Crepinsek:2013:EEE

[1418] Matej Crepinsek, Shih-Hsi Liu, and Marjan Mernik. Exploration and exploitation in evolutionary algorithms: a survey. *ACM Computing Surveys*, 45(3):35:1–35:33, June 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

SilvaGalvaoDeCarvalho:2013:SAL

[1419] Leandro Silva Galvão De Carvalho and Edjair De Souza Mota. Survey on application-layer mechanisms for speech quality adaptation in VoIP. *ACM Computing Surveys*, 45(3):36:1–36:31, June 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Grehant:2013:STM

[1420] Xavier Grehant, Isabelle Demeure, and Sverre Jarp. A survey of task mapping on production grids. *ACM Computing Surveys*, 45(3):37:1–37:25, June 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kiasari:2013:MFP

[1421] Abbas Eslami Kiasari, Axel Jantsch, and Zhonghai Lu. Mathematical formalisms for performance evaluation of networks-on-chip. *ACM Computing Surveys*, 45(3):38:1–38:41, June 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Newell:2013:PCD

[1422] Andrew Newell, Jing Dong, and Cristina Nita-Rotaru. On the practicality of cryptographic defences against pollution attacks in wireless network coding. *ACM Computing Surveys*, 45(3):39:1–39:26, June 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Pek:2013:SSI

[1423] Gábor Pék, Levente Butty'an, and Boldizsár Bencsáth. A survey of security issues in hardware virtualization. *ACM Computing Surveys*, 45 (3):40:1–40:34, June 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bossuet:2013:AFS

[1424] Lilian Bossuet, Michael Grand, Lubos Gaspar, Viktor Fischer, and Guy Gogniat. Architectures of flexible symmetric key crypto engines — a survey: From hardware coprocessor to multi-crypto-processor system on chip. *ACM Computing Surveys*, 45(4):41:1–41:32, August 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Parent:2013:STM

[1425] Christine Parent, Stefano Spaccapietra, Chiara Renso, Gennady Andrienko, Natalia Andrienko, Vania Bogorny, Maria Luisa Damiani, Aris Gkoulalas-Divanis, Jose Macedo, Nikos Pelekis, Yannis Theodoridis, and

Zhixian Yan. Semantic trajectories modeling and analysis. *ACM Computing Surveys*, 45(4):42:1–42:32, August 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Xie:2013:OCD

[1426] Jierui Xie, Stephen Kelley, and Boleslaw K. Szymanski. Overlapping community detection in networks: The state-of-the-art and comparative study. *ACM Computing Surveys*, 45(4):43:1–43:35, August 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Liu:2013:NDV

[1427] Jiajun Liu, Zi Huang, Hongyun Cai, Heng Tao Shen, Chong Wah Ngo, and Wei Wang. Near-duplicate video retrieval: Current research and future trends. *ACM Computing Surveys*, 45(4):44:1–44:23, August 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Rodriguez-Gomez:2013:STB

[1428] Rafael A. Rodríguez-Gómez, Gabriel Maciá-Fernández, and Pedro García-Teodoro. Survey and taxonomy of botnet research through life-cycle. *ACM Computing Surveys*, 45(4):45:1–45:33, August 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Basu:2013:SPP

[1429] Anirban Basu, Simon Fleming, James Stanier, Stephen Naicken, Ian Wakeman, and Vijay K. Gurbani. The state of peer-to-peer network simulators. *ACM Computing Surveys*, 45(4):46:1–46:25, August 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sherchan:2013:STS

[1430] Wanita Sherchan, Surya Nepal, and Cecile Paris. A survey of trust in social networks. *ACM Computing Surveys*, 45(4):47:1–47:33, August 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kalayappan:2013:SCA

[1431] Rajshekar Kalayappan and Smruti R. Sarangi. A survey of checker architectures. *ACM Computing Surveys*, 45(4):48:1–48:34, August 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chang:2013:ADA

[1432] Jian Chang, Krishna K. Venkatasubramanian, Andrew G. West, and Insup Lee. Analyzing and defending against Web-based malware. *ACM Computing Surveys*, 45(4):49:1–49:35, August 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Benoit:2013:SPW

[1433] Anne Benoit, Ümit V. Çatalyürek, Yves Robert, and Erik Saule. A survey of pipelined workflow scheduling: Models and algorithms. *ACM Computing Surveys*, 45(4):50:1–50:36, August 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hubaux:2013:SCF

[1434] Arnaud Hubaux, Thein Than Tun, and Patrick Heymans. Separation of concerns in feature diagram languages: a systematic survey. *ACM Computing Surveys*, 45(4):51:1–51:23, August 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bainomugisha:2013:SRP

[1435] Engineer Bainomugisha, Andoni Lombide Carreton, Tom van Cutsem, Stijn Mostinckx, and Wolfgang de Meuter. A survey on reactive programming. *ACM Computing Surveys*, 45(4):52:1–52:34, August 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Androutsopoulos:2013:SBM

[1436] Kelly Androutsopoulos, David Clark, Mark Harman, Jens Krinke, and Laurence Tratt. State-based model slicing: a survey. *ACM Computing Surveys*, 45(4):53:1–53:36, August 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Lazaro:2013:DRD

[1437] Daniel Lazaro, Joan Manuel Marques, Josep Jorba, and Xavier Vilajosana. Decentralized resource discovery mechanisms for distributed computing in peer-to-peer environments. *ACM Computing Surveys*, 45(4): 54:1–54:54, August 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shaul:2013:CSF

[1438] Levi Shaul and Doron Tauber. Critical success factors in enterprise resource planning systems: Review of the last decade. *ACM Computing Surveys*, 45(4):55:1–55:39, August 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kritikos:2013:SSQ

[1439] Kyriakos Kritikos, Barbara Pernici, Pierluigi Plebani, Cinzia Cappiello, Marco Comuzzi, Salima Benrernou, Ivona Brandic, Attila Kertész, Michael Parkin, and Manuel Carro. A survey on service quality description. *ACM Computing Surveys*, 46(1):1:1–1:??, October 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Yenikaya:2013:KVR

[1440] Sibel Yenikaya, Gökhan Yenikaya, and Ekrem Düven. Keeping the vehicle on the road: a survey on on-road lane detection systems. *ACM Computing Surveys*, 46(1):2:1–2:??, October 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Tamburri:2013:OSS

[1441] Damian A. Tamburri, Patricia Lago, and Hans van Vliet. Organizational social structures for software engineering. *ACM Computing Surveys*, 46 (1):3:1–3:??, October 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Roundy:2013:BCO

[1442] Kevin A. Roundy and Barton P. Miller. Binary-code obfuscations in prevalent packer tools. *ACM Computing Surveys*, 46(1):4:1–4:??, October 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

deNicola:2013:UDS

[1443] Rocco de Nicola, Diego Latella, Michele Loreti, and Mieke Massink. A uniform definition of stochastic process calculi. *ACM Computing Surveys*, 46(1):5:1–5:??, October 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Esposito:2013:SES

[1444] Flavio Esposito, Ibrahim Matta, and Vatche Ishakian. Slice embedding solutions for distributed service architectures. *ACM Computing Surveys*, 46(1):6:1–6:??, October 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Araujo:2013:SOM

[1445] Aluizio F. R. Araujo and Renata L. M. E. Rego. Self-organizing maps with a time-varying structure. *ACM Computing Surveys*, 46(1):7:1–7:??, October 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Radetzki:2013:MFT

[1446] Martin Radetzki, Chaochao Feng, Xueqian Zhao, and Axel Jantsch. Methods for fault tolerance in networks-on-chip. *ACM Computing Sur-*

veys, 46(1):8:1–8:??, October 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Yahyavi:2013:PPA

[1447] Amir Yahyavi and Bettina Kemme. Peer-to-peer architectures for massively multiplayer online games: a survey. *ACM Computing Surveys*, 46 (1):9:1–9:??, October 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhang:2013:OCD

[1448] Xin Zhang, Yee-Hong Yang, Zhiguang Han, Hui Wang, and Chao Gao. Object class detection: a survey. *ACM Computing Surveys*, 46(1):10:1–10:??, October 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sakr:2013:FML

[1449] Sherif Sakr, Anna Liu, and Ayman G. Fayoumi. The family of MapReduce and large-scale data processing systems. *ACM Computing Surveys*, 46(1):11:1–11:??, October 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Noor:2013:TMS

[1450] Talal H. Noor, Quan Z. Sheng, Sherali Zeadally, and Jian Yu. Trust management of services in cloud environments: obstacles and solutions. *ACM Computing Surveys*, 46(1):12:1–12:??, October 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Silva:2013:DSC

[1451] Jonathan A. Silva, Elaine R. Faria, Rodrigo C. Barros, Eduardo R. Hruschka, André C. P. L. F. de Carvalho, and João Gama. Data stream clustering: a survey. *ACM Computing Surveys*, 46(1):13:1–13:??, October 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Vijayalayan:2013:DSS

[1452] Kanthaiah Sivapragasam Vijayalayan, Aaron Harwood, and Shanika Karunasekera. Distributed scheduling schemes for wireless mesh networks: a survey. *ACM Computing Surveys*, 46(1):14:1–14:??, October 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sen:2013:SSD

[1453] Soumya Sen, Carlee Joe-Wong, Sangtae Ha, and Mung Chiang. A survey of smart data pricing: Past proposals, current plans, and future trends. *ACM Computing Surveys*, 46(2):15:1–15:??, November 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kermarrec:2013:XPP

[1454] Anne-Marie Kermarrec and Peter Triantafillou. XL peer-to-peer pub/sub systems. *ACM Computing Surveys*, 46(2):16:1–16:??, November 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Castro:2013:TGT

[1455] Pablo Samuel Castro, Daqing Zhang, Chao Chen, Shijian Li, and Gang Pan. From taxi GPS traces to social and community dynamics: a survey. *ACM Computing Surveys*, 46(2):17:1–17:??, November 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wu:2013:CPC

[1456] Qiong Wu and Chunyan Miao. Curiosity: From psychology to computation. *ACM Computing Surveys*, 46(2):18:1–18:??, November 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Csapo:2013:OAR

[1457] Ádám Csapó and György Wersényi. Overview of auditory representations in human-machine interfaces. *ACM Computing Surveys*, 46(2):19:1–19:??, November 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mazurczyk:2013:VSD

[1458] Wojciech Mazurczyk. VoIP steganography and its detection — a survey. *ACM Computing Surveys*, 46(2):20:1–20:??, November 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gammie:2013:SDC

[1459] Peter Gammie. Synchronous digital circuits as functional programs. *ACM Computing Surveys*, 46(2):21:1–21:??, November 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ghosh:2013:UPV

[1460] Subir K. Ghosh and Partha P. Goswami. Unsolved problems in visibility graphs of points, segments, and polygons. *ACM Computing Surveys*, 46(2):22:1–22:??, November 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Renner:2013:PED

[1461] Rebekka S. Renner, Boris M. Velichkovsky, and Jens R. Helmert. The perception of egocentric distances in virtual environments — a review. *ACM Computing Surveys*, 46(2):23:1–23:??, November 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Barkati:2013:SPA

[1462] Karim Barkati and Pierre Jouvelot. Synchronous programming in audio processing: a lookup table oscillator case study. *ACM Computing Surveys*, 46(2):24:1–24:??, November 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Yang:2013:RCI

[1463] Zheng Yang, Zimu Zhou, and Yunhao Liu. From RSSI to CSI: Indoor localization via channel response. *ACM Computing Surveys*, 46(2):25:1–25:??, November 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Pedro:2013:UGP

[1464] Ricardo Wandré Dias Pedro, Fátima L. S. Nunes, and Ariane Machado-Lima. Using grammars for pattern recognition in images: a systematic review. *ACM Computing Surveys*, 46(2):26:1–26:??, November 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Pereira:2013:SAC

[1465] Orlando R. E. Pereira and Joel J. P. C. Rodrigues. Survey and analysis of current mobile learning applications and technologies. *ACM Computing Surveys*, 46(2):27:1–27:??, November 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Herraiz:2013:ELS

[1466] Israel Herraiz, Daniel Rodriguez, Gregorio Robles, and Jesus M. Gonzalez-Barahona. The evolution of the laws of software evolution: a discussion based on a systematic literature review. *ACM Computing Surveys*, 46(2):28:1–28:??, November 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Vezzani:2013:PRS

[1467] Roberto Vezzani, Davide Baltieri, and Rita Cucchiara. People reidentification in surveillance and forensics: a survey. *ACM Computing Surveys*, 46(2):29:1–29:??, November 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Medina:2013:SMM

[1468] Violeta Medina and Juan Manuel García. A survey of migration mechanisms of virtual machines. *ACM Computing Surveys*, 46(3):30:1–30:??, January 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Li:2013:DDM

[1469] Feng Li, Beng Chin Ooi, M. Tamer Özsu, and Sai Wu. Distributed data management using MapReduce. *ACM Computing Surveys*, 46(3): 31:1–31:??, January 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bellucci:2013:LHI

[1470] Andrea Bellucci, Alessio Malizia, and Ignacio Aedo. Light on horizontal interactive surfaces: Input space for tabletop computing. *ACM Computing Surveys*, 46(3):32:1–32:??, January 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bulling:2013:THA

[1471] Andreas Bulling, Ulf Blanke, and Bernt Schiele. A tutorial on human activity recognition using body-worn inertial sensors. *ACM Computing Surveys*, 46(3):33:1–33:??, January 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Furia:2013:LIA

[1472] Carlo A. Furia, Bertrand Meyer, and Sergey Velder. Loop invariants: Analysis, classification, and examples. *ACM Computing Surveys*, 46(3): 34:1–34:??, January 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Li:2013:OPS

[1473] Bin Li and Steven C. H. Hoi. Online portfolio selection: a survey. *ACM Computing Surveys*, 46(3):35:1–35:??, January 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ma:2013:SAT

[1474] Dongzhe Ma, Jianhua Feng, and Guoliang Li. A survey of address translation technologies for flash memories. *ACM Computing Surveys*, 46(3): 36:1–36:??, January 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Helbig:2013:BDM

[1475] Mardé Helbig and Andries P. Engelbrecht. Benchmarks for dynamic multi-objective optimisation algorithms. *ACM Computing Surveys*, 46 (3):37:1–37:??, January 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mei:2013:MSR

[1476] Tao Mei, Yong Rui, Shipeng Li, and Qi Tian. Multimedia search reranking: a literature survey. *ACM Computing Surveys*, 46(3):38:1–38:??, January 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Fontana:2013:MTA

[1477] Peter Fontana and Rance Cleaveland. A menagerie of timed automata. *ACM Computing Surveys*, 46(3):40:1–40:??, January 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See corrections [1737].

Kopliku:2013:ASN

[1478] Arlind Kopliku, Karen Pinel-Sauvagnat, and Mohand Boughanem. Aggregated search: a new information retrieval paradigm. *ACM Computing Surveys*, 46(3):41:1–41:??, January 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Costa-Jussa:2013:SMT

[1479] Marta R. Costa-Jussà and Mireia Farrús. Statistical machine translation enhancements through linguistic levels: a survey. *ACM Computing Surveys*, 46(3):42:1–42:??, January 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Rodriguez:2013:SOH

[1480] Natalia Díaz Rodríguez, M. P. Cuéllar, Johan Lilius, and Miguel Delgado Calvo-Flores. A survey on ontologies for human behavior recognition. *ACM Computing Surveys*, 46(4):43:1–43:??, March 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hirzel:2013:CSP

[1481] Martin Hirzel, Robert Soulé, Scott Schneider, Bugra Gedik, and Robert Grimm. A catalog of stream processing optimizations. *ACM Computing Surveys*, 46(4):46:1–46:??, March 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Orgerie:2013:STI

[1482] Anne-Cecile Orgerie, Marcos Dias de Assuncao, and Laurent Lefevre. A survey on techniques for improving the energy efficiency of large-scale distributed systems. *ACM Computing Surveys*, 46(4):47:1–47:??, March 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Krishna:2013:FTS

[1483] C. M. Krishna. Fault-tolerant scheduling in homogeneous real-time systems. *ACM Computing Surveys*, 46(4):48:1–48:??, March 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Perez:2013:SSR

[1484] Héctor Pérez and J. Javier Gutiérrez. A survey on standards for real-time distribution middleware. *ACM Computing Surveys*, 46(4):49:1–49:??, March 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Navarro:2013:STC

[1485] Gonzalo Navarro. Spaces, trees, and colors: The algorithmic landscape of document retrieval on sequences. *ACM Computing Surveys*, 46(4): 52:1–52:??, March 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Henson:2013:MES

[1486] Michael Henson and Stephen Taylor. Memory encryption: a survey of existing techniques. *ACM Computing Surveys*, 46(4):53:1–53:??, March 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mitchell:2013:SID

[1487] Robert Mitchell and Ing-Ray Chen. A survey of intrusion detection techniques for cyber-physical systems. *ACM Computing Surveys*, 46(4):55:1–55:??, March 2013. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chiang:2014:SDM

[1488] Yao-Yi Chiang, Stefan Leyk, and Craig A. Knoblock. A survey of digital map processing techniques. *ACM Computing Surveys*, 47(1):1:1–1:??, May 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Winkler:2014:SPP

[1489] Thomas Winkler and Bernhard Rinner. Security and privacy protection in visual sensor networks: a survey. *ACM Computing Surveys*, 47(1):2:1–2:??, May 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shi:2014:CFB

[1490] Yue Shi, Martha Larson, and Alan Hanjalic. Collaborative filtering beyond the user-item matrix: a survey of the state of the art and future challenges. *ACM Computing Surveys*, 47(1):3:1–3:??, May 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Howard:2014:SDE

[1491] Catherine Howard and Markus Stumptner. A survey of directed entity-relation–based first-order probabilistic languages. *ACM Computing Surveys*, 47(1):4:1–4:??, May 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Toosi:2014:ICC

[1492] Adel Nadjaran Toosi, Rodrigo N. Calheiros, and Rajkumar Buyya. Interconnected cloud computing environments: Challenges, taxonomy, and survey. *ACM Computing Surveys*, 47(1):7:1–7:??, May 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chong:2014:SUI

[1493] Ming Ki Chong, Rene Mayrhofer, and Hans Gellersen. A survey of user interaction for spontaneous device association. *ACM Computing Surveys*, 47(1):8:1–8:??, May 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Akiki:2014:AMD

[1494] Pierre A. Akiki, Arosha K. Bandara, and Yijun Yu. Adaptive model-driven user interface development systems. *ACM Computing Surveys*, 47(1):9:1–9:??, May 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Aggarwal:2014:ENA

[1495] Charu Aggarwal and Karthik Subbian. Evolutionary network analysis: a survey. *ACM Computing Surveys*, 47(1):10:1–10:??, May 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Paulo:2014:SCS

[1496] João Paulo and José Pereira. A survey and classification of storage deduplication systems. *ACM Computing Surveys*, 47(1):11:1–11:??, July 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wang:2014:MSN

[1497] You-Chiun Wang. Mobile sensor networks: System hardware and dispatch software. *ACM Computing Surveys*, 47(1):12:1–12:??, July 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Paola:2014:IMS

[1498] Alessandra De Paola, Marco Ortolani, Giuseppe Lo Re, Giuseppe Anastasi, and Sajal K. Das. Intelligent management systems for energy efficiency in buildings: a survey. *ACM Computing Surveys*, 47(1):13:1–13:??, July 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Treurniet:2014:TSM

[1499] Joanne Treurniet. A taxonomy and survey of microscopic mobility models from the mobile networking domain. *ACM Computing Surveys*, 47 (1):14:1–14:??, July 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Campos:2014:STI

[1500] Ricardo Campos, Gaël Dias, Alípio M. Jorge, and Adam Jatowt. Survey of temporal information retrieval and related applications. *ACM Computing Surveys*, 47(2):15:1–15:??, November 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gostner:2014:GMT

[1501] Roswitha Gostner, Bianca Baldacci, Melissa J. Morine, and Corrado Priami. Graphical modeling tools for systems biology. *ACM Computing Surveys*, 47(2):16:1–16:??, November 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Thomasian:2014:AFJ

[1502] Alexander Thomasian. Analysis of fork/join and related queueing systems. *ACM Computing Surveys*, 47(2):17:1–17:??, November 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bosch:2014:SPS

[1503] Christoph Bösch, Pieter Hartel, Willem Jonker, and Andreas Peter. A survey of provably secure searchable encryption. *ACM Computing Surveys*, 47(2):18:1–18:??, November 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mittal:2014:SMA

[1504] Sparsh Mittal and Jeffrey S. Vetter. A survey of methods for analyzing and improving GPU energy efficiency. *ACM Computing Surveys*, 47(2):19:1–19:??, November 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Abid:2014:SDB

[1505] Shahbaz Akhtar Abid, Mazliza Othman, and Nadir Shah. A survey on DHT-based routing for large-scale mobile ad hoc networks. *ACM Computing Surveys*, 47(2):20:1–20:??, November 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Qiu:2014:RTW

[1506] Dong Qiu, Bixin Li, Shunhui Ji, and Hareton Leung. Regression testing of Web service: a systematic mapping study. *ACM Computing Surveys*, 47(2):21:1–21:??, November 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Boukerche:2014:ORW

[1507] Azzedine Boukerche and Amir Darehshoorzadeh. Opportunistic routing in wireless networks: Models, algorithms, and classifications. *ACM Computing Surveys*, 47(2):22:1–22:??, November 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Laszka:2014:SII

[1508] Aron Laszka, Mark Felegyhazi, and Levente Buttyan. A survey of interdependent information security games. *ACM Computing Surveys*, 47(2):23:1–23:??, November 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Newell:2014:NCR

[1509] Andrew Newell, Hongyi Yao, Alex Ryker, Tracey Ho, and Cristina Nita-Rotaru. Node-capture resilient key establishment in sensor networks: Design space and new protocols. *ACM Computing Surveys*, 47(2):24:1–24:??, November 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Calabrese:2014:USU

[1510] Francesco Calabrese, Laura Ferrari, and Vincent D. Blondel. Urban sensing using mobile phone network data: a survey of research. *ACM Computing Surveys*, 47(2):25:1–25:??, November 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bonnin:2014:AGM

[1511] Geoffray Bonnin and Dietmar Jannach. Automated generation of music playlists: Survey and experiments. *ACM Computing Surveys*, 47(2): 26:1–26:??, November 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Jagadeesan:2014:SDN

[1512] Nachikethas A. Jagadeesan and Bhaskar Krishnamachari. Software-defined networking paradigms in wireless networks: a survey. *ACM Computing Surveys*, 47(2):27:1–27:??, November 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Marasco:2014:SAS

[1513] Emanuela Marasco and Arun Ross. A survey on antispoofing schemes for fingerprint recognition systems. *ACM Computing Surveys*, 47(2):28:1–28:??, November 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ziaie:2014:MCD

[1514] Pujan Ziaie. A model for context in the design of open production communities. *ACM Computing Surveys*, 47(2):29:1–29:??, November 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kong:2014:SGE

[1515] Fanxin Kong and Xue Liu. A survey on green-energy-aware power management for datacenters. *ACM Computing Surveys*, 47(2):30:1–30:??, November 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Cockburn:2014:SNE

[1516] Andy Cockburn, Carl Gutwin, Joey Scarr, and Sylvain Malacria. Supporting novice to expert transitions in user interfaces. *ACM Computing Surveys*, 47(2):31:1–31:??, November 2014. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Caceres-Cruz:2015:RVR

[1517] Jose Caceres-Cruz, Pol Arias, Daniel Guimarans, Daniel Riera, and Angel A. Juan. Rich vehicle routing problem: Survey. *ACM Computing Surveys*, 47(2):32:1–32:??, January 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mastelic:2015:CCS

[1518] Toni Mastelic, Ariel Oleksiak, Holger Claussen, Ivona Brandic, Jean-Marc Pierson, and Athanasios V. Vasilakos. Cloud computing: Survey on energy efficiency. *ACM Computing Surveys*, 47(2):33:1–33:??, January 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Li:2015:CMO

[1519] Xin Li and S. S. Iyengar. On computing mapping of 3D objects: a survey. *ACM Computing Surveys*, 47(2):34:1–34:??, January 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Borrajo:2015:PCB

[1520] Daniel Borrajo, Anna Roubícková, and Ivan Serina. Progress in case-based planning. *ACM Computing Surveys*, 47(2):35:1–35:??, January 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhou:2015:LRM

[1521] Xiaowei Zhou, Can Yang, Hongyu Zhao, and Weichuan Yu. Low-rank modeling and its applications in image analysis. *ACM Computing Surveys*, 47(2):36:1–36:??, January 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Siegle:2015:MRE

[1522] Felix Siegle, Tanya Vladimirova, Jørgen Ilstad, and Omar Emam. Mitigation of radiation effects in SRAM-based FPGAs for space applications. *ACM Computing Surveys*, 47(2):37:1–37:??, January 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Rodopoulos:2015:CFA

[1523] Dimitrios Rodopoulos, Georgia Psychou, Mohamed M. Sabry, Francky Catthoor, Antonis Papanikolaou, Dimitrios Soudris, Tobias G. Noll, and David Atienza. Classification framework for analysis and modeling of physically induced reliability violations. *ACM Computing Surveys*, 47

(3):38:1–38:??, April 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chaudhry:2015:TAS

[1524] Muhammad Tayyab Chaudhry, Teck Chaw Ling, Atif Manzoor, Syed Asad Hussain, and Jongwon Kim. Thermal-aware scheduling in green data centers. *ACM Computing Surveys*, 47(3):39:1–39:??, April 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Fabry:2015:TDS

[1525] Johan Fabry, Tom Dinkelaker, Jacques Noyé, and Éric Tanter. A taxonomy of domain-specific aspect languages. *ACM Computing Surveys*, 47 (3):40:1–40:??, April 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Roy:2015:SCP

[1526] Arpan Roy, Santonu Sarkar, Rajeshwari Ganesan, and Geetika Goel. Secure the cloud: From the perspective of a service-oriented organization. *ACM Computing Surveys*, 47(3):41:1–41:??, April 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Renesse:2015:PMM

[1527] Robbert Van Renesse and Deniz Altinbuken. Paxos made moderately complex. *ACM Computing Surveys*, 47(3):42:1–42:??, April 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

DMello:2015:RMA

[1528] Sidney K. D'Mello and Jacqueline Kory. A review and meta-analysis of multimodal affect detection systems. *ACM Computing Surveys*, 47 (3):43:1–43:??, April 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Maglo:2015:MCS

[1529] Adrien Maglo, Guillaume Lavoué, Florent Dupont, and Céline Hudelot. 3D mesh compression: Survey, comparisons, and emerging trends. *ACM Computing Surveys*, 47(3):44:1–44:??, April 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Diez:2015:QRC

[1530] Yago Díez, Ferran Roure, Xavier Lladó, and Joaquim Salvi. A qualitative review on 3D coarse registration methods. *ACM Computing Surveys*, 47

(3):45:1–45:??, April 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ardito:2015:ILD

[1531] Carmelo Ardito, Paolo Buono, Maria Francesca Costabile, and Giuseppe Desolda. Interaction with large displays: a survey. *ACM Computing Surveys*, 47(3):46:1–46:??, April 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Pejovic:2015:AMC

[1532] Veljko Pejovic and Mirco Musolesi. Anticipatory mobile computing: a survey of the state of the art and research challenges. *ACM Computing Surveys*, 47(3):47:1–47:??, April 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zoidi:2015:GBL

[1533] Olga Zoidi, Eftychia Fotiadou, Nikos Nikolaidis, and Ioannis Pitas. Graph-based label propagation in digital media: a review. *ACM Computing Surveys*, 47(3):48:1–48:??, April 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Tiwari:2015:CFM

[1534] Nidhi Tiwari, Santonu Sarkar, Umesh Bellur, and Maria Indrawan. Classification framework of MapReduce scheduling algorithms. *ACM Computing Surveys*, 47(3):49:1–49:??, April 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wendzel:2015:PBS

[1535] Steffen Wendzel, Sebastian Zander, Bernhard Fechner, and Christian Herdin. Pattern-based survey and categorization of network covert channel techniques. *ACM Computing Surveys*, 47(3):50:1–50:??, April 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hani:2015:RSL

[1536] Ahmad Fadzil M. Hani, Irving Vitra Paputungan, and Mohd Fadzil Hassan. Renegotiation in service level agreement management for a cloud-based system. *ACM Computing Surveys*, 47(3):51:1–51:??, April 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gibaja:2015:TML

[1537] Eva Gibaja and Sebastián Ventura. A tutorial on multilabel learning. *ACM Computing Surveys*, 47(3):52:1–52:??, April 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sgora:2015:STS

[1538] Aggeliki Sgora, Dimitrios J. Vergados, and Dimitrios D. Vergados. A survey of TDMA scheduling schemes in wireless multihop networks. *ACM Computing Surveys*, 47(3):53:1–53:??, April 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Yang:2015:MIL

[1539] Zheng Yang, Chenshu Wu, Zimu Zhou, Xinglin Zhang, Xu Wang, and Yunhao Liu. Mobility increases localizability: a survey on wireless indoor localization using inertial sensors. *ACM Computing Surveys*, 47(3):54:1–54:??, April 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Vasilomanolakis:2015:TSC

[1540] Emmanouil Vasilomanolakis, Shankar Karuppayah, Max Mühlhäuser, and Mathias Fischer. Taxonomy and survey of collaborative intrusion detection. *ACM Computing Surveys*, 47(4):55:1–55:??, July 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Karimi:2015:TDM

[1541] Sarvnaz Karimi, Chen Wang, Alejandro Metke-Jimenez, Raj Gaire, and Cecile Paris. Text and data mining techniques in adverse drug reaction detection. *ACM Computing Surveys*, 47(4):56:1–56:??, July 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shi:2015:SIR

[1542] Shu Shi and Cheng-Hsin Hsu. A survey of interactive remote rendering systems. *ACM Computing Surveys*, 47(4):57:1–57:??, July 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sufatrio:2015:SAS

[1543] Sufatrio, Darell J. J. Tan, Tong-Wei Chua, and Vrizlynn L. L. Thing. Securing Android: a survey, taxonomy, and challenges. *ACM Computing Surveys*, 47(4):58:1–58:??, July 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

OCoileain:2015:AAC

[1544] Diarmuid Ó Coileáin and Donal O'Mahony. Accounting and accountability in content distribution architectures: a survey. *ACM Computing Surveys*, 47(4):59:1–59:??, July 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

deAraujo:2015:SIS

[1545] B. R. de Araújo, Daniel S. Lopes, Pauline Jepp, Joaquim A. Jorge, and Brian Wyvill. A survey on implicit surface polygonization. *ACM Computing Surveys*, 47(4):60:1–60:??, July 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mukhopadhyay:2015:SME

[1546] Anirban Mukhopadhyay, Ujjwal Maulik, and Sanghamitra Bandyopadhyay. A survey of multiobjective evolutionary clustering. *ACM Computing Surveys*, 47(4):61:1–61:??, July 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wael:2015:PGA

[1547] Mattias De Wael, Stefan Marr, Bruno De Fraine, Tom Van Cutsem, and Wolfgang De Meuter. Partitioned global address space languages. *ACM Computing Surveys*, 47(4):62:1–62:??, July 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhan:2015:CCR

[1548] Zhi-Hui Zhan, Xiao-Fang Liu, Yue-Jiao Gong, Jun Zhang, Henry Shu-Hung Chung, and Yun Li. Cloud computing resource scheduling and a survey of its evolutionary approaches. *ACM Computing Surveys*, 47 (4):63:1–63:??, July 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Moghaddam:2015:EEN

[1549] Fahimeh Alizadeh Moghaddam, Patricia Lago, and Paola Grosso. Energy-efficient networking solutions in cloud-based environments: a systematic literature review. *ACM Computing Surveys*, 47(4):64:1–64:??, July 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sookhak:2015:RDA

[1550] Mehdi Sookhak, Abdullah Gani, Hamid Talebian, Adnan Akhunzada, Samee U. Khan, Rajkumar Buyya, and Albert Y. Zomaya. Remote data auditing in cloud computing environments: a survey, taxonomy, and open issues. *ACM Computing Surveys*, 47(4):65:1–65:??, July 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kamisinski:2015:ASC

[1551] Andrzej Kamisiński, Piotr Cholda, and Andrzej Jajszczyk. Assessing the structural complexity of computer and communication networks. *ACM*

Computing Surveys, 47(4):66:1–66:??, July 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Imran:2015:PSM

[1552] Muhammad Imran, Carlos Castillo, Fernando Diaz, and Sarah Vieweg. Processing social media messages in mass emergency: a survey. *ACM Computing Surveys*, 47(4):67:1–67:??, July 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Huang:2015:SPI

[1553] Wei Huang, Afshar Ganjali, Beom Heyn Kim, Sukwon Oh, and David Lie. The state of public infrastructure-as-a-service cloud security. *ACM Computing Surveys*, 47(4):68:1–68:??, July 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mittal:2015:SCG

[1554] Sparsh Mittal and Jeffrey S. Vetter. A survey of CPU–GPU heterogeneous computing techniques. *ACM Computing Surveys*, 47(4):69:1–69:??, July 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Xu:2015:SAT

[1555] Tianyin Xu and Yuanyuan Zhou. Systems approaches to tackling configuration errors: a survey. *ACM Computing Surveys*, 47(4):70:1–70:??, July 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Meng:2015:CSS

[1556] Guozhu Meng, Yang Liu, Jie Zhang, Alexander Pokluda, and Raouf Boutaba. Collaborative security: a survey and taxonomy. *ACM Computing Surveys*, 48(1):1:1–1:??, September 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ardagna:2015:SAC

[1557] Claudio A. Ardagna, Rasool Asal, Ernesto Damiani, and Quang Hieu Vu. From security to assurance in the cloud: a survey. *ACM Computing Surveys*, 48(1):2:1–2:??, September 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mitsch:2015:LBM

[1558] Stefan Mitsch, André Platzer, Werner Retschitzegger, and Wieland Schwinger. Logic-based modeling approaches for qualitative and hybrid reasoning in dynamic spatial systems. *ACM Computing Surveys*, 48(1): 3:1–3:??, September 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ibidunmoye:2015:PAD

[1559] Olumuyiwa Ibidunmoye, Francisco Hernández-Rodriguez, and Erik Elmroth. Performance anomaly detection and bottleneck identification. *ACM Computing Surveys*, 48(1):4:1–4:??, September 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Alsalibi:2015:IBI

[1560] Bisan Alsalibi, Ibrahim Venkat, K. G. Subramanian, Syaheerah Lebai Lutfi, and Philippe De Wilde. The impact of bio-inspired approaches toward the advancement of face recognition. *ACM Computing Surveys*, 48(1):5:1–5:??, September 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Naveed:2015:PGE

[1561] Muhammad Naveed, Erman Ayday, Ellen W. Clayton, Jacques Fellay, Carl A. Gunter, Jean-Pierre Hubaux, Bradley A. Malin, and Xiaofeng Wang. Privacy in the genomic era. *ACM Computing Surveys*, 48(1): 6:1–6:??, September 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Guo:2015:MCS

[1562] Bin Guo, Zhu Wang, Zhiwen Yu, Yu Wang, Neil Y. Yen, Runhe Huang, and Xingshe Zhou. Mobile crowd sensing and computing: The review of an emerging human-powered sensing paradigm. *ACM Computing Surveys*, 48(1):7:1–7:??, September 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ruiz:2015:SBA

[1563] Patricia Ruiz and Pascal Bouvry. Survey on broadcast algorithms for mobile ad hoc networks. *ACM Computing Surveys*, 48(1):8:1–8:??, September 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hong:2015:LRE

[1564] Hyejeong Hong, Jaeil Lim, Hyunyul Lim, and Sungho Kang. Lifetime reliability enhancement of microprocessors: Mitigating the impact of negative bias temperature instability. *ACM Computing Surveys*, 48(1): 9:1–9:??, September 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bauman:2015:SHB

[1565] Erick Bauman, Gbadebo Ayoade, and Zhiqiang Lin. A survey on hypervisor-based monitoring: Approaches, applications, and evolutions. *ACM Computing Surveys*, 48(1):10:1–10:??, September 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mann:2015:AVM

[1566] Zoltán Ádám Mann. Allocation of virtual machines in cloud data centers — a survey of problem models and optimization algorithms. *ACM Computing Surveys*, 48(1):11:1–11:??, September 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Milenkoski:2015:ECI

[1567] Aleksandar Milenkoski, Marco Vieira, Samuel Kounev, Alberto Avritzer, and Bryan D. Payne. Evaluating computer intrusion detection systems: a survey of common practices. *ACM Computing Surveys*, 48(1):12:1–12:??, September 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Li:2015:MOE

[1568] Bingdong Li, Jinlong Li, Ke Tang, and Xin Yao. Many-objective evolutionary algorithms: a survey. *ACM Computing Surveys*, 48(1):13:1–13:??, September 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Schoeffmann:2015:VIT

[1569] Klaus Schoeffmann, Marco A. Hudelist, and Jochen Huber. Video interaction tools: a survey of recent work. *ACM Computing Surveys*, 48 (1):14:1–14:??, September 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Edwards:2015:SSO

[1570] Matthew Edwards, Awais Rashid, and Paul Rayson. A systematic survey of online data mining technology intended for law enforcement. *ACM Computing Surveys*, 48(1):15:1–15:??, September 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Baudry:2015:MFS

[1571] Benoit Baudry and Martin Monperrus. The multiple facets of software diversity: Recent developments in year 2000 and beyond. *ACM Computing Surveys*, 48(1):16:1–16:??, September 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chen:2015:DRS

[1572] Yunji Chen, Shijin Zhang, Qi Guo, Ling Li, Ruiyang Wu, and Tianshi Chen. Deterministic replay: a survey. *ACM Computing Surveys*, 48(2): 17:1–17:47, November 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Nielsen:2015:SSE

[1573] Claus Ballegaard Nielsen, Peter Gorm Larsen, John Fitzgerald, Jim Woodcock, and Jan Peleska. Systems of systems engineering: Basic concepts, model-based techniques, and research directions. *ACM Computing Surveys*, 48(2):18:1–18:41, November 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Dongol:2015:VLC

[1574] Brijesh Dongol and John Derrick. Verifying linearisability: a comparative survey. *ACM Computing Surveys*, 48(2):19:1–19:43, November 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hassan:2015:IPU

[1575] Naveed Ul Hassan, Aqsa Naeem, Muhammad Adeel Pasha, Tariq Jadoon, and Chau Yuen. Indoor positioning using visible LED lights: a survey. *ACM Computing Surveys*, 48(2):20:1–20:32, November 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Velloso:2015:FHC

[1576] Eduardo Velloso, Dominik Schmidt, Jason Alexander, Hans Gellersen, and Andreas Bulling. The feet in human–computer interaction: a survey of foot-based interaction. *ACM Computing Surveys*, 48(2):21:1–21:35, November 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kaur:2015:EET

[1577] Tarandeep Kaur and Inderveer Chana. Energy efficiency techniques in cloud computing: a survey and taxonomy. *ACM Computing Surveys*, 48(2):22:1–22:46, November 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Guo:2015:NTP

[1578] Mingming Guo, Xinyu Jin, Niki Pissinou, Sebastian Zanlongo, Bogdan Carbunar, and S. S. Iyengar. In-network trajectory privacy preservation. *ACM Computing Surveys*, 48(2):23:1–23:29, November 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Illiano:2015:DMD

[1579] Vittorio P. Illiano and Emil C. Lupu. Detecting malicious data injections in wireless sensor networks: a survey. *ACM Computing Surveys*, 48(2): 24:1–24:33, November 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

McCune:2015:TLV

[1580] Robert Ryan McCune, Tim Weninger, and Greg Madey. Thinking like a vertex: a survey of vertex-centric frameworks for large-scale distributed graph processing. *ACM Computing Surveys*, 48(2):25:1–25:39, November 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Delvaux:2015:SLE

[1581] Jeroen Delvaux, Roel Peeters, Dawu Gu, and Ingrid Verbauwhede. A survey on lightweight entity authentication with strong PUFs. *ACM Computing Surveys*, 48(2):26:1–26:42, November 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Granatyr:2015:TRM

[1582] Jones Granatyr, Vanderson Botelho, Otto Robert Lessing, Edson Emílio Scalabrin, Jean-Paul Barthès, and Fabrício Enembreck. Trust and reputation models for multiagent systems. *ACM Computing Surveys*, 48(2): 27:1–27:42, November 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Cho:2015:STM

[1583] Jin-Hee Cho, Kevin Chan, and Sibel Adali. A survey on trust modeling. *ACM Computing Surveys*, 48(2):28:1–28:40, November 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Saini:2015:HCW

[1584] Mukesh Saini, Abdulhameed Alelaiwi, and Abdulmotaleb El Saddik. How close are we to realizing a pragmatic VANET solution? A meta-survey. *ACM Computing Surveys*, 48(2):29:1–29:40, November 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shilkrot:2015:DDC

[1585] Roy Shilkrot, Jochen Huber, Jürgen Steimle, Suranga Nanayakkara, and Pattie Maes. Digital digits: a comprehensive survey of finger augmentation devices. *ACM Computing Surveys*, 48(2):30:1–30:29, November

2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Souza:2015:MQT

[1586] Ramon Hugo De Souza and Mário Antônio Ribeiro Dantas. Mapping QoE through QoS in an approach to DDB architectures: Research analysis and conceptualization. *ACM Computing Surveys*, 48(2):31:1–31:41, November 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gracioli:2015:SCM

[1587] Giovani Gracioli, Ahmed Alhammad, Renato Mancuso, Antônio Augusto Fröhlich, and Rodolfo Pellizzoni. A survey on cache management mechanisms for real-time embedded systems. *ACM Computing Surveys*, 48(2): 32:1–32:36, November 2015. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Lemos:2016:WSC

[1588] Angel Lagares Lemos, Florian Daniel, and Boualem Benatallah. Web service composition: a survey of techniques and tools. *ACM Computing Surveys*, 48(3):33:1–33:??, February 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Benmansour:2016:MAR

[1589] Asma Benmansour, Abdelhamid Bouchachia, and Mohammed Feham. Multioccupant activity recognition in pervasive smart home environments. *ACM Computing Surveys*, 48(3):34:1–34:??, February 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Koutrouli:2016:RSE

[1590] Eleni Koutrouli and Aphrodite Tsalgatidou. Reputation systems evaluation survey. *ACM Computing Surveys*, 48(3):35:1–35:??, February 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Brienza:2016:SEE

[1591] Simone Brienza, Sena Efsun Cebeci, Seyed Saeid Masoumzadeh, Helmut Hlavacs, Öznur Özkasap, and Giuseppe Anastasi. A survey on energy efficiency in P2P systems: File distribution, content streaming, and epidemics. *ACM Computing Surveys*, 48(3):36:1–36:??, February 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Heartfield:2016:TAS

[1592] Ryan Heartfield and George Loukas. A taxonomy of attacks and a survey of defence mechanisms for semantic social engineering attacks. *ACM Computing Surveys*, 48(3):37:1–37:??, February 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hess:2016:DDH

[1593] Andrea Hess, Karin Anna Hummel, Wilfried N. Gansterer, and Günter Haring. Data-driven human mobility modeling: a survey and engineering guidance for mobile networking. *ACM Computing Surveys*, 48(3):38:1–38:??, February 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hoque:2016:MPD

[1594] Mohammad Ashraful Hoque, Matti Siekkinen, Kashif Nizam Khan, Yu Xiao, and Sasu Tarkoma. Modeling, profiling, and debugging the energy consumption of mobile devices. *ACM Computing Surveys*, 48(3):39:1–39:??, February 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Narayan:2016:SAP

[1595] John Narayan, Sandeep K. Shukla, and T. Charles Clancy. A survey of automatic protocol reverse engineering tools. *ACM Computing Surveys*, 48(3):40:1–40:??, February 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Momeni:2016:SAR

[1596] Elaheh Momeni, Claire Cardie, and Nicholas Diakopoulos. A survey on assessment and ranking methodologies for user-generated content on the Web. *ACM Computing Surveys*, 48(3):41:1–41:??, February 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Singh:2016:QAA

[1597] Sukhpal Singh and Inderveer Chana. QoS-aware autonomic resource management in cloud computing: a systematic review. *ACM Computing Surveys*, 48(3):42:1–42:??, February 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Faniyi:2016:SRS

[1598] Funmilade Faniyi and Rami Bahsoon. A systematic review of service level management in the cloud. *ACM Computing Surveys*, 48(3):43:1–43:??, February 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Natella:2016:ADS

[1599] Roberto Natella, Domenico Cotroneo, and Henrique S. Madeira. Assessing dependability with software fault injection: a survey. *ACM Computing Surveys*, 48(3):44:1–44:??, February 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mittal:2016:STAa

[1600] Sparsh Mittal. A survey of techniques for architecting and managing asymmetric multicore processors. *ACM Computing Surveys*, 48(3):45:1–45:??, February 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sgandurra:2016:EAT

[1601] Daniele Sgandurra and Emil Lupu. Evolution of attacks, threat models, and solutions for virtualized systems. *ACM Computing Surveys*, 48(3):46:1–46:??, February 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Avoine:2016:SSP

[1602] Gildas Avoine, Antonin Beaujeant, Julio Hernandez-Castro, Louis Demay, and Philippe Teuwen. A survey of security and privacy issues in ePassport protocols. *ACM Computing Surveys*, 48(3):47:1–47:??, February 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Calzarossa:2016:WCS

[1603] Maria Carla Calzarossa, Luisa Massari, and Daniele Tessera. Workload characterization: a survey revisited. *ACM Computing Surveys*, 48(3):48:1–48:??, February 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ren:2016:SMO

[1604] Yi Ren, Ling Liu, Qi Zhang, Qingbo Wu, Jianbo Guan, Jinzhu Kong, Huadong Dai, and Lisong Shao. Shared-memory optimizations for inter-virtual-machine communication. *ACM Computing Surveys*, 48(4):49:1–49:??, May 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mitra:2016:SRM

[1605] Barsha Mitra, Shamik Sural, Jaideep Vaidya, and Vijayalakshmi Atluri. A survey of role mining. *ACM Computing Surveys*, 48(4):50:1–50:??, May 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Farias:2016:SRS

[1606] Claudio M. De Farias, Wei Li, Flávia C. Delicato, Luci Pirmez, Albert Y. Zomaya, Paulo F. Pires, and José N. De Souza. A systematic review of shared sensor networks. *ACM Computing Surveys*, 48(4):51:1–51:??, May 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Crocco:2016:ASS

[1607] Marco Crocco, Marco Cristani, Andrea Trucco, and Vittorio Murino. Audio surveillance: a systematic review. *ACM Computing Surveys*, 48 (4):52:1–52:??, May 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Maghdid:2016:SOI

[1608] Halgurd S. Maghdid, Ihsan Alshahib Lami, Kayhan Zrar Ghafoor, and Jaime Lloret. Seamless outdoors-indoors localization solutions on smartphones: Implementation and challenges. *ACM Computing Surveys*, 48 (4):53:1–53:??, May 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mittal:2016:SAT

[1609] Sparsh Mittal. A survey of architectural techniques for managing process variation. *ACM Computing Surveys*, 48(4):54:1–54:??, May 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Stahl:2016:ECS

[1610] Bernd Carsten Stahl, Job Timmermans, and Brent Daniel Mittelstadt. The ethics of computing: a survey of the computing-oriented literature. *ACM Computing Surveys*, 48(4):55:1–55:??, May 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Murray:2016:OEM

[1611] Niall Murray, Brian Lee, Yuansong Qiao, and Gabriel-Miro Muntean. Olfaction-enhanced multimedia: a survey of application domains, displays, and research challenges. *ACM Computing Surveys*, 48(4):56:1–

56:??, May 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Palaghias:2016:SMS

[1612] Niklas Palaghias, Seyed Amir Hoseinitabatabaei, Michele Nati, Alexander Gluhak, and Klaus Moessner. A survey on mobile social signal processing. *ACM Computing Surveys*, 48(4):57:1–57:??, May 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Harrison:2016:RED

[1613] David C. Harrison, Winston K. G. Seah, and Ramesh Rayudu. Rare event detection and propagation in wireless sensor networks. *ACM Computing Surveys*, 48(4):58:1–58:??, May 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Werner:2016:SDA

[1614] Sebastian Werner, Javier Navaridas, and Mikel Luján. A survey on design approaches to circumvent permanent faults in networks-on-chip. *ACM Computing Surveys*, 48(4):59:1–59:??, May 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hu:2016:CLG

[1615] Liang Hu, Xilong Che, and Si-Qing Zheng. A closer look at GPGPU. *ACM Computing Surveys*, 48(4):60:1–60:??, May 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Platania:2016:CSC

[1616] Marco Platania, Daniel Obenshain, Thomas Tantillo, Yair Amir, and Neeraj Suri. On choosing server- or client-side solutions for BFT. *ACM Computing Surveys*, 48(4):61:1–61:??, May 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mittal:2016:STAb

[1617] Sparsh Mittal. A survey of techniques for approximate computing. *ACM Computing Surveys*, 48(4):62:1–62:??, May 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

DeOliveiraSandes:2016:POP

[1618] Edans Flavius De Oliveira Sandes, Azzedine Boukerche, and Alba Cristina Magalhaes Alves De Melo. Parallel optimal pairwise biological sequence comparison: Algorithms, platforms, and classification. *ACM Computing Surveys*, 48(4):63:1–63:??, May 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Schmidt:2016:SAG

[1619] Desmond Schmidt, Kenneth Radke, Seyit Camtepe, Ernest Foo, and Michal Ren. A survey and analysis of the GNSS spoofing threat and countermeasures. *ACM Computing Surveys*, 48(4):64:1–64:??, May 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Caballero:2016:TIE

[1620] Juan Caballero and Zhiqiang Lin. Type inference on executables. *ACM Computing Surveys*, 48(4):65:1–65:??, May 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shuja:2016:SMD

[1621] Junaid Shuja, Abdullah Gani, Kashif Bilal, Atta Ur Rehman Khan, Sajjad A. Madani, Samee U. Khan, and Albert Y. Zomaya. A survey of mobile device virtualization: Taxonomy and state of the art. *ACM Computing Surveys*, 49(1):1:1–1:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Alam:2016:CMR

[1622] Muhammad Raisul Alam, Marc St-Hilaire, and Thomas Kunz. Computational methods for residential energy cost optimization in smart grids: a survey. *ACM Computing Surveys*, 49(1):2:1–2:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Huttel:2016:FST

[1623] Hans Hüttel, Ivan Lanese, Vasco T. Vasconcelos, Luís Caires, Marco Carbone, Pierre-Malo Deniélou, Dimitris Mostrous, Luca Padovani, António Ravara, Emilio Tuosto, Hugo Torres Vieira, and Gianluigi Zavattaro. Foundations of session types and behavioural contracts. *ACM Computing Surveys*, 49(1):3:1–3:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Schrittwieser:2016:PST

[1624] Sebastian Schrittwieser, Stefan Katzenbeisser, Johannes Kinder, Georg Merzdovnik, and Edgar Weippl. Protecting software through obfuscation: Can it keep pace with progress in code analysis? *ACM Computing Surveys*, 49(1):4:1–4:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ao:2016:PBD

[1625] Buke Ao, Yongcai Wang, Lu Yu, Richard R. Brooks, and S. S. Iyengar. On precision bound of distributed fault-tolerant sensor fusion algorithms.

ACM Computing Surveys, 49(1):5:1–5:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Liu:2016:RAC

[1626] Junbin Liu, Sridha Sridharan, and Clinton Fookes. Recent advances in camera planning for large area surveillance: a comprehensive review. *ACM Computing Surveys*, 49(1):6:1–6:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Khan:2016:CLF

[1627] Suleman Khan, Abdullah Gani, Ainuddin Wahid Abdul Wahab, Mustapha Aminu Bagiwa, Muhammad Shiraz, Samee U. Khan, Rajkumar Buyya, and Albert Y. Zomaya. Cloud log forensics: Foundations, state of the art, and future directions. *ACM Computing Surveys*, 49 (1):7:1–7:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gbenga:2016:ULP

[1628] Dada Emmanuel Gbenga and Effirul Ikhwan Ramlan. Understanding the limitations of particle swarm algorithm for dynamic optimization tasks: a survey towards the singularity of PSO for swarm robotic applications. *ACM Computing Surveys*, 49(1):8:1–8:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zuo:2016:SSA

[1629] Xiang Zuo and Adriana Iamnitchi. A survey of socially aware peer-to-peer systems. *ACM Computing Surveys*, 49(1):9:1–9:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Jiang:2016:UGB

[1630] Wenjun Jiang, Guojun Wang, Md Zakirul Alam Bhuiyan, and Jie Wu. Understanding graph-based trust evaluation in online social networks: Methodologies and challenges. *ACM Computing Surveys*, 49(1):10:1–10:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Silva:2016:VNN

[1631] Fabrício A. Silva, Azzedine Boukerche, Thais R. M. Braga Silva, Linnyer B. Ruiz, Eduardo Cerqueira, and Antonio A. F. Loureiro. Vehicular networks: a new challenge for content-delivery-based applications. *ACM Computing Surveys*, 49(1):11:1–11:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Fang:2016:CHI

[1632] Ruogu Fang, Samira Pouyanfar, Yimin Yang, Shu-Ching Chen, and S. S. Iyengar. Computational health informatics in the big data age: a survey. *ACM Computing Surveys*, 49(1):12:1–12:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Tang:2016:ESP

[1633] Jun Tang, Yong Cui, Qi Li, Kui Ren, Jiangchuan Liu, and Rajkumar Buyya. Ensuring security and privacy preservation for cloud data services. *ACM Computing Surveys*, 49(1):13:1–13:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Li:2016:SSG

[1634] Xirong Li, Tiberio Uricchio, Lamberto Ballan, Marco Bertini, Cees G. M. Snoek, and Alberto Del Bimbo. Socializing the semantic gap: a comparative survey on image tag assignment, refinement, and retrieval. *ACM Computing Surveys*, 49(1):14:1–14:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Silva:2016:SCS

[1635] Nadia Felix F. Da Silva, Luiz F. S. Coletta, and Eduardo R. Hruschka. A survey and comparative study of tweet sentiment analysis via semi-supervised learning. *ACM Computing Surveys*, 49(1):15:1–15:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Samant:2016:HBS

[1636] Durgesh Samant and Umesh Bellur. Handling boot storms in virtualized data centers — a survey. *ACM Computing Surveys*, 49(1):16:1–16:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hassani:2016:VNL

[1637] Kaveh Hassani and Won-Sook Lee. Visualizing natural language descriptions: a survey. *ACM Computing Surveys*, 49(1):17:1–17:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Dan:2016:MPS

[1638] Ovidiu Dan and Brian D. Davison. Measuring and predicting search engine users' satisfaction. *ACM Computing Surveys*, 49(1):18:1–18:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Viotti:2016:CNT

[1639] Paolo Viotti and Marko Vukolić. Consistency in non-transactional distributed storage systems. *ACM Computing Surveys*, 49(1):19:1–19:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Liang:2016:DIM

[1640] Junbin Liang, Jiannong Cao, Rui Liu, and Tao Li. Distributed intelligent MEMS: a survey and a real-time programming framework. *ACM Computing Surveys*, 49(1):20:1–20:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Khwaja:2016:SSD

[1641] Salman Khwaja and Mohammad Alshayeb. Survey on software design-pattern specification languages. *ACM Computing Surveys*, 49(1):21:1–21:??, July 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Estebanez:2016:STL

[1642] Alvaro Estebanez, Diego R. Llanos, and Arturo Gonzalez-Escribano. A survey on thread-level speculation techniques. *ACM Computing Surveys*, 49(2):22:1–22:??, September 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Carrara:2016:BCC

[1643] Brent Carrara and Carlisle Adams. Out-of-band covert channels — a survey. *ACM Computing Surveys*, 49(2):23:1–23:??, September 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Labati:2016:BRA

[1644] Ruggero Donida Labati, Angelo Genovese, Enrique Muñoz, Vincenzo Piuri, Fabio Scotti, and Gianluca Sforza. Biometric recognition in automated border control: a survey. *ACM Computing Surveys*, 49(2):24:1–24:??, September 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Xiao:2016:SWI

[1645] Jiang Xiao, Zimu Zhou, Youwen Yi, and Lionel M. Ni. A survey on wireless indoor localization from the device perspective. *ACM Computing Surveys*, 49(2):25:1–25:??, September 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kokkinos:2016:SLM

[1646] Panagiotis Kokkinos, Dimitris Kalogeras, Anna Levin, and Emmanouel Varvarigos. Survey: Live migration and disaster recovery over long-distance networks. *ACM Computing Surveys*, 49(2):26:1–26:??, September 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Onica:2016:CPP

[1647] Emanuel Onica, Pascal Felber, Hugues Mercier, and Etienne Rivière. Confidentiality-preserving publish/subscribe: a survey. *ACM Computing Surveys*, 49(2):27:1–27:??, September 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Giachanou:2016:LIS

[1648] Anastasia Giachanou and Fabio Crestani. Like it or not: a survey of Twitter sentiment analysis methods. *ACM Computing Surveys*, 49(2):28:1–28:??, September 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kanvar:2016:HAS

[1649] Vini Kanvar and Uday P. Khedker. Heap abstractions for static analysis. *ACM Computing Surveys*, 49(2):29:1–29:??, September 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Souza:2016:TTS

[1650] Éfren L. Souza, Eduardo F. Nakamura, and Richard W. Pazzi. Target tracking for sensor networks: a survey. *ACM Computing Surveys*, 49(2):30:1–30:??, September 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Branco:2016:SPM

[1651] Paula Branco, Luís Torgo, and Rita P. Ribeiro. A survey of predictive modeling on imbalanced domains. *ACM Computing Surveys*, 49(2):31:1–31:??, September 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Alsabah:2016:PSI

[1652] Mashael Alsabah and Ian Goldberg. Performance and security improvements for Tor: a survey. *ACM Computing Surveys*, 49(2):32:1–32:??, September 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Khalifa:2016:SPB

[1653] Shadi Khalifa, Yehia Elshater, Kiran Sundaravarathan, Aparna Bhat, Patrick Martin, Fahim Imam, Dan Rope, Mike Mcroberts, and Craig Statchuk. The six pillars for building big data analytics ecosystems. *ACM Computing Surveys*, 49(2):33:1–33:??, September 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mittal:2016:SRP

[1654] Sparsh Mittal. A survey of recent prefetching techniques for processor caches. *ACM Computing Surveys*, 49(2):35:1–35:??, September 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kofler:2016:UIM

[1655] Christoph Kofler, Martha Larson, and Alan Hanjalic. User intent in multimedia search: a survey of the state of the art and future challenges. *ACM Computing Surveys*, 49(2):36:1–36:??, September 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Karydi:2016:PDC

[1656] Efthalia Karydi and Konstantinos Margaritis. Parallel and distributed collaborative filtering: a survey. *ACM Computing Surveys*, 49(2):37:1–37:??, September 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Xu:2016:TES

[1657] Meng Xu, Chengyu Song, Yang Ji, Ming-Wei Shih, Kangjie Lu, Cong Zheng, Ruian Duan, Yeongjin Jang, Byoungyoung Lee, Chenxiong Qian, Sangho Lee, and Taesoo Kim. Toward engineering a secure Android ecosystem: a survey of existing techniques. *ACM Computing Surveys*, 49(2):38:1–38:??, September 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Xavier:2016:SMM

[1658] Emerson M. A. Xavier, Francisco J. Ariza-López, and Manuel A. Ureña-Cámara. A survey of measures and methods for matching geospatial vector datasets. *ACM Computing Surveys*, 49(2):39:1–39:??, September 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Maqsood:2016:SIO

[1659] Tahir Maqsood, Osman Khalid, Rizwana Irfan, Sajjad A. Madani, and Samee U. Khan. Scalability issues in online social networks. *ACM Com-*

puting Surveys, 49(2):40:1–40:??, September 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bridges:2016:UGP

[1660] Robert A. Bridges, Neena Imam, and Tiffany M. Mintz. Understanding GPU power: a survey of profiling, modeling, and simulation methods. *ACM Computing Surveys*, 49(3):41:1–41:??, November 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Tang:2016:SSN

[1661] Jiliang Tang, Yi Chang, Charu Aggarwal, and Huan Liu. A survey of signed network mining in social media. *ACM Computing Surveys*, 49(3):42:1–42:??, November 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Blasco:2016:SWB

[1662] Jorge Blasco, Thomas M. Chen, Juan Tapiador, and Pedro Peris-Lopez. A survey of wearable biometric recognition systems. *ACM Computing Surveys*, 49(3):43:1–43:??, November 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Trobec:2016:INP

[1663] Roman Trobec, Radivoje Vasiljević, Milo Tomasević, Veljko Milutinović, Ramon Beivide, and Mateo Valero. Interconnection networks in petascale computer systems: a survey. *ACM Computing Surveys*, 49(3):44:1–44:??, November 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Singh:2016:TSA

[1664] Jasmeet Singh and Vishal Gupta. Text stemming: Approaches, applications, and challenges. *ACM Computing Surveys*, 49(3):45:1–45:??, November 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Coppola:2016:CCT

[1665] Riccardo Coppola and Maurizio Morisio. Connected car: Technologies, issues, future trends. *ACM Computing Surveys*, 49(3):46:1–46:??, November 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Cho:2016:SRA

[1666] Keewon Cho, Wooheon Kang, Hyungjun Cho, Changwook Lee, and Sungho Kang. A survey of repair analysis algorithms for memories.

ACM Computing Surveys, 49(3):47:1–47:??, November 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ribeiro:2016:TDU

[1667] Mateus L. Ribeiro, Henrique Manoel Lederman, Simone Elias, and Fátima L. S. Nunes. Techniques and devices used in palpation simulation with haptic feedback. *ACM Computing Surveys*, 49(3):48:1–48:??, November 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Pietri:2016:MVM

[1668] Ilia Pietri and Rizos Sakellariou. Mapping virtual machines onto physical machines in cloud computing: a survey. *ACM Computing Surveys*, 49(3): 49:1–49:??, November 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shu:2016:SSI

[1669] Rui Shu, Peipei Wang, Sigmund A. Gorski III, Benjamin Andow, Adwait Nadkarni, Luke Deshotels, Jason Gionta, William Enck, and Xiaohui Gu. A study of security isolation techniques. *ACM Computing Surveys*, 49 (3):50:1–50:??, November 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Steiner:2016:AWS

[1670] Rodrigo Vieira Steiner and Emil Lupu. Attestation in wireless sensor networks: a survey. *ACM Computing Surveys*, 49(3):51:1–51:??, November 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Abreu:2016:PBC

[1671] Pedro Henriques Abreu, Miriam Seoane Santos, Miguel Henriques Abreu, Bruno Andrade, and Daniel Castro Silva. Predicting breast cancer recurrence using machine learning techniques: a systematic review. *ACM Computing Surveys*, 49(3):52:1–52:??, November 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Malik:2016:GRN

[1672] Jamshaid Sarwar Malik and Ahmed Hemani. Gaussian random number generation: a survey on hardware architectures. *ACM Computing Surveys*, 49(3):53:1–53:??, November 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Brault-Baron:2016:HAR

[1673] Johann Brault-Baron. Hypergraph acyclicity revisited. *ACM Computing Surveys*, 49(3):54:1–54:??, December 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Reaves:2016:DAE

[1674] Bradley Reaves, Jasmine Bowers, Sigmund Albert Gorski III, Olabode Anise, Rahul Bobhate, Raymond Cho, Hiranava Das, Sharique Hussain, Hamza Karachiwala, Nolen Scaife, Byron Wright, Kevin Butler, William Enck, and Patrick Traynor. *droid: Assessment and evaluation of Android application analysis tools. *ACM Computing Surveys*, 49(3):55:1–55:??, November 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Aleti:2016:SLR

[1675] Aldeida Aleti and Irene Moser. A systematic literature review of adaptive parameter control methods for evolutionary algorithms. *ACM Computing Surveys*, 49(3):56:1–56:??, November 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Li:2016:PDS

[1676] Tuo Li, Jude Angelo Ambrose, Roshan Ragel, and Sri Parameswaran. Processor design for soft errors: Challenges and state of the art. *ACM Computing Surveys*, 49(3):57:1–57:??, November 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Dias:2016:SAP

[1677] Gabriel Martins Dias, Boris Bellalta, and Simon Oechsner. A survey about prediction-based data reduction in wireless sensor networks. *ACM Computing Surveys*, 49(3):58:1–58:??, December 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gardiner:2016:SML

[1678] Joseph Gardiner and Shishir Nagaraja. On the security of machine learning in malware C&C detection: a survey. *ACM Computing Surveys*, 49 (3):59:1–59:??, December 2016. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bailly:2017:VMT

[1679] Gilles Bailly, Eric Lecolinet, and Laurence Nigay. Visual menu techniques. *ACM Computing Surveys*, 49(4):60:1–60:??, February 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kiljan:2017:SAC

[1680] Sven Kiljan, Koen Simoens, Danny De Cock, Marko Van Eekelen, and Harald Vranken. A survey of authentication and communications security in online banking. *ACM Computing Surveys*, 49(4):61:1–61:??, February 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Pendleton:2017:SSS

[1681] Marcus Pendleton, Richard Garcia-Lebron, Jin-Hee Cho, and Shouhuai Xu. A survey on systems security metrics. *ACM Computing Surveys*, 49(4):62:1–62:??, February 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Georgievski:2017:APU

[1682] Ilche Georgievski and Marco Aiello. Automated planning for ubiquitous computing. *ACM Computing Surveys*, 49(4):63:1–63:??, February 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Diener:2017:ABT

[1683] Matthias Diener, Eduardo H. M. Cruz, Marco A. Z. Alves, Philippe O. A. Navaux, and Israel Koren. Affinity-based thread and data mapping in shared memory systems. *ACM Computing Surveys*, 49(4):64:1–64:??, February 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Servos:2017:CRO

[1684] Daniel Servos and Sylvia L. Osborn. Current research and open problems in attribute-based access control. *ACM Computing Surveys*, 49(4):65:1–65:??, February 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Liew:2017:SWM

[1685] Chee Sun Liew, Malcolm P. Atkinson, Michelle Galea, Tan Fong Ang, Paul Martin, and Jano I. Van Hemert. Scientific workflows: Moving across paradigms. *ACM Computing Surveys*, 49(4):66:1–66:??, February 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Capraro:2017:ISD

[1686] Maximilian Capraro and Dirk Riehle. Inner source definition, benefits, and challenges. *ACM Computing Surveys*, 49(4):67:1–67:??, February

2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Jhaveri:2017:ARF

[1687] Mohammad Hanif Jhaveri, Orcun Cetin, Carlos Gañán, Tyler Moore, and Michel Van Eeten. Abuse reporting and the fight against cybercrime. *ACM Computing Surveys*, 49(4):68:1–68:??, February 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Martinez:2017:SLP

[1688] Víctor Martínez, Fernando Berzal, and Juan-Carlos Cubero. A survey of link prediction in complex networks. *ACM Computing Surveys*, 49(4): 69:1–69:??, February 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chang:2017:MCB

[1689] Chii Chang, Satish Narayana Srirama, and Rajkumar Buyya. Mobile cloud business process management system for the Internet of Things: a survey. *ACM Computing Surveys*, 49(4):70:1–70:??, February 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wiriyathammabhum:2017:CVN

[1690] Peratham Wiriyathammabhum, Douglas Summers-Stay, Cornelia Fermüller, and Yiannis Aloimonos. Computer vision and natural language processing: Recent approaches in multimedia and robotics. *ACM Computing Surveys*, 49(4):71:1–71:??, February 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Pavai:2017:SCO

[1691] G. Pavai and T. V. Geetha. A survey on crossover operators. *ACM Computing Surveys*, 49(4):72:1–72:??, February 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Boukerche:2017:MIH

[1692] Azzedine Boukerche, Alexander Magnano, and Noura Aljeri. Mobile IP handover for vehicular networks: Methods, models, and classifications. *ACM Computing Surveys*, 49(4):73:1–73:??, February 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shin:2017:SSD

[1693] Youngjoo Shin, Dongyoung Koo, and Junbeom Hur. A survey of secure data deduplication schemes for cloud storage systems. *ACM Computing*

Surveys, 49(4):74:1–74:??, February 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Aburaed:2017:AQT

[1694] Nour Abura'ed, Faisal Shah Khan, and Harish Bhaskar. Advances in the quantum theoretical approach to image processing applications. *ACM Computing Surveys*, 49(4):75:1–75:??, February 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Tam:2017:EAM

[1695] Kimberly Tam, Ali Feizollah, Nor Badrul Anuar, Rosli Salleh, and Lorenzo Cavallaro. The evolution of Android malware and Android analysis techniques. *ACM Computing Surveys*, 49(4):76:1–76:??, February 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Li:2017:DDTa

[1696] Tao Li, Ning Xie, Chunqiu Zeng, Wubai Zhou, Li Zheng, Yexi Jiang, Yimin Yang, Hsin-Yu Ha, Wei Xue, Yue Huang, Shu-Ching Chen, Jainendra Navlakha, and S. S. Iyengar. Data-driven techniques in disaster information management. *ACM Computing Surveys*, 50(1):1:1–1:??, April 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

LaRosa:2017:BPV

[1697] Marcello La Rosa, Wil M. P. Van Der Aalst, Marlon Dumas, and Fredrik P. Milani. Business process variability modeling: a survey. *ACM Computing Surveys*, 50(1):2:1–2:??, April 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Salayma:2017:WBA

[1698] Marwa Salayma, Ahmed Al-Dubai, Imed Romdhani, and Youssef Nasser. Wireless body area network (WBAN): a survey on reliability, fault tolerance, and technologies coexistence. *ACM Computing Surveys*, 50(1): 3:1–3:??, April 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Nath:2017:EKG

[1699] Sayantan Nath, Sonali Agarwal, and G. N. Pandey. Evaluation of knowledge gaps in mathematical applications of thermal image processing techniques for fire prevention. *ACM Computing Surveys*, 50(1):4:1–4:??, April 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Su:2017:SDF

[1700] Ting Su, Ke Wu, Weikai Miao, Geguang Pu, Jifeng He, Yuting Chen, and Zhendong Su. A survey on data-flow testing. *ACM Computing Surveys*, 50(1):5:1–5:??, April 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Biswas:2017:STC

[1701] Arnab Kumar Biswas, Dipak Ghosal, and Shishir Nagaraja. A survey of timing channels and countermeasures. *ACM Computing Surveys*, 50 (1):6:1–6:??, April 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Dylla:2017:SQS

[1702] Frank Dylla, Jae Hee Lee, Till Mossakowski, Thomas Schneider, André Van Delden, Jasper Van De Ven, and Diedrich Wolter. A survey of qualitative spatial and temporal calculi: Algebraic and computational properties. *ACM Computing Surveys*, 50(1):7:1–7:??, April 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ramachandra:2017:PAD

[1703] Raghavendra Ramachandra and Christoph Busch. Presentation attack detection methods for face recognition systems: a comprehensive survey. *ACM Computing Surveys*, 50(1):8:1–8:??, April 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Meixner:2017:HIM

[1704] Britta Meixner. Hypervideos and interactive multimedia presentations. *ACM Computing Surveys*, 50(1):9:1–9:??, April 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Jukan:2017:SCS

[1705] Admela Jukan, Xavi Masip-Bruin, and Nina Amla. Smart computing and sensing technologies for animal welfare: a systematic review. *ACM Computing Surveys*, 50(1):10:1–10:??, April 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chi:2017:HTS

[1706] Lianhua Chi and Xingquan Zhu. Hashing techniques: a survey and taxonomy. *ACM Computing Surveys*, 50(1):11:1–11:36, April 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Tsvetkova:2017:UHM

[1707] Milena Tsvetkova, Taha Yasseri, Eric T. Meyer, J. Brian Pickering, Vegard Engen, Paul Walland, Marika Lüders, Asbjørn Følstad, and George Bravos. Understanding human-machine networks: a cross-disciplinary survey. *ACM Computing Surveys*, 50(1):12:1–12:??, April 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Calzavara:2017:SWJ

[1708] Stefano Calzavara, Riccardo Focardi, Marco Squarcina, and Mauro Tempesta. Surviving the Web: a journey into Web session security. *ACM Computing Surveys*, 50(1):13:1–13:??, April 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bashroush:2017:CTS

[1709] Rabih Bashroush, Muhammad Garba, Rick Rabiser, Iris Groher, and Goetz Botterweck. CASE tool support for variability management in software product lines. *ACM Computing Surveys*, 50(1):14:1–14:??, April 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Soler-Dominguez:2017:SFA

[1710] Amparo Soler-Dominguez, Angel A. Juan, and Renatas Kizys. A survey on financial applications of metaheuristics. *ACM Computing Surveys*, 50 (1):15:1–15:??, April 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Burow:2017:CFI

[1711] Nathan Burow, Scott A. Carr, Joseph Nash, Per Larsen, Michael Franz, Stefan Brunthaler, and Mathias Payer. Control-flow integrity: Precision, security, and performance. *ACM Computing Surveys*, 50(1):16:1–16:??, April 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

ulMuram:2017:SRS

[1712] Faiz ul Muram, Huy Tran, and Uwe Zdun. Systematic review of software behavioral model consistency checking. *ACM Computing Surveys*, 50(2): 17:1–17:??, June 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Soetens:2017:CFC

[1713] Quinten David Soetens, Romain Robbes, and Serge Demeyer. Changes as first-class citizens: a research perspective on modern software tooling. *ACM Computing Surveys*, 50(2):18:1–18:??, June 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Boyar:2017:OAA

[1714] Joan Boyar, Lene M. Favrholdt, Christian Kudahl, Kim S. Larsen, and Jesper W. Mikkelsen. Online algorithms with advice: a survey. *ACM Computing Surveys*, 50(2):19:1–19:??, June 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ioannidou:2017:DLA

[1715] Anastasia Ioannidou, Elisavet Chatzilari, Spiros Nikolopoulos, and Ioannis Kompatsiaris. Deep learning advances in computer vision with 3D data: a survey. *ACM Computing Surveys*, 50(2):20:1–20:??, June 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hussein:2017:ILS

[1716] Ahmed Hussein, Mohamed Medhat Gaber, Eyad Elyan, and Chrisina Jayne. Imitation learning: a survey of learning methods. *ACM Computing Surveys*, 50(2):21:1–21:??, June 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gudmundsson:2017:STA

[1717] Joachim Gudmundsson and Michael Horton. Spatio-temporal analysis of team sports. *ACM Computing Surveys*, 50(2):22:1–22:??, June 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gomes:2017:SEL

[1718] Heitor Murilo Gomes, Jean Paul Barddal, Fabrício Enembreck, and Albert Bifet. A survey on ensemble learning for data stream classification. *ACM Computing Surveys*, 50(2):23:1–23:??, June 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Singh:2017:SCS

[1719] Amit Kumar Singh, Piotr Dziurzanski, Hashan Roshantha Mendis, and Leandro Soares Indrusiak. A survey and comparative study of hard and soft real-time dynamic resource allocation strategies for Multi-/ many-core systems. *ACM Computing Surveys*, 50(2):24:1–24:??, June 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Yadollahi:2017:CST

[1720] Ali Yadollahi, Ameneh Gholipour Shahraki, and Osmar R. Zaiane. Current state of text sentiment analysis from opinion to emotion mining. *ACM Computing Surveys*, 50(2):25:1–25:??, June 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Weerasiri:2017:TSC

[1721] Denis Weerasiri, Moshe Chai Barukh, Boualem Benatallah, Quan Z. Sheng, and Rajiv Ranjan. A taxonomy and survey of cloud resource orchestration techniques. *ACM Computing Surveys*, 50(2):26:1–26:??, June 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mittal:2017:STC

[1722] Sparsh Mittal. A survey of techniques for cache partitioning in multicore processors. *ACM Computing Surveys*, 50(2):27:1–27:??, June 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Luo:2017:SEP

[1723] Hanjiang Luo, Kaishun Wu, Rukhsana Ruby, Feng Hong, Zhongwen Guo, and Lionel M. Ni. Simulation and experimentation platforms for underwater acoustic sensor networks: Advancements and challenges. *ACM Computing Surveys*, 50(2):28:1–28:??, June 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kazmi:2017:ERT

[1724] Rafaqut Kazmi, Dayang N. A. Jawawi, Radziah Mohamad, and Imran Ghani. Effective regression test case selection: a systematic literature review. *ACM Computing Surveys*, 50(2):29:1–29:??, June 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Do:2017:GTC

[1725] Cuong T. Do, Nguyen H. Tran, Choongseon Hong, Charles A. Kamhoua, Kevin A. Kwiat, Erik Blasch, Shaolei Ren, Niki Pissinou, and Sundaraja Sitharama Iyengar. Game theory for cyber security and privacy. *ACM Computing Surveys*, 50(2):30:1–30:??, June 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kafi:2017:SRP

[1726] Mohamed Amine Kafi, Jalel Ben Othman, and Nadjib Badache. A survey on reliability protocols in wireless sensor networks. *ACM Computing Surveys*, 50(2):31:1–31:??, June 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Perera:2017:FCS

[1727] Charith Perera, Yongrui Qin, Julio C. Estrella, Stephan Reiff-Marganiec, and Athanasios V. Vasilakos. Fog computing for sustainable smart cities: a survey. *ACM Computing Surveys*, 50(3):32:1–32:??, October 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Al-Helali:2017:AOH

[1728] Baligh M. Al-Helali and Sabri A. Mahmoud. Arabic Online Handwriting Recognition (AOHR): a survey. *ACM Computing Surveys*, 50(3):33:1–33:??, October 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Yau:2017:SRL

[1729] Kok-Lim Alvin Yau, Junaid Qadir, Hooi Ling Khoo, Mee Hong Ling, and Peter Komisarczuk. A survey on reinforcement learning models and algorithms for traffic signal control. *ACM Computing Surveys*, 50(3):34:1–34:??, October 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hong:2017:GVS

[1730] Cheol-Ho Hong, Ivor Spence, and Dimitrios S. Nikolopoulos. GPU virtualization and scheduling methods: a comprehensive survey. *ACM Computing Surveys*, 50(3):35:1–35:??, October 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Khan:2017:CDR

[1731] Muhammad Murad Khan, Roliana Ibrahim, and Imran Ghani. Cross domain recommender systems: a systematic literature review. *ACM Computing Surveys*, 50(3):36:1–36:??, October 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

OBrien:2017:SPE

[1732] Kenneth O'Brien, Ilia Pietri, Ravi Reddy, Alexey Lastovetsky, and Rizos Sakellariou. A survey of power and energy predictive models in HPC systems and applications. *ACM Computing Surveys*, 50(3):37:1–37:??, October 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Rheinlander:2017:OCD

[1733] Astrid Rheinländer, Ulf Leser, and Goetz Graefe. Optimization of complex dataflows with user-defined functions. *ACM Computing Surveys*, 50(3):38:1–38:??, October 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Barforoush:2017:NCF

[1734] Ahmad Barforoush, Hossein Shirazi, and Hojjat Emami. A new classification framework to evaluate the entity profiling on the Web: Past, present and future. *ACM Computing Surveys*, 50(3):39:1–39:??, October 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Poh:2017:SSE

[1735] Geong Sen Poh, Ji-Jian Chin, Wei-Chuen Yau, Kim-Kwang Raymond Choo, and Moesfa Soeheila Mohamad. Searchable symmetric encryption: Designs and challenges. *ACM Computing Surveys*, 50(3):40:1–40:??, October 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ye:2017:SMD

[1736] Yanfang Ye, Tao Li, Donald Adjeroh, and S. Sitharama Iyengar. A survey on malware detection using data mining techniques. *ACM Computing Surveys*, 50(3):41:1–41:??, October 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Keiren:2017:CMT

[1737] Jeroen J. A. Keiren, Peter Fontana, and Rance Cleaveland. Corrections to “A Menagerie of Timed Automata”. *ACM Computing Surveys*, 50(3):42:1–42:??, October 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). See [1477].

Cao:2017:DSC

[1738] Longbing Cao. Data science: a comprehensive overview. *ACM Computing Surveys*, 50(3):43:1–43:??, October 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Acquisti:2017:NPS

[1739] Alessandro Acquisti, Idris Adjerid, Rebecca Balebako, Laura Brandimarte, Lorrie Faith Cranor, Saranga Komanduri, Pedro Giovanni Leon, Norman Sadeh, Florian Schaub, Manya Sleeper, Yang Wang, and Shomir Wilson. Nudges for privacy and security: Understanding and assisting users’ choices online. *ACM Computing Surveys*, 50(3):44:1–44:??, October 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Li:2017:DDTb

[1740] Tao Li, Chunqiu Zeng, Yexi Jiang, Wubai Zhou, Liang Tang, Zheng Liu, and Yue Huang. Data-driven techniques in computing system management. *ACM Computing Surveys*, 50(3):45:1–45:??, October 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Morin:2017:EA

[1741] Pat Morin, Wolfgang Mulzer, and Tommy Reddad. Encoding arguments. *ACM Computing Surveys*, 50(3):46:1–46:??, October 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Storer:2017:BCS

[1742] Tim Storer. Bridging the chasm: a survey of software engineering practice in scientific programming. *ACM Computing Surveys*, 50(4):47:1–47:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Granatyr:2017:NAT

[1743] Jones Granatyr, Nardine Osman, João Dias, Maria Augusta Silveira Netto Nunes, Judith Masthoff, Fabrício Enembreck, Otto Robert Lessing, Carles Sierra, Ana Maria Paiva, and Edson Emílio Scalabrin. The need for affective trust applied to trust and reputation models. *ACM Computing Surveys*, 50(4):48:1–48:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kaur:2017:IPA

[1744] Kiranbir Kaur, Sandeep Sharma, and Karanjeet Singh Kahlon. Interoperability and portability approaches in inter-connected clouds: a review. *ACM Computing Surveys*, 50(4):49:1–49:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Psychou:2017:CRT

[1745] Georgia Psychou, Dimitrios Rodopoulos, Mohamed M. Sabry, Tobias Gemmeke, David Atienza, Tobias G. Noll, and Francky Catthoor. Classification of resilience techniques against functional errors at higher abstraction layers of digital systems. *ACM Computing Surveys*, 50(4):50:1–50:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Soulier:2017:CSI

[1746] Laure Soulier and Lynda Tamine. On the collaboration support in information retrieval. *ACM Computing Surveys*, 50(4):51:1–51:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Schoknecht:2017:SBP

[1747] Andreas Schoknecht, Tom Thaler, Peter Fettke, Andreas Oberweis, and Ralf Laue. Similarity of business process models — a state-of-the-art analysis. *ACM Computing Surveys*, 50(4):52:1–52:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Stein:2017:CLN

[1748] Michael Stein, Mathias Fischer, Immanuel Schweizer, and Max Mühlhäuser. A classification of locality in network research. *ACM Computing Surveys*, 50(4):53:1–53:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chakraborty:2017:MCA

[1749] Tanmoy Chakraborty, Ayushi Dalmia, Animesh Mukherjee, and Niloy Ganguly. Metrics for community analysis: a survey. *ACM Computing Surveys*, 50(4):54:1–54:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Tran:2017:SWT

[1750] Nguyen Khoi Tran, Quan Z. Sheng, Muhammad Ali Babar, and Lina Yao. Searching the Web of Things: State of the art, challenges, and solutions. *ACM Computing Surveys*, 50(4):55:1–55:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ghaffarian:2017:SVA

[1751] Seyed Mohammad Ghaffarian and Hamid Reza Shahriari. Software vulnerability analysis and discovery using machine-learning and data-mining techniques: a survey. *ACM Computing Surveys*, 50(4):56:1–56:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Tariq:2017:NGP

[1752] Zain Bin Tariq, Dost Muhammad Cheema, Muhammad Zahir Kamran, and Ijaz Haider Naqvi. Non-GPS positioning systems: a survey. *ACM Computing Surveys*, 50(4):57:1–57:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Deng:2017:TRT

[1753] Yangdong Deng, Yufei Ni, Zonghui Li, Shuai Mu, and Wenjun Zhang. Toward real-time ray tracing: a survey on hardware acceleration and microarchitecture techniques. *ACM Computing Surveys*, 50(4):58:1–58:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sun:2017:AJP

[1754] Kwangwon Sun and Sukyoung Ryu. Analysis of JavaScript programs: Challenges and research trends. *ACM Computing Surveys*, 50(4):59:1–59:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Caballero:2017:SAD

[1755] Rafael Caballero, Adrián Riesco, and Josep Silva. A survey of algorithmic debugging. *ACM Computing Surveys*, 50(4):60:1–60:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Jayaraman:2017:SPS

[1756] Padma Jayaraman and Ranjani Parthasarathi. A survey on post-silicon functional validation for multicore architectures. *ACM Computing Surveys*, 50(4):61:1–61:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Boukerche:2017:AVD

[1757] Azzedine Boukerche, Abdul Jabbar Siddiqui, and Abdelhamid Mammeri. Automated vehicle detection and classification: Models, methods, and techniques. *ACM Computing Surveys*, 50(5):62:1–62:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhong:2017:SAS

[1758] Changtao Zhong and Nishanth Sastry. Systems applications of social networks. *ACM Computing Surveys*, 50(5):63:1–63:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Baca:2017:SXQ

[1759] Radim Baca, Michal Krátký, Irena Holubová, Martin Necaský, Tomás Skopal, Martin Svoboda, and Sherif Sakr. Structural XML query processing. *ACM Computing Surveys*, 50(5):64:1–64:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bagga:2017:MAS

[1760] Pallavi Bagga and Rahul Hans. Mobile agents system security: a systematic survey. *ACM Computing Surveys*, 50(5):65:1–65:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Andreasen:2017:SDA

[1761] Esben Andreasen, Liang Gong, Anders Møller, Michael Pradel, Marija Selakovic, Koushik Sen, and Cristian-Alexandru Staicu. A survey of dynamic analysis and test generation for JavaScript. *ACM Computing Surveys*, 50(5):66:1–66:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Murray:2017:TOB

[1762] Niall Murray, Oluwakemi A. Ademoye, Gheorghita Ghinea, and Gabriel-Miro Muntean. A tutorial for olfaction-based multisensorial media application design and evaluation. *ACM Computing Surveys*, 50(5):67:1–67:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Angles:2017:FMQ

[1763] Renzo Angles, Marcelo Arenas, Pablo Barceló, Aidan Hogan, Juan Reutter, and Domagoj Vrgoc. Foundations of modern query languages for graph databases. *ACM Computing Surveys*, 50(5):68:1–68:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Herremans:2017:FTM

[1764] Dorien Herremans, Ching-Hua Chuan, and Elaine Chew. A functional taxonomy of music generation systems. *ACM Computing Surveys*, 50(5):69:1–69:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Pulido-Prieto:2017:SNP

[1765] Oscar Pulido-Prieto and Ulises Juárez-Martínez. A survey of naturalistic programming technologies. *ACM Computing Surveys*, 50(5):70:1–70:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Alevizos:2017:PCE

[1766] Elias Alevizos, Anastasios Skarlatidis, Alexander Artikis, and Georgios Paliouras. Probabilistic complex event recognition: a survey. *ACM Computing Surveys*, 50(5):71:1–71:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Martinez-Gil:2017:MES

[1767] Francisco Martinez-Gil, Miguel Lozano, Ignacio García-Fernández, and Fernando Fernández. Modeling, evaluation, and scale on artificial pedestrians: a literature review. *ACM Computing Surveys*, 50(5):72:1–72:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Joshi:2017:ASD

[1768] Aditya Joshi, Pushpak Bhattacharyya, and Mark J. Carman. Automatic sarcasm detection: a survey. *ACM Computing Surveys*, 50(5):73:1–73:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gonzalez:2017:RQL

[1769] Pablo González, Alberto Castaño, Nitesh V. Chawla, and Juan José Del Coz. A review on quantification learning. *ACM Computing Surveys*, 50(5):74:1–74:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Batalla:2017:SSH

[1770] Jordi Mongay Batalla, Athanasios Vasilakos, and Mariusz Gajewski. Secure smart homes: Opportunities and challenges. *ACM Computing Surveys*, 50(5):75:1–75:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

DeBoer:2017:SAO

[1771] Frank De Boer, Vlad Serbanescu, Reiner Hähnle, Ludovic Henrio, Justine Rochas, Crystal Chang Din, Einar Broch Johnsen, Marjan Sirjani, Ehsan Khamespanah, Kiko Fernandez-Reyes, and Albert Mingkun Yang. A survey of active object languages. *ACM Computing Surveys*, 50(5):76:1–76:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Laube:2017:SAC

[1772] Stefan Laube and Rainer Böhme. Strategic aspects of cyber risk information sharing. *ACM Computing Surveys*, 50(5):77:1–77:??, November 2017. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Santana:2018:SPS

[1773] Eduardo Felipe Zambom Santana, Ana Paula Chaves, Marco Aurelio Gerosa, Fabio Kon, and Dejan S. Milojicic. Software platforms for smart cities: Concepts, requirements, challenges, and a unified reference architecture. *ACM Computing Surveys*, 50(6):78:1–78:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Tunali:2018:SFT

[1774] Onur Tunali and Mustafa Altun. A survey of fault-tolerance algorithms for reconfigurable nano-crossbar arrays. *ACM Computing Surveys*, 50(6): 79:1–79:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Tal:2018:TRV

[1775] Irina Tal and Gabriel-Miro Muntean. Towards reasoning vehicles: a survey of fuzzy logic-based solutions in vehicular networks. *ACM Computing Surveys*, 50(6):80:1–80:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shi:2018:GPG

[1776] Xuanhua Shi, Zhigao Zheng, Yongluan Zhou, Hai Jin, Ligang He, Bo Liu, and Qiang-Sheng Hua. Graph processing on GPUs: a survey. *ACM Computing Surveys*, 50(6):81:1–81:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Burns:2018:SRM

[1777] Alan Burns and Robert I. Davis. A survey of research into mixed criticality systems. *ACM Computing Surveys*, 50(6):82:1–82:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Martins:2018:SFH

[1778] Paulo Martins, Leonel Sousa, and Artur Mariano. A survey on fully homomorphic encryption: an engineering perspective. *ACM Computing Surveys*, 50(6):83:1–83:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Torreno:2018:CMA

[1779] Alejandro Torreño, Eva Onaindia, Antonín Komenda, and Michal Stolba. Cooperative multi-agent planning: a survey. *ACM Computing Surveys*, 50(6):84:1–84:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Yadav:2018:MEH

[1780] Pranjul Yadav, Michael Steinbach, Vipin Kumar, and Gyorgy Simon. Mining electronic health records (EHRs): a survey. *ACM Computing Surveys*, 50(6):85:1–85:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Neal:2018:SST

[1781] Tempestt Neal, Kalaivani Sundararajan, Aneez Fatima, Yiming Yan, Yingfei Xiang, and Damon Woodard. Surveying stylometry techniques and applications. *ACM Computing Surveys*, 50(6):86:1–86:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Voronkov:2018:SLR

[1782] Artem Voronkov, Leonardo Horn Iwaya, Leonardo A. Martucci, and Stefan Lindskog. Systematic literature review on usability of firewall configuration. *ACM Computing Surveys*, 50(6):87:1–87:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kavun:2018:SAE

[1783] Elif Bilge Kavun, Hristina Mihajloska, and Tolga Yalçin. A survey on authenticated encryption–ASIC designer's perspective. *ACM Computing Surveys*, 50(6):88:1–88:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Werner:2018:SON

[1784] Sebastian Werner, Javier Navaridas, and Mikel Luján. A survey on optical network-on-chip architectures. *ACM Computing Surveys*, 50(6):89:1–89:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hooshyar:2018:DDA

[1785] Danial Hooshyar, Moslem Yousefi, and Heuiseok Lim. Data-driven approaches to game player modeling: a systematic literature review. *ACM Computing Surveys*, 50(6):90:1–90:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mansouri:2018:DSM

[1786] Yaser Mansouri, Adel Nadjaran Toosi, and Rajkumar Buyya. Data storage management in cloud environments: Taxonomy, survey, and future directions. *ACM Computing Surveys*, 50(6):91:1–91:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shrestha:2018:ODE

[1787] Prakash Shrestha and Nitesh Saxena. An offensive and defensive exposition of wearable computing. *ACM Computing Surveys*, 50(6):92:1–92:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

VanBerkel:2018:ESM

[1788] Niels Van Berkel, Denzil Ferreira, and Vassilis Kostakos. The experience sampling method on mobile devices. *ACM Computing Surveys*, 50(6): 93:1–93:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Li:2018:FSD

[1789] Jundong Li, Kewei Cheng, Suhang Wang, Fred Morstatter, Robert P. Trevino, Jiliang Tang, and Huan Liu. Feature selection: a data perspective. *ACM Computing Surveys*, 50(6):94:1–94:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Uurtio:2018:TCC

[1790] Viivi Uurtio, João M. Monteiro, Jaz Kandola, John Shawe-Taylor, Delmiro Fernandez-Reyes, and Juho Rousu. A tutorial on canonical correlation methods. *ACM Computing Surveys*, 50(6):95:1–95:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Skarbez:2018:SPR

[1791] Richard Skarbez, Frederick P. Brooks, Jr., and Mary C. Whitton. A survey of presence and related concepts. *ACM Computing Surveys*, 50(6): 96:1–96:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

He:2018:GSB

[1792] Suining He and Kang G. Shin. Geomagnetism for Smartphone-based indoor localization: Challenges, advances, and comparisons. *ACM Computing Surveys*, 50(6):97:1–97:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mertz:2018:UAL

[1793] Jhonny Mertz and Ingrid Nunes. Understanding application-level caching in Web applications: a comprehensive introduction and survey of state-of-the-art approaches. *ACM Computing Surveys*, 50(6):98:1–98:??, January 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Betzel:2018:ACT

[1794] Filipe Betzel, Karen Khatamifard, Harini Suresh, David J. Lilja, John Sartori, and Ulya Karpuzcu. Approximate communication: Techniques for reducing communication bottlenecks in large-scale parallel systems. *ACM Computing Surveys*, 51(1):1:1–1:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sturdee:2018:ACS

[1795] Miriam Sturdee and Jason Alexander. Analysis and classification of shape-changing interfaces for design and application-based research. *ACM Computing Surveys*, 51(1):2:1–2:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wasik:2018:SOJ

[1796] Szymon Wasik, Maciej Antczak, Jan Badura, Artur Laskowski, and Tomasz Sternal. A survey on online judge systems and their applications. *ACM Computing Surveys*, 51(1):3:1–3:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chen:2018:MTR

[1797] Tsong Yueh Chen, Fei-Ching Kuo, Huai Liu, Pak-Lok Poon, Dave Towey, T. H. Tse, and Zhi Quan Zhou. Metamorphic testing: a review of challenges and opportunities. *ACM Computing Surveys*, 51(1):4:1–4:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Obaidellah:2018:SUE

[1798] Unaizah Obaidellah, Mohammed Al Haek, and Peter C.-H. Cheng. A survey on the usage of eye-tracking in computer programming. *ACM Computing Surveys*, 51(1):5:1–5:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Paci:2018:SAC

[1799] Federica Paci, Anna Squicciarini, and Nicola Zannone. Survey on access control for community-centered collaborative systems. *ACM Computing Surveys*, 51(1):6:1–6:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Daniel:2018:QCC

[1800] Florian Daniel, Pavel Kucherbaev, Cinzia Cappiello, Boualem Benatallah, and Mohammad Allahbakhsh. Quality control in crowdsourcing: a survey of quality attributes, assessment techniques, and assurance actions. *ACM Computing Surveys*, 51(1):7:1–7:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Netto:2018:HCS

[1801] Marco A. S. Netto, Rodrigo N. Calheiros, Eduardo R. Rodrigues, Renato L. F. Cunha, and Rajkumar Buyya. HPC cloud for scientific and business applications: Taxonomy, vision, and research challenges. *ACM Computing Surveys*, 51(1):8:1–8:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Khalastchi:2018:FDD

[1802] Eliahu Khalastchi and Meir Kalech. On fault detection and diagnosis in robotic systems. *ACM Computing Surveys*, 51(1):9:1–9:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Pouyanfar:2018:MBD

[1803] Samira Pouyanfar, Yimin Yang, Shu-Ching Chen, Mei-Ling Shyu, and S. S. Iyengar. Multimedia big data analytics: a survey. *ACM Computing Surveys*, 51(1):10:1–10:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gritzalis:2018:ERA

[1804] Dimitris Gritzalis, Giulia Iseppi, Alexios Mylonas, and Vasilis Stavrou. Exiting the risk assessment maze: a meta-survey. *ACM Computing Surveys*, 51(1):11:1–11:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Nashat:2018:CTF

[1805] Dalia Nashat and Ali A. Amer. A comprehensive taxonomy of fragmentation and allocation techniques in distributed database design. *ACM Computing Surveys*, 51(1):12:1–12:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhou:2018:ATM

[1806] Bowen Zhou and Rajkumar Buyya. Augmentation techniques for mobile cloud computing: a taxonomy, survey, and future directions. *ACM Computing Surveys*, 51(1):13:1–13:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Marvel:2018:MRA

[1807] Jeremy A. Marvel, Roger Bostelman, and Joe Falco. Multi-robot assembly strategies and metrics. *ACM Computing Surveys*, 51(1):14:1–14:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gaziel-Yablowitz:2018:RAF

[1808] Michal Gaziel-Yablowitz and David G. Schwartz. A review and assessment framework for mobile-based emergency intervention apps. *ACM Computing Surveys*, 51(1):15:1–15:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Al-Garadi:2018:AOS

[1809] Mohammed Ali Al-Garadi, Kasturi Dewi Varathan, Sri Devi Ravana, Ejaz Ahmed, Ghulam Mujtaba, Muhammad Usman Shahid Khan, and Samee U. Khan. Analysis of online social network connections for identification of influential users: Survey and open research issues. *ACM Computing Surveys*, 51(1):16:1–16:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Monperrus:2018:ASR

[1810] Martin Monperrus. Automatic software repair: a bibliography. *ACM Computing Surveys*, 51(1):17:1–17:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ding:2018:OSA

[1811] Zhijun Ding, Xiaolun Li, Changjun Jiang, and Mengchu Zhou. Objectives and state-of-the-art of location-based social network recommender systems. *ACM Computing Surveys*, 51(1):18:1–18:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Coutinho:2018:UWS

[1812] Rodolfo W. L. Coutinho, Azzedine Boukerche, Luiz F. M. Vieira, and Antonio A. F. Loureiro. Underwater wireless sensor networks: a new challenge for topology control-based systems. *ACM Computing Surveys*, 51 (1):19:1–19:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bruno:2018:SGC

[1813] Rodrigo Bruno and Paulo Ferreira. A study on garbage collection algorithms for big data environments. *ACM Computing Surveys*, 51(1): 20:1–20:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Draghici:2018:STA

[1814] Adriana Draghici and Maarten Van Steen. A survey of techniques for automatically sensing the behavior of a crowd. *ACM Computing Sur-*

veys, 51(1):21:1–21:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bergmayr:2018:SRC

[1815] Alexander Bergmayr, Uwe Breitenbücher, Nicolas Ferry, Alessandro Rossini, Arnor Solberg, Manuel Wimmer, Gerti Kappel, and Frank Leymann. A systematic review of cloud modeling languages. *ACM Computing Surveys*, 51(1):22:1–22:??, April 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Boito:2018:CRP

[1816] Francieli Zanon Boito, Eduardo C. Inacio, Jean Luca Bez, Philippe O. A. Navaux, Mario A. R. Dantas, and Yves Denneulin. A checkpoint of research on parallel I/O for high-performance computing. *ACM Computing Surveys*, 51(2):23:1–23:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Brugere:2018:NSI

[1817] Ivan Brugere, Brian Gallagher, and Tanya Y. Berger-Wolf. Network structure inference, a survey: Motivations, methods, and applications. *ACM Computing Surveys*, 51(2):24:1–24:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhang:2018:FEA

[1818] Ligang Zhang, Brijesh Verma, Dian Tjondronegoro, and Vinod Chandran. Facial expression analysis under partial occlusion: a survey. *ACM Computing Surveys*, 51(2):25:1–25:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gebai:2018:SAK

[1819] Mohamad Gebai and Michel R. Dagenais. Survey and analysis of kernel and userspace tracers on Linux: Design, implementation, and overhead. *ACM Computing Surveys*, 51(2):26:1–26:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Rojas:2018:WRD

[1820] Elisa Rojas, Roberto Doriguzzi-Corin, Sergio Tamurejo, Andres Beato, Arne Schwabe, Kevin Phemius, and Carmen Guerrero. Are we ready to drive software-defined networks? A comprehensive survey on management tools and techniques. *ACM Computing Surveys*, 51(2):27:1–27:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Lamb:2018:ECC

[1821] Carolyn Lamb, Daniel G. Brown, and Charles L. A. Clarke. Evaluating computational creativity: an interdisciplinary tutorial. *ACM Computing Surveys*, 51(2):28:1–28:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Fathy:2018:LSI

[1822] Yasmin Fathy, Payam Barnaghi, and Rahim Tafazolli. Large-scale indexing, discovery, and ranking for the Internet of Things (IoT). *ACM Computing Surveys*, 51(2):29:1–29:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Siabato:2018:SMT

[1823] Willington Siabato, Christophe Claramunt, Sergio Ilarri, and Miguel Angel Manso-Callejo. A survey of modelling trends in temporal GIS. *ACM Computing Surveys*, 51(2):30:1–30:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shan:2018:PSC

[1824] Zihao Shan, Kui Ren, Marina Blanton, and Cong Wang. Practical secure computation outsourcing: a survey. *ACM Computing Surveys*, 51(2):31:1–31:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zubiaga:2018:DRR

[1825] Arkaitz Zubiaga, Ahmet Aker, Kalina Bontcheva, Maria Liakata, and Rob Procter. Detection and resolution of rumours in social media: a survey. *ACM Computing Surveys*, 51(2):32:1–32:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Dayarathna:2018:RAE

[1826] Miyuru Dayarathna and Srinath Perera. Recent advancements in event processing. *ACM Computing Surveys*, 51(2):33:1–33:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Soo:2018:SLB

[1827] Wooi King Soo, Teck-Chaw Ling, Aung Htein Maw, and Su Thawda Win. Survey on load-balancing methods in 802.11 infrastructure mode wireless networks for improving quality of service. *ACM Computing Surveys*, 51(2):34:1–34:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Rossetti:2018:CDD

[1828] Giulio Rossetti and Rémy Cazabet. Community discovery in dynamic networks: a survey. *ACM Computing Surveys*, 51(2):35:1–35:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Toch:2018:PIC

[1829] Eran Toch, Claudio Bettini, Erez Shmueli, Laura Radaelli, Andrea Lanzi, Daniele Riboni, and Bruno Lepri. The privacy implications of cyber security systems: a technological survey. *ACM Computing Surveys*, 51 (2):36:1–36:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Saputra:2018:VSS

[1830] Muhamad Risqi U. Saputra, Andrew Markham, and Niki Trigoni. Visual SLAM and structure from motion in dynamic environments: a survey. *ACM Computing Surveys*, 51(2):37:1–37:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ghanbari:2018:OQS

[1831] Hadi Ghanbari, Tero Vartiainen, and Mikko Siponen. Omission of quality software development practices: a systematic literature review. *ACM Computing Surveys*, 51(2):38:1–38:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Li:2018:EOC

[1832] Chao Li, Yushu Xue, Jing Wang, Weigong Zhang, and Tao Li. Edge-oriented computing paradigms: a survey on architecture design and system management. *ACM Computing Surveys*, 51(2):39:1–39:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Davoudian:2018:SNS

[1833] Ali Davoudian, Liu Chen, and Mengchi Liu. A survey on NoSQL stores. *ACM Computing Surveys*, 51(2):40:1–40:43, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Rodrigues:2018:UGA

[1834] Davi Silva Rodrigues, Márcio Eduardo Delamaro, Cléber Gimenez Corrêa, and Fátima L. S. Nunes. Using genetic algorithms in test data generation: a critical systematic mapping. *ACM Computing Surveys*, 51

(2):41:1–41:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Antunes:2018:SSH

[1835] Rodolfo S. Antunes, Lucas A. Seewald, Vinicius F. Rodrigues, Cristiano A. Da Costa, Luiz Gonzaga, Jr., Rodrigo R. Righi, Andreas Maier, Björn Eskofier, Malte Ollenschläger, Farzad Naderi, Rebecca Fahrig, Sebastian Bauer, Sigrun Klein, and Gelson Campanatti. A survey of sensors in healthcare workflow monitoring. *ACM Computing Surveys*, 51 (2):42:1–42:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Turilli:2018:CPP

[1836] Matteo Turilli, Mark Santcroos, and Shantenu Jha. A comprehensive perspective on pilot-job systems. *ACM Computing Surveys*, 51(2):43:1–43:??, June 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Brandt:2018:GS

[1837] Tobias Brandt and Marco Grawunder. GeoStreams: a survey. *ACM Computing Surveys*, 51(3):44:1–44:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Murthy:2018:CBM

[1838] Y. V. Srinivasa Murthy and Shashidhar G. Koolagudi. Content-based music information retrieval (CB-MIR) and its applications toward the music industry: a review. *ACM Computing Surveys*, 51(3):45:1–45:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Barmpatsalou:2018:CFT

[1839] Konstantia Barmpatsalou, Tiago Cruz, Edmundo Monteiro, and Paulo Simoes. Current and future trends in mobile device forensics: a survey. *ACM Computing Surveys*, 51(3):46:1–46:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Saeed:2018:SMS

[1840] Nasir Saeed, Haewoon Nam, Mian Imtiaz Ul Haq, and Dost Bhatti Muhammad Saqib. A survey on multidimensional scaling. *ACM Computing Surveys*, 51(3):47:1–47:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Resende:2018:SRF

[1841] Paulo Angelo Alves Resende and André Costa Drummond. A survey of random forest based methods for intrusion detection systems. *ACM Computing Surveys*, 51(3):48:1–48:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gomes:2018:CSS

[1842] Cláudio Gomes, Casper Thule, David Broman, Peter Gorm Larsen, and Hans Vangheluwe. Co-simulation: a survey. *ACM Computing Surveys*, 51(3):49:1–49:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Baldoni:2018:SSE

[1843] Roberto Baldoni, Emilio Coppa, Daniele Cono D'Elia, Camil Demetrescu, and Irene Finocchi. A survey of symbolic execution techniques. *ACM Computing Surveys*, 51(3):50:1–50:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shirazi:2018:SRA

[1844] Fatemeh Shirazi, Milivoj Simeonovski, Muhammad Rizwan Asghar, Michael Backes, and Claudia Diaz. A survey on routing in anonymous communication protocols. *ACM Computing Surveys*, 51(3):51:1–51:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

VanDijkhuizen:2018:SNT

[1845] Niels Van Dijkhuizen and Jeroen Van Der Ham. A survey of network traffic anonymisation techniques and implementations. *ACM Computing Surveys*, 51(3):52:1–52:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Oliveira:2018:PAW

[1846] Wellington Oliveira, Daniel De Oliveira, and Vanessa Braganholo. Provenance analytics for workflow-based computational experiments: a survey. *ACM Computing Surveys*, 51(3):53:1–53:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hanford:2018:SES

[1847] Nathan Hanford, Vishal Ahuja, Matthew K. Farrens, Brian Tierney, and Dipak Ghosal. A survey of end-system optimizations for high-speed networks. *ACM Computing Surveys*, 51(3):54:1–54:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ramaki:2018:SMS

[1848] Ali Ahmadian Ramaki, Abbas Rasoolzadegan, and Abbas Ghaemi Bafghi. A systematic mapping study on intrusion alert analysis in intrusion detection systems. *ACM Computing Surveys*, 51(3):55:1–55:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Venieris:2018:TMC

[1849] Stylianos I. Venieris, Alexandros Kouris, and Christos-Savvas Bouganis. Toolflows for mapping convolutional neural networks on FPGAs: a survey and future directions. *ACM Computing Surveys*, 51(3):56:1–56:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wagner:2018:TPM

[1850] Isabel Wagner and David Eckhoff. Technical privacy metrics: a systematic survey. *ACM Computing Surveys*, 51(3):57:1–57:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Meidan:2018:MSP

[1851] Ayman Meidan, Julián A. García-García, Isabel Ramos, and María José Escalona. Measuring software process: a systematic mapping study. *ACM Computing Surveys*, 51(3):58:1–58:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Son:2018:TSD

[1852] Jungmin Son and Rajkumar Buyya. A taxonomy of software-defined networking (SDN)-enabled cloud computing. *ACM Computing Surveys*, 51(3):59:1–59:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Heidari:2018:SGP

[1853] Safiollah Heidari, Yogesh Simmhan, Rodrigo N. Calheiros, and Rajkumar Buyya. Scalable graph processing frameworks: a taxonomy and open challenges. *ACM Computing Surveys*, 51(3):60:1–60:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chen:2018:STS

[1854] Tao Chen, Rami Bahsoon, and Xin Yao. A survey and taxonomy of self-aware and self-adaptive cloud autoscaling systems. *ACM Computing Surveys*, 51(3):61:1–61:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Liu:2018:GSM

[1855] Yike Liu, Tara Safavi, Abhilash Dighe, and Danai Koutra. Graph summarization methods and applications: a survey. *ACM Computing Surveys*, 51(3):62:1–62:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ivie:2018:RSC

[1856] Peter Ivie and Douglas Thain. Reproducibility in scientific computing. *ACM Computing Surveys*, 51(3):63:1–63:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Qi:2018:CSQ

[1857] Jianzhong Qi, Rui Zhang, Christian S. Jensen, Kotagiri Ramamohanarao, and Jiayuan He. Continuous spatial query processing: a survey of safe region based techniques. *ACM Computing Surveys*, 51(3):64:1–64:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sundararajan:2018:DLB

[1858] Kalaivani Sundararajan and Damon L. Woodard. Deep learning for biometrics: a survey. *ACM Computing Surveys*, 51(3):65:1–65:??, July 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Quadrana:2018:SAR

[1859] Massimo Quadrana, Paolo Cremonesi, and Dietmar Jannach. Sequence-aware recommender systems. *ACM Computing Surveys*, 51(4):66:1–66:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhauniarovich:2018:SMD

[1860] Yury Zhauniarovich, Issa Khalil, Ting Yu, and Marc Dacier. A survey on malicious domains detection through DNS data analysis. *ACM Computing Surveys*, 51(4):67:1–67:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

FarrUs:2018:VDA

[1861] Mireia FarrÚs. Voice disguise in automatic speaker recognition. *ACM Computing Surveys*, 51(4):68:1–68:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Botacin:2018:WWW

[1862] Marcus Botacin, Paulo Lício De Geus, and André Grégio. Who watches the watchmen: a security-focused review on current state-of-the-art techniques, tools, and methods for systems and binary analysis on modern platforms. *ACM Computing Surveys*, 51(4):69:1–69:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Huang:2018:SUC

[1863] Keman Huang, Michael Siegel, and Stuart Madnick. Systematically understanding the cyber attack business: a survey. *ACM Computing Surveys*, 51(4):70:1–70:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Abdallah:2018:ARE

[1864] Zahraa S. Abdallah, Mohamed Medhat Gaber, Bala Srinivasan, and Shonali Krishnaswamy. Activity recognition with evolving data streams: a review. *ACM Computing Surveys*, 51(4):71:1–71:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Vipin:2018:FDP

[1865] Kizheppatt Vipin and Suhaib A. Fahmy. FPGA dynamic and partial reconfiguration: a survey of architectures, methods, and applications. *ACM Computing Surveys*, 51(4):72:1–72:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Qu:2018:ASW

[1866] Chenhao Qu, Rodrigo N. Calheiros, and Rajkumar Buyya. Auto-scaling Web applications in clouds: a taxonomy and survey. *ACM Computing Surveys*, 51(4):73:1–73:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Siow:2018:AIT

[1867] Eugene Siow, Thanassis Tiropanis, and Wendy Hall. Analytics for the Internet of Things: a survey. *ACM Computing Surveys*, 51(4):74:1–74:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ochieng:2018:LSO

[1868] Peter Ochieng and Swaib Kyanda. Large-scale ontology matching: State-of-the-art analysis. *ACM Computing Surveys*, 51(4):75:1–75:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Giraldo:2018:SPB

[1869] Jairo Giraldo, David Urbina, Alvaro Cardenas, Junia Valente, Mustafa Faisal, Justin Ruths, Nils Ole Tippenhauer, Henrik Sandberg, and Richard Candell. A survey of physics-based attack detection in cyber-physical systems. *ACM Computing Surveys*, 51(4):76:1–76:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Toth:2018:GDD

[1870] Edward Toth and Sanjay Chawla. Group deviation detection methods: a survey. *ACM Computing Surveys*, 51(4):77:1–77:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Tamine:2018:ECI

[1871] Lynda Tamine and Mariam Daoud. Evaluation in contextual information retrieval: Foundations and recent advances within the challenges of context dynamicity and data privacy. *ACM Computing Surveys*, 51 (4):78:1–78:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Acar:2018:SHE

[1872] Abbas Acar, Hidayet Aksu, A. Selcuk Uluagac, and Mauro Conti. A survey on homomorphic encryption schemes: Theory and implementation. *ACM Computing Surveys*, 51(4):79:1–79:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Han:2018:DTC

[1873] Xiao Han, Nizar Kheir, and Davide Balzarotti. Deception techniques in computer security: a research perspective. *ACM Computing Surveys*, 51 (4):80:1–80:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Allamanis:2018:SML

[1874] Miltiadis Allamanis, Earl T. Barr, Premkumar Devanbu, and Charles Sutton. A survey of machine learning for big code and naturalness. *ACM Computing Surveys*, 51(4):81:1–81:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Singh:2018:SMM

[1875] Harcharan Jit Singh and Seema Bawa. Scalable metadata management techniques for ultra-large distributed storage systems — a systematic review. *ACM Computing Surveys*, 51(4):82:1–82:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Atluri:2018:STD

[1876] Gowtham Atluri, Anuj Karpatne, and Vipin Kumar. Spatio-temporal data mining: a survey of problems and methods. *ACM Computing Surveys*, 51(4):83:1–83:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wylot:2018:RDS

[1877] Marcin Wylot, Manfred Hauswirth, Philippe Cudré-Mauroux, and Sherif Sakr. RDF data storage and query processing schemes: a survey. *ACM Computing Surveys*, 51(4):84:1–84:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Fortuna:2018:SAD

[1878] Paula Fortuna and Sérgio Nunes. A survey on automatic detection of hate speech in text. *ACM Computing Surveys*, 51(4):85:1–85:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Czajka:2018:PAD

[1879] Adam Czajka and Kevin W. Bowyer. Presentation attack detection for iris recognition: an assessment of the state-of-the-art. *ACM Computing Surveys*, 51(4):86:1–86:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Gupta:2018:ART

[1880] Nishant Gupta, Vibhash Yadav, and Mayank Singh. Automated regression test case generation for Web application: a survey. *ACM Computing Surveys*, 51(4):87:1–87:??, September 2018. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Rastgoo:2019:CRP

[1881] Mohammad Naim Rastgoo, Bahareh Nakisa, Andry Rakotonirainy, Vinod Chandran, and Dian Tjondronegoro. A critical review of proactive detection of driver stress levels based on multimodal measurements. *ACM Computing Surveys*, 51(5):88:1–88:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/ft_gateway.cfm?id=3186585`.

Wan:2019:SGR

[1882] Changsheng Wan, Li Wang, and Vir V. Phoha. A survey on gait recognition. *ACM Computing Surveys*, 51(5):89:1–89:??, January 2019. CODEN

CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3230633.

Kiennert:2019:SGT

[1883] Christophe Kiennert, Ziad Ismail, Herve Debar, and Jean Leneutre. A survey on game-theoretic approaches for intrusion detection and response optimization. *ACM Computing Surveys*, 51(5):90:1–90:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3232848.

Covaci:2019:MMR

[1884] Alexandra Covaci, Longhao Zou, Irina Tal, Gabriel-Miro Muntean, and Gheorghita Ghinea. Is multimedia multisensorial? — A review of mulsemedia systems. *ACM Computing Surveys*, 51(5):91:1–91:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3233774.

Pouyanfar:2019:SDL

[1885] Samira Pouyanfar, Saad Sadiq, Yilin Yan, Haiman Tian, Yudong Tao, Maria Presa Reyes, Mei-Ling Shyu, Shu-Ching Chen, and S. S. Iyengar. A survey on deep learning: Algorithms, techniques, and applications. *ACM Computing Surveys*, 51(5):92:1–92:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3234150.

Guidotti:2019:SME

[1886] Riccardo Guidotti, Anna Monreale, Salvatore Ruggieri, Franco Turini, Fosca Giannotti, and Dino Pedreschi. A survey of methods for explaining black box models. *ACM Computing Surveys*, 51(5):93:1–93:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3236009.

Avoine:2019:SDB

[1887] Gildas Avoine, Muhammed Ali Bingöl, Ioana Boureanu, Srdjan Capkun, Gerhard Hancke, Süleyman Kardas, Chong Hee Kim, Cédric Lauradoux, Benjamin Martin, Jorge Munilla, Alberto Peinado, Kasper Bonne Rasmussen, Dave Singelée, Aslan Tchamkerten, Rolando Trujillo-Rasua, and Serge Vaudenay. Security of distance-bounding: a survey. *ACM Computing Surveys*, 51(5):94:1–94:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3264628.

Henriques:2019:TAT

[1888] Rui Henriques and Sara C. Madeira. Triclustering algorithms for three-dimensional data analysis: a comprehensive survey. *ACM Computing Surveys*, 51(5):95:1–95:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3195833.

Ashouri:2019:SCA

[1889] Amir H. Ashouri, William Killian, John Cavazos, Gianluca Palermo, and Cristina Silvano. A survey on compiler autotuning using machine learning. *ACM Computing Surveys*, 51(5):96:1–96:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3197978.

Kumar:2019:KAC

[1890] Dileep Kumar, Akash Gandhamal, Sanjay Talbar, and Ahmad Fadzil Mohd Hani. Knee articular cartilage segmentation from MR images: a review. *ACM Computing Surveys*, 51(5):97:1–97:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3230631.

Liu:2019:HBI

[1891] Ming Liu, Zhi Xue, Xianghua Xu, Changmin Zhong, and Jinjun Chen. Host-based intrusion detection system with system calls: Review and future trends. *ACM Computing Surveys*, 51(5):98:1–98:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3214304.

Doherty:2019:EHC

[1892] Kevin Doherty and Gavin Doherty. Engagement in HCI: Conception, theory and measurement. *ACM Computing Surveys*, 51(5):99:1–99:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3234149.

Tziakouris:2019:SSA

[1893] Giannis Tziakouris, Rami Bahsoon, and Muhammad Ali Babar. A survey on self-adaptive security for large-scale open environments. *ACM Computing Surveys*, 51(5):100:1–100:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3234148.

DeSiqueiraBraga:2019:SCT

[1894] Diego De Siqueira Braga, Marco Niemann, Bernd Hellingrath, and Fernando Buarque De Lima Neto. Survey on computational trust and reputation models. *ACM Computing Surveys*, 51(5):101:1–101:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3236008.

Grando:2019:MLN

[1895] Felipe Grando, Lisandro Z. Granville, and Luis C. Lamb. Machine learning in network centrality measures: Tutorial and outlook. *ACM Computing Surveys*, 51(5):102:1–102:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3237192.

Moustaka:2019:SRS

[1896] Vaia Moustaka, Athena Vakali, and Leonidas G. Anthopoulos. A systematic review for smart city data analytics. *ACM Computing Surveys*, 51(5):103:1–103:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3239566.

Gill:2019:TFD

[1897] Sukhpal Singh Gill and Rajkumar Buyya. A taxonomy and future directions for sustainable cloud computing: 360 degree view. *ACM Computing Surveys*, 51(5):104:1–104:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3241038.

Buyya:2019:MFG

[1898] Rajkumar Buyya, Satish Narayana Srirama, Giuliano Casale, Rodrigo Calheiros, Yogesh Simmhan, Blesson Varghese, Erol Gelenbe, Bahman Javadi, Luis Miguel Vaquero, Marco A. S. Netto, Adel Nadjaran Toosi, Maria Alejandra Rodriguez, Ignacio M. Llorente, Sabrina De Capitani Di Vimercati, Pierangela Samarati, Dejan Milojicic, Carlos Varela, Rami Bahsoon, Marcos Dias De Assunção, Omer Rana, Wanlei Zhou, Hai Jin, Wolfgang Gentzsch, Albert Y. Zomaya, and Haiying Shen. A manifesto for future generation cloud computing: Research directions for the next decade. *ACM Computing Surveys*, 51(5):105:1–105:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3241737.

Smirnova:2019:REU

[1899] Alisa Smirnova and Philippe Cudré-Mauroux. Relation extraction using distant supervision: a survey. *ACM Computing Surveys*, 51(5):106:1–106:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3241741.

Nayyer:2019:SCB

[1900] M. Ziad Nayyer, Imran Raza, and Syed Asad Hussain. A survey of cloudlet-based mobile augmentation approaches for resource optimization. *ACM Computing Surveys*, 51(5):107:1–107:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3241738.

Biorn-Hansen:2019:STC

[1901] Andreas Biørn-Hansen, Tor-Morten Grønli, and Gheorghita Ghinea. A survey and taxonomy of core concepts and research challenges in cross-platform mobile development. *ACM Computing Surveys*, 51(5):108:1–108:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3241739.

Khan:2019:SPN

[1902] Yasir Imtiaz Khan, Alexandros Konios, and Nicolas Guelfi. A survey of Petri nets slicing. *ACM Computing Surveys*, 51(5):109:1–109:??, January 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3241736.

Wang:2019:MLS

[1903] Ping Wang, Yan Li, and Chandan K. Reddy. Machine learning for survival analysis: a survey. *ACM Computing Surveys*, 51(6):110:1–110:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3214306.

Ferrer:2019:TDC

[1904] Ana Juan Ferrer, Joan Manuel Marquès, and Josep Jorba. Towards the decentralised cloud: Survey on approaches and challenges for mobile, ad hoc, and edge computing. *ACM Computing Surveys*, 51(6):111:1–111:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3243929.

Gui:2019:SBB

[1905] Qiong Gui, Maria V. Ruiz-Blondet, Sarah Laszlo, and Zhanpeng Jin. A survey on brain biometrics. *ACM Computing Surveys*, 51(6):112:1–112:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3230632.

Israelsen:2019:DCA

[1906] Brett W. Israelsen and Nisar R. Ahmed. "Dave ... I can assure you ... that it's going to be all right ..." A definition, case for, and survey of algorithmic assurances in human–autonomy trust relationships. *ACM Computing Surveys*, 51(6):113:1–113:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3267338.

Bonfim:2019:INS

[1907] Michel S. Bonfim, Kelvin L. Dias, and Stenio F. L. Fernandes. Integrated NFV/SDN architectures: a systematic literature review. *ACM Computing Surveys*, 51(6):114:1–114:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3172866.

Bashir:2019:SCO

[1908] Janibul Bashir, Eldhose Peter, and Smruti R. Sarangi. A survey of on-chip optical interconnects. *ACM Computing Surveys*, 51(6):115:1–115:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3267934.

Dizdarevic:2019:SCP

[1909] Jasenka Dizdarević, Francisco Carpio, Admela Jukan, and Xavi Masip-Bruin. A survey of communication protocols for Internet of Things and related challenges of fog and cloud computing integration. *ACM Computing Surveys*, 51(6):116:1–116:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3292674.

Diaz:2019:PAH

[1910] Moises Diaz, Miguel A. Ferrer, Donato Impedovo, Muhammad Imran Malik, Giuseppe Pirlo, and Réjean Plamondon. A perspective analysis of handwritten signature technology. *ACM Computing Surveys*, 51(6):117:1–117:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3274658.

Hossain:2019:CSD

[1911] MD. Zakir Hossain, Ferdous Sohel, Mohd Fairuz Shiratuddin, and Hamid Laga. A comprehensive survey of deep learning for image captioning. *ACM Computing Surveys*, 51(6):118:1–118:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3295748.

Elhabbash:2019:CBS

[1912] Abdessalam Elhabbash, Faiza Samreen, James Hadley, and Yehia Elkhatib. Cloud brokerage: a systematic survey. *ACM Computing Surveys*, 51(6):119:1–119:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3274657.

Kumar:2019:ICL

[1913] Pawan Kumar and Rakesh Kumar. Issues and challenges of load balancing techniques in cloud computing: a survey. *ACM Computing Surveys*, 51(6):120:1–120:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3281010.

Jabal:2019:MTP

[1914] Amani Abu Jabal, Maryam Davari, Elisa Bertino, Christian Makaya, Seraphin Calo, Dinesh Verma, Alessandra Russo, and Christopher Williams. Methods and tools for policy analysis. *ACM Computing Surveys*, 51(6):121:1–121:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3295749.

Manazir:2019:RDC

[1915] Abdul Manazir and Khalid Raza. Recent developments in Cartesian genetic programming and its variants. *ACM Computing Surveys*, 51(6):122:1–122:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3275518.

Tavara:2019:PCS

[1916] Shirin Tavara. Parallel computing of support vector machines: a survey. *ACM Computing Surveys*, 51(6):123:1–123:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3280989.

Testa:2019:SFE

[1917] Rafael Luiz Testa, Cléber Gimenez Corrêa, Ariane Machado-Lima, and Fátima L. S. Nunes. Synthesis of facial expressions in photographs: Characteristics, approaches, and challenges. *ACM Computing Surveys*, 51(6):124:1–124:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3292652.

Patrignani:2019:FAS

[1918] Marco Patrignani, Amal Ahmed, and Dave Clarke. Formal approaches to secure compilation: a survey of fully abstract compilation and related work. *ACM Computing Surveys*, 51(6):125:1–125:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3280984.

Rico-Gallego:2019:SCP

[1919] Juan A. Rico-Gallego, Juan C. Díaz-Martín, Ravi Reddy Manumachu, and Alexey L. Lastovetsky. A survey of communication performance models for high-performance computing. *ACM Computing Surveys*, 51(6):126:1–126:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3284358.

Kolbe:2019:LVR

[1920] Niklas Kolbe, Sylvain Kubler, Jérémy Robert, Yves Le Traon, and Arkady Zaslavsky. Linked vocabulary recommendation tools for Internet of Things: a survey. *ACM Computing Surveys*, 51(6):127:1–127:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3284316.

Cho:2019:SMT

[1921] Jin-Hee Cho, Shouhuai Xu, Patrick M. Hurley, Matthew Mackay, Trevor Benjamin, and Mark Beaumont. STRAM: Measuring the trustworthiness of computer-based systems. *ACM Computing Surveys*, 51(6):128:1–128:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3277666.

Nejatollahi:2019:PQL

[1922] Hamid Nejatollahi, Nikil Dutt, Sandip Ray, Francesco Regazzoni, Indranil Banerjee, and Rosario Cammarota. Post-quantum lattice-based cryptography implementations: a survey. *ACM Computing Surveys*, 51(6):129:1–129:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/ft_gateway.cfm?id=3292548`.

Pinto:2019:DAT

[1923] Sandro Pinto and Nuno Santos. Demystifying Arm TrustZone: a comprehensive survey. *ACM Computing Surveys*, 51(6):130:1–130:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/ft_gateway.cfm?id=3291047`.

Xiao:2019:SAB

[1924] Jiajian Xiao, Philipp Andelfinger, David Eckhoff, Wentong Cai, and Alois Knoll. A survey on agent-based simulation using hardware accelerators. *ACM Computing Surveys*, 51(6):131:1–131:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/ft_gateway.cfm?id=3291048`.

Malla:2019:SPM

[1925] Sulav Malla and Ken Christensen. A survey on power management techniques for oversubscription of multi-tenant data centers. *ACM Computing Surveys*, 52(1):1:1–1:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/ft_gateway.cfm?id=3291049`.

Wang:2019:ECO

[1926] Jianyu Wang, Jianli Pan, Flavio Esposito, Prasad Calyam, Zhicheng Yang, and Prasant Mohapatra. Edge cloud offloading algorithms: Issues, methods, and perspectives. *ACM Computing Surveys*, 52(1):2:1–2:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/ft_gateway.cfm?id=3284387`.

Kalgutkar:2019:CAA

[1927] Vaibhavi Kalgutkar, Ratinder Kaur, Hugo Gonzalez, Natalia Stakhanova, and Alina Matyukhina. Code authorship attribution: Methods and challenges. *ACM Computing Surveys*, 52(1):3:1–3:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/ft_gateway.cfm?id=3292577`.

Didimo:2019:SGD

[1928] Walter Didimo, Giuseppe Liotta, and Fabrizio Montecchiani. A survey on graph drawing beyond planarity. *ACM Computing Surveys*, 52(1):4:1–4:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3301281.

Zhang:2019:DLB

[1929] Shuai Zhang, Lina Yao, Aixin Sun, and Yi Tay. Deep learning based recommender system: a survey and new perspectives. *ACM Computing Surveys*, 52(1):5:1–5:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3285029.

MendonCa:2019:GBS

[1930] Matheus R. F. MendonÇa, Artur Ziviani, and AndrÉ M. S. Barreto. Graph-based skill acquisition for reinforcement learning. *ACM Computing Surveys*, 52(1):6:1–6:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3291045.

Zhang:2019:RAT

[1931] Jing Zhang, Wanqing Li, Philip Ogunbona, and Dong Xu. Recent advances in transfer learning for cross-dataset visual recognition: a problem-oriented perspective. *ACM Computing Surveys*, 52(1):7:1–7:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3291124.

Xu:2019:BAA

[1932] Minxian Xu and Rajkumar Buyya. Brownout approach for adaptive management of resources and applications in cloud computing systems: a taxonomy and future directions. *ACM Computing Surveys*, 52(1): 8:1–8:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3234151.

Xiao:2019:CRC

[1933] Ping Xiao, Hannu Toivonen, Oskar Gross, Amílcar Cardoso, João Correia, Penousal Machado, Pedro Martins, Hugo Goncalo Oliveira, Rahul Sharma, Alexandre Miguel Pinto, Alberto Díaz, Virginia Francisco, Pablo Gervás, Raquel Hervás, Carlos León, Jamie Forth, Matthew Purver, Geraint A. Wiggins, Dragana Miljković, Vid Podpecan, Senja Pollak, Jan Kralj, Martin Znidarsic, Marko Bohanec, Nada Lavrac, Tanja Urbancic, Frank Van Der Velde, and Stuart Battersby. Conceptual representations for computational concept creation. *ACM Computing Surveys*, 52(1):9:1–9:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3186729.

Hong:2019:HGA

[1934] Yongjun Hong, Uiwon Hwang, Jaeyoon Yoo, and Sungroh Yoon. How generative adversarial networks and their variants work: an overview. *ACM Computing Surveys*, 52(1):10:1–10:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3301282.

Boukerche:2019:SOM

[1935] Azzedine Boukerche, Shichao Guan, and Robson E. De Grande. Sustainable offloading in mobile cloud computing: Algorithmic design and implementation. *ACM Computing Surveys*, 52(1):11:1–11:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3286688.

Patil:2019:ESS

[1936] Rajendra Patil and Chirag Modi. An exhaustive survey on security concerns and solutions at different components of virtualization. *ACM Computing Surveys*, 52(1):12:1–12:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3287306.

Xuan:2019:SBN

[1937] Junyu Xuan, Jie Lu, and Guangquan Zhang. A survey on Bayesian nonparametric learning. *ACM Computing Surveys*, 52(1):13:1–13:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3291044.

Cazorla:2019:PWC

[1938] Francisco J. Cazorla, Leonidas Kosmidis, Enrico Mezzetti, Carles Hernandez, Jaume Abella, and Tullio Vardanega. Probabilistic worst-case timing analysis: Taxonomy and comprehensive survey. *ACM Computing Surveys*, 52(1):14:1–14:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3301283.

Abdulahhad:2019:MIR

[1939] Karam Abdulahhad, Catherine Berrut, Jean-Pierre Chevallet, and Gabriella Pasi. Modeling information retrieval by formal logic: a survey. *ACM Computing Surveys*, 52(1):15:1–15:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3291043.

Cormode:2019:STA

[1940] Graham Cormode and Hossein Jowhari. L_p samplers and their applications: a survey. *ACM Computing Surveys*, 52(1):16:1–16:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3297715.

Silva:2019:UCL

[1941] Thiago H. Silva, Aline Carneiro Viana, Fabrício Benevenuto, Leandro Villas, Juliana Salles, Antonio Loureiro, and Daniele Quercia. Urban computing leveraging location-based social network data: a survey. *ACM Computing Surveys*, 52(1):17:1–17:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3301284.

Reghenzani:2019:RTL

[1942] Federico Reghenzani, Giuseppe Massari, and William Fornaciari. The real-time Linux kernel: a survey on PREEMPT_RT. *ACM Computing Surveys*, 52(1):18:1–18:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3297714.

Ahmed:2019:TEC

[1943] Usama Ahmed, Imran Raza, and Syed Asad Hussain. Trust evaluation in cross-cloud federation: Survey and requirement analysis. *ACM Computing Surveys*, 52(1):19:1–19:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3292499.

Bablani:2019:SBC

[1944] Annushree Bablani, Damodar Reddy Edla, Diwakar Tripathi, and Ramalingaswamy Cheruku. Survey on brain-computer interface: an emerging computational intelligence paradigm. *ACM Computing Surveys*, 52(1):20:1–20:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3297713.

Bhat:2019:SVT

[1945] Parnika Bhat and Kamlesh Dutta. A survey on various threats and current state of security in Android platform. *ACM Computing Surveys*, 52(1):21:1–21:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3301285.

Bian:2019:ITK

[1946] Ranran Bian, Yun Sing Koh, Gillian Dobbie, and Anna Divoli. Identifying top-k nodes in social networks: a survey. *ACM Computing Surveys*, 52(1):22:1–22:??, February 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3301286.

Dinakarrao:2019:CAA

[1947] Sai Manoj Pudukotai Dinakarrao, Axel Jantsch, and Muhammad Shafique. Computer-aided arrhythmia diagnosis with bio-signal processing: a survey of trends and techniques. *ACM Computing Surveys*, 52 (2):23:1–23:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3297711.

Djenouri:2019:MLS

[1948] Djamel Djenouri, Roufaida Laidi, Youcef Djenouri, and Ilangko Balasingham. Machine learning for smart building applications: Review and taxonomy. *ACM Computing Surveys*, 52(2):24:1–24:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3311950.

Constantin:2019:CUV

[1949] Mihai Gabriel Constantin, Miriam Redi, Gloria Zen, and Bogdan Ionescu. Computational understanding of visual interestingness beyond semantics: Literature survey and analysis of covariates. *ACM Computing Surveys*, 52(2):25:1–25:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3301299.

Li:2019:QES

[1950] Miqing Li and Xin Yao. Quality evaluation of solution sets in multiobjective optimisation: a survey. *ACM Computing Surveys*, 52(2):26:1–26:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3300148.

Oz:2019:SMA

[1951] Isil Oz and Sanem Arslan. A survey on multithreading alternatives for soft error fault tolerance. *ACM Computing Surveys*, 52(2):27:1–27:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3302255.

Swami:2019:SDN

[1952] Rochak Swami, Mayank Dave, and Virender Ranga. Software-defined networking-based DDoS defense mechanisms. *ACM Computing Surveys*, 52(2):28:1–28:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3301614.

Rizk:2019:CHM

[1953] Yara Rizk, Mariette Awad, and Edward W. Tunstel. Cooperative heterogeneous multi-robot systems: a survey. *ACM Computing Surveys*, 52 (2):29:1–29:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3303848.

Homoliak:2019:III

[1954] Ivan Homoliak, Flavio Toffalini, Juan Guarnizo, Yuval Elovici, and Martín Ochoa. Insight into insiders and IT: a survey of insider threat taxonomies, analysis, modeling, and countermeasures. *ACM Computing Surveys*, 52(2):30:1–30:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3303771.

Rateke:2019:PVR

[1955] Thiago Rateke, Karla A. Justen, Vito F. Chiarella, Antonio C. Sobieranski, Eros Comunello, and Aldo Von Wangenheim. Passive vision region-based road detection: a literature review. *ACM Computing Surveys*, 52 (2):31:1–31:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3311951.

Wang:2019:NSA

[1956] Wei Wang and Longbing Cao. Negative sequence analysis: a review. *ACM Computing Surveys*, 52(2):32:1–32:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3311952.

Nambiar:2019:GBP

[1957] Athira Nambiar, Alexandre Bernardino, and Jacinto C. Nascimento. Gait-based person re-identification: a survey. *ACM Computing Surveys*, 52(2):33:1–33:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3243043.

Boukerche:2019:CAW

[1958] Azzedine Boukerche and Qi Zhang. Countermeasures against worm spreading: a new challenge for vehicular networks. *ACM Computing Surveys*, 52(2):34:1–34:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3284748.

Afzalan:2019:IPB

[1959] Milad Afzalan and Farrokh Jazizadeh. Indoor positioning based on visible light communication: a performance-based survey of real-world prototypes. *ACM Computing Surveys*, 52(2):35:1–35:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3299769.

Roger:2019:CSP

[1960] Henriette Röger and Ruben Mayer. A comprehensive survey on parallelization and elasticity in stream processing. *ACM Computing Surveys*, 52(2):36:1–36:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3303849.

Islam:2019:MVR

[1961] Chadni Islam, Muhammad Ali Babar, and Surya Nepal. A multi-vocal review of security orchestration. *ACM Computing Surveys*, 52(2):37:1–37:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3305268.

Taha:2019:ADM

[1962] Ayman Taha and Ali S. Hadi. Anomaly detection methods for categorical data: a review. *ACM Computing Surveys*, 52(2):38:1–38:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3312739.

Sundararajan:2019:SMC

[1963] Aditya Sundararajan, Arif I. Sarwat, and Alexander Pons. A survey on modality characteristics, performance evaluation metrics, and security for traditional and wearable biometric systems. *ACM Computing Surveys*, 52(2):39:1–39:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3309550.

Wang:2019:DNN

[1964] Erwei Wang, James J. Davis, Ruizhe Zhao, Ho-Cheung Ng, Xinyu Niu, Wayne Luk, Peter Y. K. Cheung, and George A. Constantinides. Deep neural network approximation for custom hardware: Where we've been, where we're going. *ACM Computing Surveys*, 52(2):40:1–40:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3309551.

Habibzadeh:2019:SCS

[1965] Hadi Habibzadeh, Cem Kaptan, Tolga Soyata, Burak Kantarci, and Azzedine Boukerche. Smart city system design: a comprehensive study of the application and data planes. *ACM Computing Surveys*, 52(2):41:1–41:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3309545.

Sultan:2019:SCL

[1966] Hameedah Sultan, Anjali Chauhan, and Smruti R. Sarangi. A survey of chip-level thermal simulators. *ACM Computing Surveys*, 52(2):42:1–42:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3309544.

Fiaz:2019:HDT

[1967] Mustansar Fiaz, Arif Mahmood, Sajid Javed, and Soon Ki Jung. Hand-crafted and deep trackers: Recent visual object tracking approaches and trends. *ACM Computing Surveys*, 52(2):43:1–43:??, May 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3309665.

Mannes:2019:NCN

[1968] Elisa Mannes and Carlos Maziero. Naming content on the network layer: a security analysis of the information-centric network model. *ACM Computing Surveys*, 52(3):44:1–44:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3311888.

Grondahl:2019:TAA

[1969] Tommi Gröndahl and N. Asokan. Text analysis in adversarial settings: Does deception leave a stylistic trace? *ACM Computing Surveys*, 52(3):45:1–45:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3310331.

Ma:2019:WSC

[1970] Yongsen Ma, Gang Zhou, and Shuangquan Wang. WiFi sensing with channel state information: a survey. *ACM Computing Surveys*, 52(3): 46:1–46:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3310194.

Pimentel:2019:SCM

[1971] João Felipe Pimentel, Juliana Freire, Leonardo Murta, and Vanessa Braganholo. A survey on collecting, managing, and analyzing provenance from scripts. *ACM Computing Surveys*, 52(3):47:1–47:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3311955.

Goncales:2019:CSD

[1972] Lucian José Gonçales, Kleinner Farias, Toacy Cavalcante De Oliveira, and Murilo Scholl. Comparison of software design models: an extended systematic mapping study. *ACM Computing Surveys*, 52(3):48:1–48:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3313801.

Wenzl:2019:HET

[1973] Matthias Wenzl, Georg Merzdovnik, Johanna Ullrich, and Edgar Weippl. From hack to elaborate technique — a survey on binary rewriting. *ACM Computing Surveys*, 52(3):49:1–49:37, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3316415.

ElRaheb:2019:DIL

[1974] Katerina El Raheb, Marina Stergiou, Akrivi Katifori, and Yannis Ioannidis. Dance interactive learning systems: a study on interaction workflow and teaching approaches. *ACM Computing Surveys*, 52(3):50:1–50:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3323335.

Zhang:2019:SPB

[1975] Rui Zhang, Rui Xue, and Ling Liu. Security and privacy on blockchain. *ACM Computing Surveys*, 52(3):51:1–51:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3316481.

Bakhshalipour:2019:EHD

[1976] Mohammad Bakhshalipour, Seyedali Tabaeiaghdaei, Pejman Lotfi-Kamran, and Hamid Sarbazi-Azad. Evaluation of hardware data prefetchers on server processors. *ACM Computing Surveys*, 52(3):52:1–52:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3312740.

Gonzalez-Manzano:2019:LUR

[1977] Lorena Gonzalez-Manzano, Jose M. De Fuentes, and Arturo Ribagorda. Leveraging user-related Internet of Things for continuous authentication: a survey. *ACM Computing Surveys*, 52(3):53:1–53:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3314023.

Usman:2019:SBM

[1978] Muhammad Usman, Mian Ahmad Jan, Xiangjian He, and Jinjun Chen. A survey on big multimedia data processing and management in smart cities. *ACM Computing Surveys*, 52(3):54:1–54:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3323334.

Lu:2019:MMD

[1979] Jiaheng Lu and Irena Holubová. Multi-model databases: a new journey to handle the variety of data. *ACM Computing Surveys*, 52(3):55:1–55:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3323214.

Maiza:2019:STV

[1980] Claire Maiza, Hamza Rihani, Juan M. Rivas, Joël Goossens, Sebastian Altmeyer, and Robert I. Davis. A survey of timing verification techniques for multi-core real-time systems. *ACM Computing Surveys*, 52(3):56:1–56:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3323212.

Xiong:2019:SGK

[1981] Hu Xiong, Yan Wu, and Zhenyu Lu. A survey of group key agreement protocols with constant rounds. *ACM Computing Surveys*, 52(3):57:1–57:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3318460.

Saleme:2019:MDS

[1982] Estêvão B. Saleme, Alexandra Covaci, Gebremariam Mesfin, Celso A. S. Santos, and Gheorghita Ghinea. Mulsemedia DIY: a survey of devices and a tutorial for building your own mulsemedia environment. *ACM Computing Surveys*, 52(3):58:1–58:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3319853.

Mengistu:2019:STV

[1983] Tessema M. Mengistu and Dunren Che. Survey and taxonomy of volunteer computing. *ACM Computing Surveys*, 52(3):59:1–59:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3320073.

Oukemeni:2019:PAM

[1984] Samia Oukemeni, Helena Rifà-Pous, and Joan Manuel Marquès Puig. Privacy analysis on microblogging online social networks: a survey. *ACM Computing Surveys*, 52(3):60:1–60:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3321481.

Winter:2019:III

[1985] Stephan Winter, Martin Tomko, Maria Vasardani, Kai-Florian Richter, Kourosh Khoshelham, and Mohsen Kalantari. Infrastructure-independent indoor localization and navigation. *ACM Computing Surveys*, 52(3):61:1–61:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3321516.

Lozano:2019:SCR

[1986] Roberto Castañeda Lozano and Christian Schulte. Survey on combinatorial register allocation and instruction scheduling. *ACM Computing Surveys*, 52(3):62:1–62:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3200920.

Chandrakala:2019:EAS

[1987] S. Chandrakala and S. L. Jayalakshmi. Environmental audio scene and sound event recognition for autonomous surveillance: a survey and comparative studies. *ACM Computing Surveys*, 52(3):63:1–63:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3322240.

Gu:2019:ILI

[1988] Fuqiang Gu, Xuke Hu, Milad Ramezani, Debaditya Acharya, Kourosh Khoshelham, Shahrokh Valaee, and Jianga Shang. Indoor localization improved by spatial context — a survey. *ACM Computing Surveys*, 52 (3):64:1–64:??, July 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3322241.

Ben-Nun:2019:DPD

[1989] Tal Ben-Nun and Torsten Hoefler. Demystifying parallel and distributed deep learning: an in-depth concurrency analysis. *ACM Computing Surveys*, 52(4):65:1–65:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3320060.

Liao:2019:UAT

[1990] Xiaofeng Liao and Zhiming Zhao. Unsupervised approaches for textual semantic annotation, a survey. *ACM Computing Surveys*, 52(4):66:1–66:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3324473.

Kaur:2019:CSC

[1991] Parminder Kaur, Husanbir Singh Pannu, and Avleen Kaur Malhi. Comprehensive study of continuous orthogonal moments — a systematic review. *ACM Computing Surveys*, 52(4):67:1–67:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3331167.

Adhikari:2019:SSS

[1992] Mainak Adhikari, Tarachand Amgoth, and Satish Narayana Srirama. A survey on scheduling strategies for workflows in cloud environment and emerging trends. *ACM Computing Surveys*, 52(4):68:1–68:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3325097.

VanGlabbeek:2019:PJF

[1993] Rob Van Glabbeek and Peter Höfner. Progress, justness, and fairness. *ACM Computing Surveys*, 52(4):69:1–69:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3329125.

McDaniel:2019:EDO

[1994] Melinda McDaniel and Veda C. Storey. Evaluating domain ontologies: Clarification, classification, and challenges. *ACM Computing Surveys*, 52(4):70:1–70:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3329124.

Fan:2019:SVS

[1995] Ching-Ling Fan, Wen-Chih Lo, Yu-Tung Pai, and Cheng-Hsin Hsu. A survey on 360° video streaming: Acquisition, transmission, and display. *ACM Computing Surveys*, 52(4):71:1–71:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3329119.

Ribeiro:2019:RAC

[1996] Madalena Ribeiro and Abel J. P. Gomes. Recoloring algorithms for colorblind people: a survey. *ACM Computing Surveys*, 52(4):72:1–72:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3329118.

Ghosh:2019:UDL

[1997] Swarnendu Ghosh, Nibaran Das, Ishita Das, and Ujjwal Maulik. Understanding deep learning techniques for image segmentation. *ACM Computing Surveys*, 52(4):73:1–73:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3329784.

Celik:2019:PAC

[1998] Z. Berkay Celik, Earlence Fernandes, Eric Pauley, Gang Tan, and Patrick McDaniel. Program analysis of commodity IoT applications for security and privacy: Challenges and opportunities. *ACM Computing Surveys*, 52(4):74:1–74:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3333501.

Widel:2019:BFM

[1999] Wojciech Wideł, Maxime Audinot, Barbara Fila, and Sophie Pinchinat. Beyond 2014: Formal methods for attack tree-based security modeling. *ACM Computing Surveys*, 52(4):75:1–75:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3331524.

Rashidi:2019:SPL

[2000] Saeed Rashidi, Majid Jalili, and Hamid Sarbazi-Azad. A survey on PCM lifetime enhancement schemes. *ACM Computing Surveys*, 52(4):76:1–76:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3332257.

Bergstrom:2019:HCI

[2001] Joanna Bergström and Kasper Hornbæk. Human–computer interaction on the skin. *ACM Computing Surveys*, 52(4):77:1–77:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3332166.

Maiorca:2019:TAM

[2002] Davide Maiorca, Battista Biggio, and Giorgio Giacinto. Towards adversarial malware detection: Lessons learned from PDF-based attacks. *ACM Computing Surveys*, 52(4):78:1–78:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3332184.

Kaur:2019:SRI

[2003] Harsurinder Kaur, Husanbir Singh Pannu, and Avleen Kaur Malhi. A systematic review on imbalanced data challenges in machine learning: Applications and solutions. *ACM Computing Surveys*, 52(4):79:1–79:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3343440.

Arias-Cabarcos:2019:SAA

[2004] Patricia Arias-Cabarcos, Christian Krupitzer, and Christian Becker. A survey on adaptive authentication. *ACM Computing Surveys*, 52(4):80:1–80:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3336117.

Georgiou:2019:SDL

[2005] Stefanos Georgiou, Stamatia Rizou, and Diomidis Spinellis. Software development lifecycle for energy efficiency: Techniques and tools. *ACM Computing Surveys*, 52(4):81:1–81:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3337773.

Pawlick:2019:GTT

[2006] Jeffrey Pawlick, Edward Colbert, and Quanyan Zhu. A game-theoretic taxonomy and survey of defensive deception for cybersecurity and privacy. *ACM Computing Surveys*, 52(4):82:1–82:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3337772.

Fletcher:2019:DTC

[2007] Sam Fletcher and Md. Zahidul Islam. Decision tree classification with differential privacy: a survey. *ACM Computing Surveys*, 52(4):83:1–83:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3337064.

Moghaddam:2019:PAM

[2008] Sara Kardani Moghaddam, Rajkumar Buyya, and Kotagiri Ramamohanarao. Performance-aware management of cloud resources: a taxonomy and future directions. *ACM Computing Surveys*, 52(4):84:1–84:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3337956.

Moffat:2019:HC

[2009] Alistair Moffat. Huffman coding. *ACM Computing Surveys*, 52(4):85:1–85:35, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3342555.

DeMarsico:2019:SGR

[2010] Maria De Marsico and Alessio Mecca. A survey on gait recognition via wearable sensors. *ACM Computing Surveys*, 52(4):86:1–86:??, September 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3340293.

Almoqbel:2019:CMS

[2011] Mashael Almoqbel and Songhua Xu. Computational mining of social media to curb terrorism. *ACM Computing Surveys*, 52(5):87:1–87:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3342101.

Or-Meir:2019:DMA

[2012] Ori Or-Meir, Nir Nissim, Yuval Elovici, and Lior Rokach. Dynamic malware analysis in the modern era — a state of the art survey. *ACM Computing Surveys*, 52(5):88:1–88:??, October 2019. CODEN CMSVAN.

ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3329786.

Labatut:2019:EAF

[2013] Vincent Labatut and Xavier Bost. Extraction and analysis of fictional character networks: a survey. *ACM Computing Surveys*, 52(5):89:1–89:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3344548.

Rejiba:2019:SMI

[2014] Zeineb Rejiba, Xavier Masip-Bruin, and Eva Marín-Tordera. A survey on mobility-induced service migration in the fog, edge, and related computing paradigms. *ACM Computing Surveys*, 52(5):90:1–90:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3326540.

Jahan:2019:SMA

[2015] Farha Jahan, Weiqing Sun, Quamar Niyaz, and Mansoor Alam. Security modeling of autonomous systems: a survey. *ACM Computing Surveys*, 52(5):91:1–91:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3337791.

Min:2019:SFC

[2016] Weiqing Min, Shuqiang Jiang, Linhu Liu, Yong Rui, and Ramesh Jain. A survey on food computing. *ACM Computing Surveys*, 52(5):92:1–92:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3329168.

Bertolino:2019:SRC

[2017] Antonia Bertolino, Guglielmo De Angelis, Micael Gallego, Boni García, Francisco Gortázar, Francesca Lonetti, and Eda Marchetti. A systematic review on cloud testing. *ACM Computing Surveys*, 52(5):93:1–93:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3331447.

Duc:2019:MLM

[2018] Thang Le Duc, Rafael García Leiva, Paolo Casari, and Per-Olov Östberg. Machine learning methods for reliable resource provisioning in edge-cloud computing: a survey. *ACM Computing Surveys*, 52(5):94:1–94:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3341145.

Barika:2019:OBD

[2019] Mutaz Barika, Saurabh Garg, Albert Y. Zomaya, Lizhe Wang, Aad Van Moorsel, and Rajiv Ranjan. Orchestrating big data analysis workflows in the cloud: Research challenges, survey, and future directions. *ACM Computing Surveys*, 52(5):95:1–95:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3332301.

Goncalves:2019:AER

[2020] Rodrigo Gonçalves and Carina Friedrich Dorneles. Automated expertise retrieval: a taxonomy-based survey and open issues. *ACM Computing Surveys*, 52(5):96:1–96:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3331000.

Hong:2019:RMF

[2021] Cheol-Ho Hong and Blesson Varghese. Resource management in fog/edge computing: a survey on architectures, infrastructure, and algorithms. *ACM Computing Surveys*, 52(5):97:1–97:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3326066.

Wong:2019:DST

[2022] Ka-Chun Wong, Jiao Zhang, Shankai Yan, Xiangtao Li, Qiuzhen Lin, Sam Kwong, and Cheng Liang. DNA sequencing technologies: Sequencing data protocols and bioinformatics tools. *ACM Computing Surveys*, 52(5):98:1–98:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3340286.

Dai:2019:BDA

[2023] Hong-Ning Dai, Raymond Chi-Wing Wong, Hao Wang, Zibin Zheng, and Athanasios V. Vasilakos. Big data analytics for large-scale wireless networks: Challenges and opportunities. *ACM Computing Surveys*, 52(5):99:1–99:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3337065.

Luckcuck:2019:FSV

[2024] Matt Luckcuck, Marie Farrell, Louise A. Dennis, Clare Dixon, and Michael Fisher. Formal specification and verification of autonomous robotic systems: a survey. *ACM Computing Surveys*, 52(5):100:1–100:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3342355.

Maksimov:2019:STS

[2025] Mike Maksimov, Sahar Kokaly, and Marsha Chechik. A survey of tool-supported assurance case assessment techniques. *ACM Computing Surveys*, 52(5):101:1–101:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3342481.

Pisani:2019:ABS

[2026] Paulo Henrique Pisani, Abir Mhenni, Romain Giot, Estelle Cherrier, Norman Poh, André Carlos Ponce de Leon Ferreira de Carvalho, Christophe Rosenberger, and Najoua Essoukri Ben Amara. Adaptive biometric systems: Review and perspectives. *ACM Computing Surveys*, 52(5):102:1–102:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3344255.

Mountantonakis:2019:LSS

[2027] Michalis Mountantonakis and Yannis Tzitzikas. Large-scale semantic integration of linked data: a survey. *ACM Computing Surveys*, 52(5):103:1–103:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3345551.

Barua:2019:CSC

[2028] Hrishav Bakul Barua and Kartick Chandra Mondal. A comprehensive survey on cloud data mining (CDM) frameworks and algorithms. *ACM Computing Surveys*, 52(5):104:1–104:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3349265.

Mademlis:2019:AUC

[2029] Ioannis Mademlis, Nikos Nikolaidis, Anastasios Tefas, Ioannis Pitas, Tilman Wagner, and Alberto Messina. Autonomous UAV cinematography: a tutorial and a formalized shot-type taxonomy. *ACM Computing Surveys*, 52(5):105:1–105:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3347713.

K:2019:VST

[2030] Vivekraj V. K., Debashis Sen, and Balasubramanian Raman. Video skimming: Taxonomy and comprehensive survey. *ACM Computing Surveys*, 52(5):106:1–106:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3347712.

Lorena:2019:HCY

[2031] Ana C. Lorena, Luís P. F. Garcia, Jens Lehmann, Marcilio C. P. Souto, and Tin Kam Ho. How complex is your classification problem?: a survey on measuring classification complexity. *ACM Computing Surveys*, 52(5): 107:1–107:??, October 2019. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3347711.

Wu:2020:CPM

[2032] Caesar Wu, Rajkumar Buyya, and Kotagiri Ramamohanarao. Cloud pricing models: Taxonomy, survey, and interdisciplinary challenges. *ACM Computing Surveys*, 52(6):108:1–108:??, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3342103.

Binmakhashen:2020:DLA

[2033] Galal M. Binmakhashen and Sabri A. Mahmoud. Document layout analysis: a comprehensive survey. *ACM Computing Surveys*, 52(6):109:1–109:??, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3355610.

DeGuzman:2020:SPA

[2034] Jaybie A. De Guzman, Kanchana Thilakarathna, and Aruna Seneviratne. Security and privacy approaches in mixed reality: a literature survey. *ACM Computing Surveys*, 52(6):110:1–110:??, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3359626.

Usman:2020:SRL

[2035] Muhammad Usman, Mian Ahmad Jan, Xiangjian He, and Jinjun Chen. A survey on representation learning efforts in cybersecurity domain. *ACM Computing Surveys*, 52(6):111:1–111:??, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3331174.

Foltynek:2020:APD

[2036] Tomás Foltýnek, Norman Meuschke, and Bela Gipp. Academic plagiarism detection: a systematic literature review. *ACM Computing Surveys*, 52(6):112:1–112:??, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3345317.

Lilis:2020:SML

[2037] Yannis Lilis and Anthony Savidis. A survey of metaprogramming languages. *ACM Computing Surveys*, 52(6):113:1–113:??, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3354584.

Ngo:2020:SIS

[2038] Anh Cat Le Ngo and Raphaël C.-W. Phan. Seeing the invisible: Survey of video motion magnification and small motion analysis. *ACM Computing Surveys*, 52(6):114:1–114:??, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3355389.

Aafaq:2020:VDS

[2039] Nayyer Aafaq, Ajmal Mian, Wei Liu, Syed Zulqarnain Gilani, and Mubarak Shah. Video description: a survey of methods, datasets, and evaluation metrics. *ACM Computing Surveys*, 52(6):115:1–115:??, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3355390.

Basavarajaiah:2020:SCD

[2040] Madhushree Basavarajaiah and Priyanka Sharma. Survey of compressed domain video summarization techniques. *ACM Computing Surveys*, 52(6):116:1–116:29, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3355398.

Gleirscher:2020:NOI

[2041] Mario Gleirscher, Simon Foster, and Jim Woodcock. New opportunities for integrated formal methods. *ACM Computing Surveys*, 52(6):117:1–117:??, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/ft_gateway.cfm?id=3357231.

Liu:2020:SCG

[2042] Leibo Liu, Jianfeng Zhu, Zhaoshi Li, Yanan Lu, Yangdong Deng, Jie Han, Shouyi Yin, and Shaojun Wei. A survey of coarse-grained reconfigurable architecture and design: Taxonomy, challenges, and applications. *ACM Computing Surveys*, 52(6):118:1–118:??, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/ft_gateway.cfm?id=3357375`.

Joshi:2020:STB

[2043] Aditya Joshi, Sarvnaz Karimi, Ross Sparks, Cécile Paris, and C. Raina Macintyre. Survey of text-based epidemic intelligence: a computational linguistics perspective. *ACM Computing Surveys*, 52(6):119:1–119:??, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/ft_gateway.cfm?id=3361141`.

Humbert:2020:SIP

[2044] Mathias Humbert, Benjamin Trubert, and Kévin Huguenin. A survey on interdependent privacy. *ACM Computing Surveys*, 52(6):122:1–122:??, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/ft_gateway.cfm?id=3360498`.

Ren:2020:SEE

[2045] Ju Ren, Deyu Zhang, Shiwen He, Yaoxue Zhang, and Tao Li. A survey on end-edge-cloud orchestrated network computing paradigms: Transparent computing, mobile edge computing, fog computing, and cloudlet. *ACM Computing Surveys*, 52(6):125:1–125:??, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/ft_gateway.cfm?id=3362031`.

Afianian:2020:MDA

[2046] Amir Afianian, Salman Niksefat, Babak Sadeghiyan, and David Baptiste. Malware dynamic analysis evasion techniques: a survey. *ACM Computing Surveys*, 52(6):1–28, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/abs/10.1145/3365001`.

Leite:2020:SDC

[2047] Leonardo Leite, Carla Rocha, Fabio Kon, Dejan Milojicic, and Paulo Meirelles. A survey of DevOps concepts and challenges. *ACM Computing Surveys*, 52(6):1–35, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/abs/10.1145/3359981`.

Bridges:2020:SID

[2048] Robert A. Bridges, Tarrah R. Glass-Vanderlan, Michael D. Iannacone, Maria S. Vincent, and Qian (Guenevere) Chen. A survey of intrusion detection systems leveraging host data. *ACM Computing Surveys*, 52 (6):1–35, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3344382.

Thilakaratne:2020:SRL

[2049] Menasha Thilakaratne, Katrina Falkner, and Thushari Atapattu. A systematic review on literature-based discovery: General overview, methodology, & statistical analysis. *ACM Computing Surveys*, 52(6):1–34, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3365756.

Saini:2020:HSS

[2050] Mukesh Kumar Saini and Neeraj Goel. How smart are smart classrooms? A review of smart classroom technologies. *ACM Computing Surveys*, 52 (6):1–28, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3365757.

Drobyshevskiy:2020:RGM

[2051] Mikhail Drobyshevskiy and Denis Turdakov. Random graph modeling: a survey of the concepts. *ACM Computing Surveys*, 52(6):1–36, January 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3369782.

Bae:2020:ICC

[2052] Juhee Bae, Tove Helldin, Maria Riveiro, Sławomir Nowaczyk, Mohamed-Rafik Bouguelia, and Göran Falkman. Interactive clustering: a comprehensive review. *ACM Computing Surveys*, 53(1):1:1–1:39, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3340960.

Fan:2020:DTM

[2053] Xinxin Fan, Ling Liu, Rui Zhang, Quanliang Jing, and Jingping Bi. Decentralized trust management: Risk analysis and trust aggregation. *ACM Computing Surveys*, 53(1):2:1–2:33, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3362168.

Mayer:2020:SDL

[2054] Ruben Mayer and Hans-Arno Jacobsen. Scalable deep learning on distributed infrastructures: Challenges, techniques, and tools. *ACM Computing Surveys*, 53(1):3:1–3:37, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3363554.

Chen:2020:SCT

[2055] Junjie Chen, Jibesh Patra, Michael Pradel, Yingfei Xiong, Hongyu Zhang, Dan Hao, and Lu Zhang. A survey of compiler testing. *ACM Computing Surveys*, 53(1):4:1–4:36, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3363562.

Randal:2020:IVR

[2056] Allison Randal. The ideal versus the real: Revisiting the history of virtual machines and containers. *ACM Computing Surveys*, 53(1):5:1–5:31, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3365199.

Paulino:2020:IPE

[2057] Nuno Paulino, João Canas Ferreira, and João M. P. Cardoso. Improving performance and energy consumption in embedded systems via binary acceleration: a survey. *ACM Computing Surveys*, 53(1):6:1–6:36, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3369764.

Razis:2020:MIS

[2058] Gerasimos Razis, Ioannis Anagnostopoulos, and Sherali Zeadally. Modeling influence with semantics in social networks: a survey. *ACM Computing Surveys*, 53(1):7:1–7:38, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3369780.

Etemad:2020:GDD

[2059] Mohammad Etemad and Alptekin Küpçü. Generic dynamic data outsourcing framework for integrity verification. *ACM Computing Surveys*, 53(1):8:1–8:32, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3365998.

Kolb:2020:CCC

[2060] John Kolb, Moustafa AbdelBaky, Randy H. Katz, and David E. Culler. Core concepts, challenges, and future directions in blockchain: a centralized tutorial. *ACM Computing Surveys*, 53(1):9:1–9:39, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3366370.

Hilman:2020:MWS

[2061] Muhammad H. Hilman, Maria A. Rodriguez, and Rajkumar Buyya. Multiple workflows scheduling in multi-tenant distributed systems: a taxonomy and future directions. *ACM Computing Surveys*, 53(1):10:1–10:39, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3368036.

Liu:2020:DLB

[2062] Dong Liu, Yue Li, Jianping Lin, Houqiang Li, and Feng Wu. Deep learning-based video coding: a review and a case study. *ACM Computing Surveys*, 53(1):11:1–11:35, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3368405.

Kucuk:2020:SDS

[2063] Dilek Küçük and Fazli Can. Stance detection: a survey. *ACM Computing Surveys*, 53(1):12:1–12:37, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3369026.

Yasuda:2020:AVN

[2064] Yuri D. V. Yasuda, Luiz Eduardo G. Martins, and Fabio A. M. Cappabianco. Autonomous visual navigation for mobile robots: a systematic literature review. *ACM Computing Surveys*, 53(1):13:1–13:34, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3368961.

Suran:2020:FCI

[2065] Shweta Suran, Vishwajeet Pattanaik, and Dirk Draheim. Frameworks for collective intelligence: a systematic literature review. *ACM Computing Surveys*, 53(1):14:1–14:36, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3368986.

Mallawaarachchi:2020:CDN

[2066] Vijini Mallawaarachchi, Lakmal Meegahapola, Roshan Madhushanka, Eranga Heshan, Dulani Meedeniya, and Sampath Jayarathna. Change detection and notification of Web pages: a survey. *ACM Computing Surveys*, 53(1):15:1–15:35, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/abs/10.1145/3369876`.

Vieira:2020:FPP

[2067] Marcos A. M. Vieira, Matheus S. Castanho, Racyus D. G. Pacífico, Elerson R. S. Santos, Eduardo P. M. Câmara Júnior, and Luiz F. M. Vieira. Fast packet processing with eBPF and XDP: Concepts, code, challenges, and applications. *ACM Computing Surveys*, 53(1):16:1–16:36, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/abs/10.1145/3371038`.

Landau:2020:MYM

[2068] Ofir Landau, Rami Puzis, and Nir Nissim. Mind your mind: EEG-based brain–computer interfaces and their security in cyber space. *ACM Computing Surveys*, 53(1):17:1–17:38, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/abs/10.1145/3372043`.

Lao:2020:SIA

[2069] Laphou Lao, Zecheng Li, Songlin Hou, Bin Xiao, Songtao Guo, and Yuanyuan Yang. A survey of IoT applications in blockchain systems: Architecture, consensus, and traffic modeling. *ACM Computing Surveys*, 53(1):18:1–18:32, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/abs/10.1145/3372136`.

Brais:2020:SCS

[2070] Hadi Brais, Rajshekar Kalayappan, and Preeti Ranjan Panda. A survey of cache simulators. *ACM Computing Surveys*, 53(1):19:1–19:32, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/abs/10.1145/3372393`.

Kaloudi:2020:ABC

[2071] Nektaria Kaloudi and Jingyue Li. The AI-based cyber threat landscape: a survey. *ACM Computing Surveys*, 53(1):20:1–20:34, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/abs/10.1145/3372823`.

Luo:2020:SCS

[2072] Chu Luo, Jorge Goncalves, Eduardo Velloso, and Vassilis Kostakos. A survey of context simulation for testing mobile context-aware applications. *ACM Computing Surveys*, 53(1):21:1–21:39, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3372788.

Cini:2020:MCR

[2073] Nevin Cini and Gulay Yalcin. A methodology for comparing the reliability of GPU-based and CPU-based HPCs. *ACM Computing Surveys*, 53 (1):22:1–22:33, May 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3372790.

Heldens:2020:LER

[2074] Stijn Heldens, Pieter Hijma, Ben Van Werkhoven, Jason Maassen, Adam S. Z. Belloum, and Rob V. Van Nieuwpoort. The landscape of exascale research: a data-driven literature analysis. *ACM Computing Surveys*, 53 (2):23:1–23:43, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3372390.

Sahni:2020:MED

[2075] Sartaj Sahni and Albert Y. Zomaya. In memoriam Eliezer Dekel (1948–2020). *ACM Computing Surveys*, 53(2):23:1–23:2, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3389414.

Rai:2020:SCM

[2076] Sunny Rai and Shampa Chakraverty. A survey on computational metaphor processing. *ACM Computing Surveys*, 53(2):24:1–24:37, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3373265.

Sequeiros:2020:ASM

[2077] João B. F. Sequeiros, Francisco T. Chimuco, Musa G. Samaila, Mário M. Freire, and Pedro R. M. Inácio. Attack and system modeling applied to IoT, cloud, and mobile ecosystems: Embedding security by design. *ACM Computing Surveys*, 53(2):25:1–25:32, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3376123.

Cong:2020:SPO

[2078] Peijin Cong, Guo Xu, Tongquan Wei, and Keqin Li. A survey of profit optimization techniques for cloud providers. *ACM Computing Surveys*, 53(2):26:1–26:35, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3376917.

DeAguiar:2020:SBB

[2079] Erikson Júlio De Aguiar, Bruno S. Faiçal, Bhaskar Krishnamachari, and Jó Ueyama. A survey of blockchain-based strategies for healthcare. *ACM Computing Surveys*, 53(2):27:1–27:27, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3376915.

Wu:2020:MLA

[2080] Jian Wu, Victor S. Sheng, Jing Zhang, Hua Li, Tetiana Dadakova, Christine Leon Swisher, Zhiming Cui, and Pengpeng Zhao. Multi-label active learning algorithms for image classification: Overview and future promise. *ACM Computing Surveys*, 53(2):28:1–28:35, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3379504.

Falcon-Cardona:2020:IBM

[2081] Jesús Guillermo Falcón-Cardona and Carlos A. Coello Coello. Indicator-based multi-objective evolutionary algorithms: a comprehensive survey. *ACM Computing Surveys*, 53(2):29:1–29:35, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3376916.

Verbraeken:2020:SDM

[2082] Joost Verbraeken, Matthijs Wolting, Jonathan Katzy, Jeroen Kloppenburg, Tim Verbelen, and Jan S. Rellermeyer. A survey on distributed machine learning. *ACM Computing Surveys*, 53(2):30:1–30:33, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3377454.

Papadakis:2020:BFT

[2083] George Papadakis, Dimitrios Skoutas, Emmanouil Thanos, and Themis Palpanas. Blocking and filtering techniques for entity resolution: a survey. *ACM Computing Surveys*, 53(2):31:1–31:42, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3377455.

Sahin:2020:CGH

[2084] Erdem Sahin, Elena Stoykova, Jani Mäkinen, and Atanas Gotchev. Computer-generated holograms for 3D imaging: a survey. *ACM Computing Surveys*, 53(2):32:1–32:35, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3378444.

Cherubin:2020:TRP

[2085] Stefano Cherubin and Giovanni Agosta. Tools for reduced precision computation: a survey. *ACM Computing Surveys*, 53(2):33:1–33:35, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3381039.

Zolfaghari:2020:CDN

[2086] Behrouz Zolfaghari, Gautam Srivastava, Swapnoneel Roy, Hamid R. Nemati, Fatemeh Afghah, Takeshi Koshiba, Abolfazl Razi, Khodakhast Bibak, Pinaki Mitra, and Brijesh Kumar Rai. Content delivery networks: State of the art, trends, and future roadmap. *ACM Computing Surveys*, 53(2):34:1–34:34, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3380613.

Alam:2020:SNV

[2087] Iqbal Alam, Kashif Sharif, Fan Li, Zohaib Latif, M. M. Karim, Sujit Biswas, Boubakr Nour, and Yu Wang. A survey of network virtualization techniques for Internet of Things using SDN and NFV. *ACM Computing Surveys*, 53(2):35:1–35:40, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3379444.

Bonifati:2020:GGS

[2088] Angela Bonifati, Irena Holubová, Arnau Prat-Pérez, and Sherif Sakr. Graph generators: State of the art and open challenges. *ACM Computing Surveys*, 53(2):36:1–36:30, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3379445.

Lu:2020:KTV

[2089] Ying Lu, Lingkun Luo, Di Huang, Yunhong Wang, and Liming Chen. Knowledge transfer in vision recognition: a survey. *ACM Computing Surveys*, 53(2):37:1–37:35, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3379344.

Cong:2020:SHE

[2090] Peijin Cong, Junlong Zhou, Liying Li, Kun Cao, Tongquan Wei, and Keqin Li. A survey of hierarchical energy optimization for mobile edge computing: a perspective from end devices to the cloud. *ACM Computing Surveys*, 53(2):38:1–38:44, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3378935.

Valejo:2020:CSM

[2091] Alan Valejo, Vinícius Ferreira, Renato Fabbri, Maria Cristina Ferreira de Oliveira, and Alneu de Andrade Lopes. A critical survey of the multilevel method in complex networks. *ACM Computing Surveys*, 53(2):39:1–39:35, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3379347.

Suaboot:2020:TSL

[2092] Jakapan Suaboot, Adil Fahad, Zahir Tari, John Grundy, Abdun Naser Mahmood, Abdulmohsen Almalawi, Albert Y. Zomaya, and Khalil Drira. A taxonomy of supervised learning for IDSs in SCADA environments. *ACM Computing Surveys*, 53(2):40:1–40:37, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3379499.

Li:2020:SRS

[2093] Guangjie Li, Hui Liu, and Ally S. Nyamawe. A survey on renamings of software entities. *ACM Computing Surveys*, 53(2):41:1–41:38, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3379443.

Kannengiesser:2020:TOB

[2094] Niclas Kannengießer, Sebastian Lins, Tobias Dehling, and Ali Sunyaev. Trade-offs between distributed ledger technology characteristics. *ACM Computing Surveys*, 53(2):42:1–42:37, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3379463.

Herodotou:2020:SAP

[2095] Herodotos Herodotou, Yuxing Chen, and Jiaheng Lu. A survey on automatic parameter tuning for big data processing systems. *ACM Computing Surveys*, 53(2):43:1–43:37, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3381027.

Figueroa-Lorenzo:2020:SIP

[2096] Santiago Figueroa-Lorenzo, Javier Añorga, and Saioa Arrizabalaga. A survey of IIoT protocols: a measure of vulnerability risk analysis based on CVSS. *ACM Computing Surveys*, 53(2):44:1–44:53, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/abs/10.1145/3381038`.

Sierra-Arriaga:2020:SIC

[2097] Federico Sierra-Arriaga, Rodrigo Branco, and Ben Lee. Security issues and challenges for virtualization technologies. *ACM Computing Surveys*, 53(2):45:1–45:37, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/abs/10.1145/3382190`.

Zeng:2020:SMB

[2098] Xuezhi Zeng, Saurabh Garg, Mutaz Barika, Albert Y. Zomaya, Lizhe Wang, Massimo Villari, Dan Chen, and Rajiv Ranjan. SLA management for big data analytical applications in clouds: a taxonomy study. *ACM Computing Surveys*, 53(3):46:1–46:40, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/abs/10.1145/3383464`.

Patil:2020:VQG

[2099] Charulata Patil and Manasi Patwardhan. Visual question generation: The state of the art. *ACM Computing Surveys*, 53(3):47:1–47:22, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/abs/10.1145/3383465`.

Macedo:2020:SCS

[2100] Ricardo Macedo, João Paulo, José Pereira, and Alysson Bessani. A survey and classification of software-defined storage systems. *ACM Computing Surveys*, 53(3):48:1–48:38, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/abs/10.1145/3385896`.

Alhakamy:2020:RTI

[2101] A'Aeshah Alhakamy and Mihran Tuceryan. Real-time illumination and visual coherence for photorealistic augmented/mixed reality. *ACM Computing Surveys*, 53(3):49:1–49:34, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/abs/10.1145/3386496`.

Liu:2020:RMS

[2102] Xunyun Liu and Rajkumar Buyya. Resource management and scheduling in distributed stream processing systems: a taxonomy, review, and future directions. *ACM Computing Surveys*, 53(3):50:1–50:41, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3355399.

Stanley-Marbell:2020:EEE

[2103] Phillip Stanley-Marbell, Armin Alaghi, Michael Carbin, Eva Darulova, Lara Dolecek, Andreas Gerstlauer, Ghayoor Gillani, Djordje Jevdjic, Thierry Moreau, Mattia Cacciotti, Alexandros Daglis, Natalie Enright Jerger, Babak Falsafi, Sasa Misailovic, Adrian Sampson, and Damien Zufferey. Exploiting errors for efficiency: a survey from circuits to applications. *ACM Computing Surveys*, 53(3):51:1–51:39, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3394898.

Akpinar:2020:ECS

[2104] Elgın Akpinar, Yelız Yesılada, and Selım Temızer. The effect of context on small screen and wearable device users' performance — a systematic review. *ACM Computing Surveys*, 53(3):52:1–52:44, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3386370.

Warford:2020:CDS

[2105] J. Stanley Warford, David Vega, and Scott M. Staley. A calculational deductive system for linear temporal logic. *ACM Computing Surveys*, 53(3):53:1–53:38, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3387109.

Das:2020:SFD

[2106] Rangan Das, Sagnik Sen, and Ujjwal Maulik. A survey on fuzzy deep neural networks. *ACM Computing Surveys*, 53(3):54:1–54:25, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3369798.

Boukerche:2020:ODM

[2107] Azzedine Boukerche, Lining Zheng, and Omar Alfandi. Outlier detection: Methods, models, and classification. *ACM Computing Surveys*, 53(3):55:1–55:37, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3381028.

Beaumont:2020:STT

[2108] Olivier Beaumont, Louis-Claude Canon, Lionel Eyraud-Dubois, Giorgio Lucarelli, Loris Marchal, Clément Mommessin, Bertrand Simon, and Denis Trystram. Scheduling on two types of resources: a survey. *ACM Computing Surveys*, 53(3):56:1–56:36, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3387110.

Prenkaj:2020:SML

[2109] Bardh Prenkaj, Paola Velardi, Giovanni Stilo, Damiano Distante, and Stefano Faralli. A survey of machine learning approaches for student dropout prediction in online courses. *ACM Computing Surveys*, 53(3):57:1–57:34, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3388792.

Ismail:2020:CSP

[2110] Leila Ismail and Huned Materwala. Computing server power modeling in a data center: Survey, taxonomy, and performance evaluation. *ACM Computing Surveys*, 53(3):58:1–58:34, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3390605.

Welsh:2020:RCC

[2111] Thomas Welsh and Elhadj Benkhelifa. On resilience in cloud computing: a survey of techniques across the cloud domain. *ACM Computing Surveys*, 53(3):59:1–59:36, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3388922.

Anwar:2020:DJS

[2112] Saeed Anwar, Salman Khan, and Nick Barnes. A deep journey into super-resolution: a survey. *ACM Computing Surveys*, 53(3):60:1–60:34, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3390462.

Butijn:2020:BSM

[2113] Bert-Jan Butijn, Damian A. Tamburri, and Willem-Jan van den Heuvel. Blockchains: a systematic multivocal literature review. *ACM Computing Surveys*, 53(3):61:1–61:37, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3369052.

Le:2020:DLS

[2114] Triet H. M. Le, Hao Chen, and Muhammad Ali Babar. Deep learning for source code modeling and generation: Models, applications, and challenges. *ACM Computing Surveys*, 53(3):62:1–62:38, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3383458.

Wang:2020:GFE

[2115] Yaqing Wang, Quanming Yao, James T. Kwok, and Lionel M. Ni. Generalizing from a few examples: a survey on few-shot learning. *ACM Computing Surveys*, 53(3):63:1–63:34, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3386252.

Zepf:2020:DER

[2116] Sebastian Zepf, Javier Hernandez, Alexander Schmitt, Wolfgang Minker, and Rosalind W. Picard. Driver emotion recognition for intelligent vehicles: a survey. *ACM Computing Surveys*, 53(3):64:1–64:30, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3388790.

Salaht:2020:OSP

[2117] Farah Aït Salaht, Frédéric Desprez, and Adrien Lebre. An overview of service placement problem in fog and edge computing. *ACM Computing Surveys*, 53(3):65:1–65:35, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3391196.

Serban:2020:AEO

[2118] Alex Serban, Erik Poll, and Joost Visser. Adversarial examples on object recognition: a comprehensive survey. *ACM Computing Surveys*, 53(3):66:1–66:38, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3398394.

Chen:2020:SES

[2119] Huashan Chen, Marcus Pendleton, Laurent Njilla, and Shouhuai Xu. A survey on Ethereum systems security: Vulnerabilities, attacks, and defenses. *ACM Computing Surveys*, 53(3):67:1–67:43, July 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/abs/10.1145/3391195.

Guo:2020:FFI

[2120] Bin Guo, Yasan Ding, Lina Yao, Yunji Liang, and Zhiwen Yu. The future of false information detection on social media: New perspectives and trends. *ACM Computing Surveys*, 53(4):68:1–68:36, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3393880.

Emami:2020:MLM

[2121] Patrick Emami, Panos M. Pardalos, Lily Elefteriadou, and Sanjay Ranka. Machine learning methods for data association in multi-object tracking. *ACM Computing Surveys*, 53(4):69:1–69:34, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3394659.

Wood:2020:HEM

[2122] Alexander Wood, Kayvan Najarian, and Delaram Kahrobaei. Homomorphic encryption for machine learning in medicine and bioinformatics. *ACM Computing Surveys*, 53(4):70:1–70:35, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3394658.

Ngamakeur:2020:SDF

[2123] Kan Ngamakeur, Sira Yongchareon, Jian Yu, and Saeed Ur Rehman. A survey on device-free indoor localization and tracking in the multi-resident environment. *ACM Computing Surveys*, 53(4):71:1–71:29, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3396302.

Ali:2020:FPS

[2124] Isra Mohamed Ali, Maurantonio Caprolu, and Roberto Di Pietro. Foundations, properties, and security applications of puzzles: a survey. *ACM Computing Surveys*, 53(4):72:1–72:38, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3396374.

Fei:2020:PWN

[2125] Xincai Fei, Fangming Liu, Qixia Zhang, Hai Jin, and Hongxin Hu. Paving the way for NFV acceleration: a taxonomy, survey and future directions. *ACM Computing Surveys*, 53(4):73:1–73:42, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3397022.

Feldmann:2020:SAS

[2126] Michael Feldmann, Christian Scheideler, and Stefan Schmid. Survey on algorithms for self-stabilizing overlay networks. *ACM Computing Surveys*, 53(4):74:1–74:24, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3397190.

Guo:2020:SLC

[2127] Ruocheng Guo, Lu Cheng, Jundong Li, P. Richard Hahn, and Huan Liu. A survey of learning causality with data: Problems and methods. *ACM Computing Surveys*, 53(4):75:1–75:37, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3397269.

Kritikakou:2020:BTC

[2128] Angeliki Kritikakou, Rafail Psiakis, Francky Catthoor, and Olivier Sentieys. Binary tree classification of rigid error detection and correction techniques. *ACM Computing Surveys*, 53(4):76:1–76:38, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3397268.

Calvo-Zaragoza:2020:UOM

[2129] Jorge Calvo-Zaragoza, Jan Hajic Jr., and Alexander Pacha. Understanding optical music recognition. *ACM Computing Surveys*, 53(4):77:1–77:35, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3397499.

Lucas:2020:CSR

[2130] Salvador Lucas. Context-sensitive rewriting. *ACM Computing Surveys*, 53(4):78:1–78:36, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3397677.

Cerrolaza:2020:MCD

[2131] Jon Perez Cerrolaza, Roman Obermaisser, Jaume Abella, Francisco J. Cazorla, Kim Grüttner, Irune Agirre, Hamidreza Ahmadian, and Imanol Allende. Multi-core devices for safety-critical systems: a survey. *ACM Computing Surveys*, 53(4):79:1–79:38, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3398665.

Boukerche:2020:COR

[2132] Azzedine Boukerche and Victor Soto. Computation offloading and retrieval for vehicular edge computing: Algorithms, models, and classification. *ACM Computing Surveys*, 53(4):80:1–80:35, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3392064.

Weisenburger:2020:SMP

[2133] Pascal Weisenburger, Johannes Wirth, and Guido Salvaneschi. A survey of multitier programming. *ACM Computing Surveys*, 53(4):81:1–81:35, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3397495.

Qian:2020:ODL

[2134] Bin Qian, Jie Su, Zhenyu Wen, Devki Nandan Jha, Yinhao Li, Yu Guan, Deepak Puthal, Philip James, Renyu Yang, Albert Y. Zomaya, Omer Rana, Lizhe Wang, Maciej Koutny, and Rajiv Ranjan. Orchestrating the development lifecycle of machine learning-based IoT applications: a taxonomy and survey. *ACM Computing Surveys*, 53(4):82:1–82:47, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3398020.

Zhang:2020:ABE

[2135] Yinghui Zhang, Robert H. Deng, Shengmin Xu, Jianfei Sun, Qi Li, and Dong Zheng. Attribute-based encryption for cloud computing access control: a survey. *ACM Computing Surveys*, 53(4):83:1–83:41, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3398036.

Chen:2020:DLM

[2136] Yanjiao Chen, Baolin Zheng, Zihan Zhang, Qian Wang, Chao Shen, and Qian Zhang. Deep learning on mobile and embedded devices: State-of-the-art, challenges, and future directions. *ACM Computing Surveys*, 53(4):84:1–84:37, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3398209.

Khan:2020:BSU

[2137] Saad Khan, Simon Parkinson, Liam Grant, Na Liu, and Stephen Mcguire. Biometric systems utilising health data from wearable devices: Applications and future challenges in computer security. *ACM Computing Surveys*, 53(4):85:1–85:29, September 2020. CODEN CMSVAN.

ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3400030.

Harada:2020:PGA

[2138] Tomohiro Harada and Enrique Alba. Parallel genetic algorithms: a useful survey. *ACM Computing Surveys*, 53(4):86:1–86:39, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3400031.

Pekar:2020:ADB

[2139] Adrian Pekar, Jozef Mocnej, Winston K. G. Seah, and Iveta Zolotova. Application domain-based overview of IoT network traffic characteristics. *ACM Computing Surveys*, 53(4):87:1–87:33, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3399669.

Mahmud:2020:AMF

[2140] Redowan Mahmud, Kotagiri Ramamohanarao, and Rajkumar Buyya. Application management in fog computing environments: a taxonomy, review and future directions. *ACM Computing Surveys*, 53(4):88:1–88:43, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3403955.

Sharma:2020:BTC

[2141] Pratima Sharma, Rajni Jindal, and Malaya Dutta Borah. Blockchain technology for cloud storage: a systematic literature review. *ACM Computing Surveys*, 53(4):89:1–89:32, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3403954.

Zhang:2020:OHI

[2142] Gexiang Zhang, Zeyi Shang, Sergey Verlan, Miguel Á. Martínez del Amor, Chengxun Yuan, Luis Valencia-Cabrera, and Mario J. Pérez-Jiménez. An overview of hardware implementation of membrane computing models. *ACM Computing Surveys*, 53(4):90:1–90:38, September 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3402456.

Alvarez-Garcia:2020:SEE

[2143] Juan A. Álvarez-García, Bozidara Cvetković, and Mitja Lustrek. A survey on energy expenditure estimation using wearable devices. *ACM Computing Surveys*, 53(5):91:1–91:35, October 2020. CODEN CMSVAN.

ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3404482.

Aljeri:2020:MME

[2144] Noura Aljeri and Azzedine Boukerche. Mobility management in 5G-enabled vehicular networks: Models, protocols, and classification. *ACM Computing Surveys*, 53(5):92:1–92:35, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3403953.

Khader:2020:DBA

[2145] Mariam Khader and Ghazi Al-Naymat. Density-based algorithms for big data clustering using MapReduce framework: a comprehensive study. *ACM Computing Surveys*, 53(5):93:1–93:38, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3403951.

DeSousa:2020:VTS

[2146] Roniel S. De Sousa, Azzedine Boukerche, and Antonio A. F. Loureiro. Vehicle trajectory similarity: Models, methods, and applications. *ACM Computing Surveys*, 53(5):94:1–94:32, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3406096.

Canal:2020:PRF

[2147] Ramon Canal, Carles Hernandez, Rafa Tornero, Alessandro Cilardo, Giuseppe Massari, Federico Reghenzani, William Fornaciari, Marina Zapater, David Atienza, Ariel Oleksiak, Wojciech PiAtek, and Jaume Abella. Predictive reliability and fault management in exascale systems: State of the art and perspectives. *ACM Computing Surveys*, 53(5):95:1–95:32, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3403956.

Mehic:2020:QKD

[2148] Miralem Mehic, Marcin Niemiec, Stefan Rass, Jiajun Ma, Momtchil Peev, Alejandro Aguado, Vicente Martin, Stefan Schauer, Andreas Poppe, Christoph Pacher, and Miroslav Voznak. Quantum key distribution: a networking perspective. *ACM Computing Surveys*, 53(5):96:1–96:41, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3402192.

Al-Odat:2020:SHA

[2149] Zeyad A. Al-Odat, Mazhar Ali, Assad Abbas, and Samee U. Khan. Secure hash algorithms and the corresponding FPGA optimization techniques. *ACM Computing Surveys*, 53(5):97:1–97:36, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3311724.

Uprety:2020:SQT

[2150] Sagar Uprety, Dimitris Gkoumas, and Dawei Song. A survey of quantum theory inspired approaches to information retrieval. *ACM Computing Surveys*, 53(5):98:1–98:39, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3402179.

Dabre:2020:SMN

[2151] Raj Dabre, Chenhui Chu, and Anoop Kunchukuttan. A survey of multilingual neural machine translation. *ACM Computing Surveys*, 53(5):99:1–99:38, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3406095.

Lin:2020:TSP

[2152] Weiwei Lin, Fang Shi, Wentai Wu, Keqin Li, Guangxin Wu, and Al-Alas Mohammed. A taxonomy and survey of power models and power modeling for cloud servers. *ACM Computing Surveys*, 53(5):100:1–100:41, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3406208.

Chatterjee:2020:CSS

[2153] Deya Chatterjee and Shrisha Rao. Computational sustainability: a sociotechnical perspective. *ACM Computing Surveys*, 53(5):101:1–101:29, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3409797.

Younes:2020:TEA

[2154] Maram Bani Younes and Azzedine Boukerche. Traffic efficiency applications over downtown roads: a new challenge for intelligent connected vehicles. *ACM Computing Surveys*, 53(5):102:1–102:30, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3403952.

Cornejo-Lupa:2020:SOS

[2155] María A. Cornejo-Lupa, Regina P. Ticona-Herrera, Yudith Cardinale, and Dennis Barrios-Aranibar. A survey of ontologies for simultaneous localization and mapping in mobile robots. *ACM Computing Surveys*, 53(5):103:1–103:26, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3408316.

Bu:2020:UMI

[2156] Kai Bu, Avery Laird, Yutian Yang, Linfeng Cheng, Jiaqing Luo, Yingjiu Li, and Kui Ren. Unveiling the mystery of Internet packet forwarding: a survey of network path validation. *ACM Computing Surveys*, 53(5):104:1–104:34, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3409796.

Navarro:2020:PS

[2157] Gonzalo Navarro and Javiel Rojas-Ledesma. Predecessor search. *ACM Computing Surveys*, 53(5):105:1–105:35, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3409371.

Deldjoo:2020:RSL

[2158] Yashar Deldjoo, Markus Schedl, Paolo Cremonesi, and Gabriella Pasi. Recommender systems leveraging multimedia content. *ACM Computing Surveys*, 53(5):106:1–106:38, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3407190.

Wang:2020:STE

[2159] Jingwen Wang, Xuyang Jing, Zheng Yan, Yulong Fu, Witold Pedrycz, and Laurence T. Yang. A survey on trust evaluation based on machine learning. *ACM Computing Surveys*, 53(5):107:1–107:36, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3408292.

Wang:2020:SBD

[2160] Hao Wang and Dit-Yan Yeung. A survey on Bayesian deep learning. *ACM Computing Surveys*, 53(5):108:1–108:37, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3409383.

Zhou:2020:SFN

[2161] Xinyi Zhou and Reza Zafarani. A survey of fake news: Fundamental theories, detection methods, and opportunities. *ACM Computing Surveys*, 53(5):109:1–109:40, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3395046.

Davoudian:2020:BDS

[2162] Ali Davoudian and Mengchi Liu. Big data systems: a software engineering perspective. *ACM Computing Surveys*, 53(5):110:1–110:39, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3408314.

Yu:2020:CBF

[2163] Kui Yu, Xianjie Guo, Lin Liu, Jiuyong Li, Hao Wang, Zhaolong Ling, and Xindong Wu. Causality-based feature selection: Methods and evaluations. *ACM Computing Surveys*, 53(5):111:1–111:36, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3409382.

Alaca:2020:CAF

[2164] Furkan Alaca and Paul C. Van Oorschot. Comparative analysis and framework evaluating Web single sign-on systems. *ACM Computing Surveys*, 53(5):112:1–112:34, October 2020. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3409452.

Denning:2021:WSA

[2165] Peter J. Denning. Working set analytics. *ACM Computing Surveys*, 53(6):113:1–113:36, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3399709.

Zomaya:2021:MSS

[2166] Albert Y. Zomaya. In memoriam Sherif Sakr (1979–2020). *ACM Computing Surveys*, 53(6):113e:1, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3436208.

Rathore:2021:SHB

[2167] Aditya Singh Rathore, Zhengxiong Li, Weijin Zhu, Zhanpeng Jin, and Wenyao Xu. A survey on heart biometrics. *ACM Computing Surveys*, 53(6):114:1–114:38, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3410158`.

Matheu:2021:SCC

[2168] Sara N. Matheu, José L. Hernández-Ramos, Antonio F. Skarmeta, and Gianmarco Baldini. A survey of cybersecurity certification for the Internet of Things. *ACM Computing Surveys*, 53(6):115:1–115:36, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3410160`.

Edu:2021:SHP

[2169] Jide S. Edu, Jose M. Such, and Guillermo Suarez-Tangil. Smart home personal assistants: a security and privacy review. *ACM Computing Surveys*, 53(6):116:1–116:36, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3412383`.

C:2021:EDA

[2170] Marimuthu C., K. Chandrasekaran, and Sridhar Chimalakonda. Energy diagnosis of Android applications: a thematic taxonomy and survey. *ACM Computing Surveys*, 53(6):117:1–117:36, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3417986`.

Zave:2021:PIN

[2171] Pamela Zave and Jennifer Rexford. Patterns and interactions in network security. *ACM Computing Surveys*, 53(6):118:1–118:37, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3417988`.

Santhosh:2021:ADR

[2172] K. K. Santhosh, D. P. Dogra, and P. P. Roy. Anomaly detection in road traffic using visual surveillance: a survey. *ACM Computing Surveys*, 53(6):119:1–119:26, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3417989`.

Ellavarason:2021:TDB

[2173] Elakkiya Ellavarason, Richard Guest, Farzin Deravi, Raul Sanchez-Riello, and Barbara Corsetti. Touch-dynamics based behavioural biometrics on mobile devices — a review from a usability and performance perspective. *ACM Computing Surveys*, 53(6):120:1–120:36, February 2021.

CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3394713.

Zimmerling:2021:STL

[2174] Marco Zimmerling, Luca Mottola, and Silvia Santini. Synchronous transmissions in low-power wireless: a survey of communication protocols and network services. *ACM Computing Surveys*, 53(6):121:1–121:39, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3410159.

Waheed:2021:SPI

[2175] Nazar Waheed, Xiangjian He, Muhammad Ikram, Muhammad Usman, Saad Sajid Hashmi, and Muhammad Usman. Security and privacy in IoT using machine learning and blockchain: Threats and countermeasures. *ACM Computing Surveys*, 53(6):122:1–122:37, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3417987.

vanRozen:2021:LGP

[2176] Riemer van Rozen. Languages of games and play: a systematic mapping study. *ACM Computing Surveys*, 53(6):123:1–123:37, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3412843.

Coscia:2021:NVD

[2177] Michele Coscia, Andres Gomez-Lievano, James Mcnerney, and Frank Neffke. The node vector distance problem in complex networks. *ACM Computing Surveys*, 53(6):124:1–124:27, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3416509.

Pibiri:2021:TII

[2178] Giulio Ermanno Pibiri and Rossano Venturini. Techniques for inverted index compression. *ACM Computing Surveys*, 53(6):125:1–125:36, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3415148.

Qiu:2021:SAM

[2179] Junyang Qiu, Jun Zhang, Wei Luo, Lei Pan, Surya Nepal, and Yang Xiang. A survey of Android malware detection with deep neural models. *ACM Computing Surveys*, 53(6):126:1–126:36, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3417978.

Christophides:2021:OEE

[2180] Vassilis Christophides, Vasilis Efthymiou, Themis Palpanas, George Papadakis, and Kostas Stefanidis. An overview of end-to-end entity resolution for big data. *ACM Computing Surveys*, 53(6):127:1–127:42, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3418896.

Turan:2021:TFA

[2181] Furkan Turan and Ingrid Verbauwhede. Trust in FPGA-accelerated cloud computing. *ACM Computing Surveys*, 53(6):128:1–128:28, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3419100.

Skaik:2021:USM

[2182] Ruba Skaik and Diana Inkpen. Using social media for mental health surveillance: a review. *ACM Computing Surveys*, 53(6):129:1–129:31, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3422824.

Preum:2021:RCA

[2183] Sarah Masud Preum, Sirajum Munir, Meiyi Ma, Mohammad Samin Yasar, David J. Stone, Ronald Williams, Homa Alemzadeh, and John A. Stankovic. A review of cognitive assistants for healthcare: Trends, prospects, and future directions. *ACM Computing Surveys*, 53(6): 130:1–130:37, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3419368.

Bansal:2021:SIB

[2184] Maggi Bansal, Inderveer Chana, and Siobhán Clarke. A survey on IoT big data: Current status, 13 V's challenges, and future directions. *ACM Computing Surveys*, 53(6):131:1–131:59, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3419634.

Tolmeijer:2021:IME

[2185] Suzanne Tolmeijer, Markus Kneer, Cristina Sarasua, Markus Christen, and Abraham Bernstein. Implementations in machine ethics: a survey. *ACM Computing Surveys*, 53(6):132:1–132:38, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3419633.

Zhu:2021:SCC

[2186] Liehuang Zhu, Md M. Karim, Kashif Sharif, Chang Xu, Fan Li, Xiaojiang Du, and Mohsen Guizani. SDN controllers: a comprehensive analysis and performance evaluation study. *ACM Computing Surveys*, 53(6):133:1–133:40, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3421764.

Boukerche:2021:DAP

[2187] Azzedine Boukerche and Peng Sun. Design of algorithms and protocols for underwater acoustic wireless sensor networks. *ACM Computing Surveys*, 53(6):134:1–134:34, February 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3421763.

Mladenovic:2021:CAC

[2188] Miljana Mladenović, Vera Osmjanski, and Stasa Vujicić Stanković. Cyber-aggression, cyberbullying, and cyber-grooming: a survey and research challenges. *ACM Computing Surveys*, 54(1):1:1–1:42, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3424246.

Vyas:2021:RBC

[2189] Avani Vyas, Sujata Pal, and Barun Kumar Saha. Relay-based communications in WBANs: a comprehensive survey. *ACM Computing Surveys*, 54(1):2:1–2:34, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3423164.

Varela-Vaca:2021:SCL

[2190] Ángel Jesús Varela-Vaca and Antonia M. Reina Quintero. Smart contract languages: a multivocal mapping study. *ACM Computing Surveys*, 54(1):3:1–3:38, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3423166.

Jiang:2021:LPP

[2191] Hongbo Jiang, Jie Li, Ping Zhao, Fanzi Zeng, Zhu Xiao, and Arun Iyengar. Location privacy-preserving mechanisms in location-based services: a comprehensive survey. *ACM Computing Surveys*, 54(1):4:1–4:36, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3423165.

Wright:2021:CFR

[2192] Christopher Wright, William A. Moeglein, Saurabh Bagchi, Milind Kulkarni, and Abraham A. Clements. Challenges in firmware re-hosting, emulation, and analysis. *ACM Computing Surveys*, 54(1):5:1–5:36, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3423167.

Gu:2021:SBC

[2193] Renjie Gu, Chaoyue Niu, Fan Wu, Guihai Chen, Chun Hu, Chengfei Lyu, and Zhihua Wu. From server-based to client-based machine learning: a comprehensive survey. *ACM Computing Surveys*, 54(1):6:1–6:36, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3424660.

Mirsky:2021:CDD

[2194] Yisroel Mirsky and Wenke Lee. The creation and detection of deepfakes: a survey. *ACM Computing Surveys*, 54(1):7:1–7:41, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3425780.

Boyar:2021:RWO

[2195] Joan Boyar, Lene M. Favrholdt, and Kim S. Larsen. Relative worst-order analysis: a survey. *ACM Computing Surveys*, 54(1):8:1–8:21, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3425910.

Ravi:2021:LBK

[2196] Prasanna Ravi, James Howe, Anupam Chattopadhyay, and Shivam Bhasin. Lattice-based key-sharing schemes: a survey. *ACM Computing Surveys*, 54(1):9:1–9:39, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3422178.

Mirza:2021:PDL

[2197] Behroz Mirza, Tahir Q. Syed, Behraj Khan, and Yameen Malik. Potential deep learning solutions to persistent and emerging big data challenges — a practitioners' cookbook. *ACM Computing Surveys*, 54(1):10:1–10:39, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3427476.

Bernal:2021:SBC

[2198] Sergio López Bernal, Alberto Huertas Celdrán, Gregorio Martínez Pérez, Michael Taynnan Barros, and Sasitharan Balasubramaniam. Security in brain-computer interfaces: State-of-the-art, opportunities, and future challenges. *ACM Computing Surveys*, 54(1):11:1–11:35, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3427376.

Zhang-Kennedy:2021:SRM

[2199] Leah Zhang-Kennedy and Sonia Chiasson. A systematic review of multimedia tools for cybersecurity awareness and education. *ACM Computing Surveys*, 54(1):12:1–12:39, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3427920.

Jiang:2021:NOS

[2200] Shengming Jiang. Networking in oceans: a survey. *ACM Computing Surveys*, 54(1):13:1–13:33, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3428147.

Xu:2021:KGI

[2201] Weitao Xu, Junqing Zhang, Shunqi Huang, Chengwen Luo, and Wei Li. Key generation for Internet of Things: a contemporary survey. *ACM Computing Surveys*, 54(1):14:1–14:37, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3429740.

Bellavista:2021:DLF

[2202] Paolo Bellavista, Luca Foschini, and Alessio Mora. Decentralised learning in federated deployment environments: a system-level survey. *ACM Computing Surveys*, 54(1):15:1–15:38, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3429252.

Sandhie:2021:IMV

[2203] Zarin Tasnim Sandhie, Jill Arvindbhai Patel, Farid Uddin Ahmed, and Masud H. Chowdhury. Investigation of multiple-valued logic technologies for beyond-binary era. *ACM Computing Surveys*, 54(1):16:1–16:30, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3431230.

Chikhi:2021:DSR

[2204] Rayan Chikhi, Jan Holub, and Paul Medvedev. Data structures to represent a set of k-long DNA sequences. *ACM Computing Surveys*, 54(1):17:1–17:22, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3445967.

Hernandez:2021:PTD

[2205] Víctor Adrián Sosa Hernández, Raúl Monroy, Miguel Angel Medina-Pérez, Octavio Loyola-González, and Francisco Herrera. A practical tutorial for decision tree induction: Evaluation measures for candidate splits and opportunities. *ACM Computing Surveys*, 54(1):18:1–18:38, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3429739.

Mariani:2021:CAV

[2206] Stefano Mariani, Giacomo Cabri, and Franco Zambonelli. Coordination of autonomous vehicles: Taxonomy and survey. *ACM Computing Surveys*, 54(1):19:1–19:33, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3431231.

Nasar:2021:NER

[2207] Zara Nasar, Syed Waqar Jaffry, and Muhammad Kamran Malik. Named entity recognition and relation extraction: State-of-the-art. *ACM Computing Surveys*, 54(1):20:1–20:39, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3445965.

Aliwa:2021:CCV

[2208] Emad Aliwa, Omer Rana, Charith Perera, and Peter Burnap. Cyberattacks and countermeasures for in-vehicle networks. *ACM Computing Surveys*, 54(1):21:1–21:37, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3431233.

Song:2021:SNI

[2209] Bosheng Song, Kenli Li, David Orellana-Martín, Mario J. Pérez-Jiménez, and Ignacio PéRez-Hurtado. A survey of nature-inspired computing: Membrane computing. *ACM Computing Surveys*, 54(1):22:1–22:31, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3431234.

Minaeva:2021:SPS

[2210] Anna Minaeva and Zdenek Hanzálek. Survey on periodic scheduling for time-triggered hard real-time systems. *ACM Computing Surveys*, 54(1):23:1–23:32, April 2021. CODEN CMSVAN. ISSN 0360-

0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3431232.

Distler:2021:BFT

[2211] Tobias Distler. Byzantine fault-tolerant state-machine replication from a systems perspective. *ACM Computing Surveys*, 54(1):24:1–24:38, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3436728.

Qasem:2021:AVD

[2212] Abdullah Qasem, Paria Shirani, Mourad Debbabi, Lingyu Wang, Bernard Lebel, and Basile L. Agba. Automatic vulnerability detection in embedded devices and firmware: Survey and layered taxonomies. *ACM Computing Surveys*, 54(2):25:1–25:42, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3432893.

Navarro:2021:IHRa

[2213] Gonzalo Navarro. Indexing highly repetitive string collections, Part II: Compressed indexes. *ACM Computing Surveys*, 54(2):26:1–26:32, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3432999.

Zhou:2021:SIC

[2214] Fan Zhou, Xovee Xu, Goce Trajcevski, and Kunpeng Zhang. A survey of information cascade analysis: Models, predictions, and recent advances. *ACM Computing Surveys*, 54(2):27:1–27:36, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3433000.

Ribeiro:2021:SSC

[2215] Pedro Ribeiro, Pedro Paredes, Miguel E. P. Silva, David Aparicio, and Fernando Silva. A survey on subgraph counting: Concepts, algorithms, and applications to network motifs and graphlets. *ACM Computing Surveys*, 54(2):28:1–28:36, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3433652.

Navarro:2021:IHRb

[2216] Gonzalo Navarro. Indexing highly repetitive string collections, part i: Repetitiveness measures. *ACM Computing Surveys*, 54(2):29:1–29:31, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3434399.

Boukerche:2021:ODU

[2217] Azzedine Boukerche and Zhijun Hou. Object detection using deep learning methods in traffic scenarios. *ACM Computing Surveys*, 54(2):30:1–30:35, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3434398.

Liu:2021:WML

[2218] Bo Liu, Ming Ding, Sina Shaham, Wenny Rahayu, Farhad Farokhi, and Zihuai Lin. When machine learning meets privacy: a survey and outlook. *ACM Computing Surveys*, 54(2):31:1–31:36, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3436755.

Li:2021:DAE

[2219] Chenning Li, Zhichao Cao, and Yunhao Liu. Deep AI enabled ubiquitous wireless sensing: a survey. *ACM Computing Surveys*, 54(2):32:1–32:35, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3436729.

Harley:2021:IIW

[2220] Kelsey Harley and Rodney Cooper. Information integrity: Are we there yet? *ACM Computing Surveys*, 54(2):33:1–33:35, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3436817.

Talbi:2021:ADD

[2221] El-Ghazali Talbi. Automated design of deep neural networks: a survey and unified taxonomy. *ACM Computing Surveys*, 54(2):34:1–34:37, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3439730.

Deldjoo:2021:SAR

[2222] Yashar Deldjoo, Tommaso Di Noia, and Felice Antonio Merra. A survey on adversarial recommender systems: From attack/defense strategies to generative adversarial networks. *ACM Computing Surveys*, 54(2):35:1–35:38, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3439729.

Bouhenni:2021:SDG

[2223] Sarra Bouhenni, Saïd Yahiaoui, Nadia Nouali-Taboudjemat, and Hamamache Kheddouci. A survey on distributed graph pattern matching in massive graphs. *ACM Computing Surveys*, 54(2):36:1–36:35, April 2021.

CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3439724.

Wang:2021:GAN

[2224] Zhengwei Wang, Qi She, and Tomás E. Ward. Generative adversarial networks in computer vision: a survey and taxonomy. *ACM Computing Surveys*, 54(2):37:1–37:38, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3439723.

Pang:2021:DLA

[2225] Guansong Pang, Chunhua Shen, Longbing Cao, and Anton Van Den Hengel. Deep learning for anomaly detection: a review. *ACM Computing Surveys*, 54(2):38:1–38:38, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3439950.

Wang:2021:STD

[2226] Sheng Wang, Zhifeng Bao, J. Shane Culpepper, and Gao Cong. A survey on trajectory data management, analytics, and learning. *ACM Computing Surveys*, 54(2):39:1–39:36, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3440207.

Meurisch:2021:DPA

[2227] Christian Meurisch and Max Mühlhäuser. Data protection in AI services: a survey. *ACM Computing Surveys*, 54(2):40:1–40:38, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3440754.

Chandrasekaran:2021:ESS

[2228] Dhivya Chandrasekaran and Vijay Mago. Evolution of semantic similarity — a survey. *ACM Computing Surveys*, 54(2):41:1–41:37, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3440755.

Chen:2021:TRW

[2229] Xiaoxue Chen, Lianwen Jin, Yuanzhi Zhu, Canjie Luo, and Tianwei Wang. Text recognition in the wild: a survey. *ACM Computing Surveys*, 54(2):42:1–42:35, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3440756.

Al-Thanyyan:2021:ATS

[2230] Suha S. Al-Thanyyan and Aqil M. Azmi. Automated text simplification: a survey. *ACM Computing Surveys*, 54(2):43:1–43:36, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3442695.

Huang:2021:SSA

[2231] Huawei Huang, Wei Kong, Sicong Zhou, Zibin Zheng, and Song Guo. A survey of state-of-the-art on blockchains: Theories, modelings, and tools. *ACM Computing Surveys*, 54(2):44:1–44:42, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3441692.

Maruf:2021:SDL

[2232] Sameen Maruf, Fahimeh Saleh, and Gholamreza Haffari. A survey on document-level neural machine translation: Methods and evaluation. *ACM Computing Surveys*, 54(2):45:1–45:36, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3441691.

Magalhaes:2021:MMD

[2233] Arlino Magalhaes, Jose Maria Monteiro, and Angelo Brayner. Main memory database recovery: a survey. *ACM Computing Surveys*, 54(2):46:1–46:36, April 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3442197.

Hassanin:2021:VAF

[2234] Mohammed Hassanin, Salman Khan, and Murat Tahtali. Visual affordance and function understanding: a survey. *ACM Computing Surveys*, 54(3):47:1–47:35, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3446370.

Magnani:2021:CDM

[2235] Matteo Magnani, Obaida Hanteer, Roberto Interdonato, Luca Rossi, and Andrea Tagarelli. Community detection in multiplex networks. *ACM Computing Surveys*, 54(3):48:1–48:35, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3444688.

Celes:2021:MTA

[2236] Clayson Celes, Azzedine Boukerche, and Antonio A. F. Loureiro. Mobility trace analysis for intelligent vehicular networks: Methods, models, and applications. *ACM Computing Surveys*, 54(3):49:1–49:38, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3446679.

Sabir:2021:MLD

[2237] Bushra Sabir, Faheem Ullah, M. Ali Babar, and Raj Gaire. Machine learning for detecting data exfiltration: a review. *ACM Computing Surveys*, 54(3):50:1–50:47, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3442181.

UlHaq:2021:SBC

[2238] Irfan Ul Haq and Juan Caballero. A survey of binary code similarity. *ACM Computing Surveys*, 54(3):51:1–51:38, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3446371.

Mitra:2021:CIA

[2239] Shyamali Mitra, Nibaran Das, Soumyajyoti Dey, Sukanta Chakraborty, Mita Nasipuri, and Mrinal Kanti Naskar. Cytology image analysis techniques toward automation: Systematically revisited. *ACM Computing Surveys*, 54(3):52:1–52:41, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3447238.

Bluemke:2021:STE

[2240] Ilona Bluemke and Agnieszka Malanowska. Software testing effort estimation and related problems: a systematic literature review. *ACM Computing Surveys*, 54(3):53:1–53:38, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3442694.

Xiong:2021:STE

[2241] Wenjie Xiong and Jakub Szefer. Survey of transient execution attacks and their mitigations. *ACM Computing Surveys*, 54(3):54:1–54:36, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3442479.

Zhao:2021:NLP

[2242] Liping Zhao, Waad Alhoshan, Alessio Ferrari, Keletso J. Letsholo, Muideen A. Ajagbe, Erol-Valeriu Chioasca, and Riza T. Batista-Navarro. Natural language processing for requirements engineering: a systematic mapping study. *ACM Computing Surveys*, 54(3):55:1–55:41, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3444689`.

Blazquez-Garcia:2021:ROA

[2243] Ane Blázquez-García, Angel Conde, Usue Mori, and Jose A. Lozano. A review on outlier/anomaly detection in time series data. *ACM Computing Surveys*, 54(3):56:1–56:33, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3444690`.

Hamdani:2021:CSC

[2244] Syed Wasif Abbas Hamdani, Haider Abbas, Abdul Rehman Janjua, Waleed Bin Shahid, Muhammad Faisal Amjad, Jahanzaib Malik, Malik Hamza Murtaza, Mohammed Atiquzzaman, and Abdul Waheed Khan. Cybersecurity standards in the context of operating system: Practical aspects, analysis, and comparisons. *ACM Computing Surveys*, 54(3):57:1–57:36, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3442480`.

Li:2021:BED

[2245] Xi Li, Zehua Wang, Victor C. M. Leung, Hong Ji, Yiming Liu, and Heli Zhang. Blockchain-empowered data-driven networks: a survey and outlook. *ACM Computing Surveys*, 54(3):58:1–58:38, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3446373`.

Spelda:2021:HIM

[2246] Petr Spelda and Vit Stritecky. Human induction in machine learning: a survey of the nexus. *ACM Computing Surveys*, 54(3):59:1–59:18, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3444691`.

Huang:2021:ABT

[2247] Jun Huang, Debiao He, Mohammad S. Obaidat, Pandi Vijayakumar, Min Luo, and Kim-Kwang Raymond Choo. The application of the blockchain technology in voting systems: a review. *ACM Computing*

Surveys, 54(3):60:1–60:28, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3439725.

Nour:2021:ACM

[2248] Boubakr Nour, Hakima Khelifi, Rasheed Hussain, Spyridon Mastorakis, and Hassine Moungla. Access control mechanisms in named data networks: a comprehensive survey. *ACM Computing Surveys*, 54(3):61:1–61:35, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3442150.

Minaee:2021:DLB

[2249] Shervin Minaee, Nal Kalchbrenner, Erik Cambria, Narjes Nikzad, Meysam Chenaghlu, and Jianfeng Gao. Deep learning–based text classification: a comprehensive review. *ACM Computing Surveys*, 54(3):62:1–62:40, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3439726.

Saxena:2021:GAN

[2250] Divya Saxena and Jiannong Cao. Generative adversarial networks (GANs): Challenges, solutions, and future directions. *ACM Computing Surveys*, 54(3):63:1–63:42, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3446374.

Gharibshah:2021:URP

[2251] Zhabiz Gharibshah and Xingquan Zhu. User response prediction in online advertising. *ACM Computing Surveys*, 54(3):64:1–64:43, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3446662.

Astolfi:2021:SPR

[2252] Gilberto Astolfi, Fábio Prestes Cesar Rezende, João Vitor De Andrade Porto, Edson Takashi Matsubara, and Hemerson Pistori. Syntactic pattern recognition in computer vision: a systematic review. *ACM Computing Surveys*, 54(3):65:1–65:35, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3447241.

Varghese:2021:SEP

[2253] Blesson Varghese, Nan Wang, David Bermbach, Cheol-Ho Hong, Eyal De Lara, Weisong Shi, and Christopher Stewart. A survey on edge performance benchmarking. *ACM Computing Surveys*, 54(3):66:1–66:33, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3444692.

Avola:2021:UMI

[2254] Danilo Avola, Luigi Cinque, Alessio Fagioli, Gianluca Foresti, and Alessio Mecca. Ultrasound medical imaging techniques: a survey. *ACM Computing Surveys*, 54(3):67:1–67:38, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3447243.

Muhammad:2021:FLS

[2255] Khan Muhammad, Mohammad S. Obaidat, Tanveer Hussain, Javier Del Ser, Neeraj Kumar, Mohammad Tanveer, and Faiyaz Doctor. Fuzzy logic in surveillance big video data analysis: Comprehensive review, challenges, and research directions. *ACM Computing Surveys*, 54(3):68:1–68:33, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3444693.

Alharbi:2021:SMI

[2256] Ahmed Alharbi, Hai Dong, Xun Yi, Zahir Tari, and Ibrahim Khalil. Social media identity deception detection: a survey. *ACM Computing Surveys*, 54(3):69:1–69:35, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3446372.

Gewers:2021:PCA

[2257] Felipe L. Gewers, Gustavo R. Ferreira, Henrique F. De Arruda, Filipi N. Silva, Cesar H. Comin, Diego R. Amancio, and Luciano Da F.Costa. Principal component analysis: a natural approach to data exploration. *ACM Computing Surveys*, 54(4):70:1–70:34, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3447755.

Hogan:2021:KG

[2258] Aidan Hogan, Eva Blomqvist, Michael Cochez, Claudia D'amato, Gerard De Melo, Claudio Gutierrez, Sabrina Kirrane, José Emilio Labra Gayo, Roberto Navigli, Sebastian Neumaier, Axel-Cyrille Ngonga Ngomo, Axel Polleres, Sabbir M. Rashid, Anisa Rula, Lukas Schmelzeisen, Juan Sequeda, Steffen Staab, and Antoine Zimmermann. Knowledge graphs. *ACM Computing Surveys*, 54(4):71:1–71:37, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3447772.

Cheng:2021:FMC

[2259] Wen-Huang Cheng, Sijie Song, Chieh-Yun Chen, Shintami Chusnul Hidayati, and Jiaying Liu. Fashion meets computer vision: a survey. *ACM Computing Surveys*, 54(4):72:1–72:41, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3447239.

Dunne:2021:SAI

[2260] Rob Dunne, Tim Morris, and Simon Harper. A survey of ambient intelligence. *ACM Computing Surveys*, 54(4):73:1–73:27, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3447242.

Kabir:2021:UAD

[2261] H. M. Dipu Kabir, Abbas Khosravi, Subrota K. Mondal, Mustaneer Rahman, Saeid Nahavandi, and Rajkumar Buyya. Uncertainty-aware decisions in cloud computing: Foundations and future directions. *ACM Computing Surveys*, 54(4):74:1–74:30, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3447583.

Chen:2021:ICS

[2262] Fei Chen, Duming Luo, Tao Xiang, Ping Chen, Junfeng Fan, and Hong-Linh Truong. IoT cloud security review: a case study approach using emerging consumer-oriented applications. *ACM Computing Surveys*, 54(4):75:1–75:36, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3447625.

Ren:2021:CSN

[2263] Pengzhen Ren, Yun Xiao, Xiaojun Chang, Po yao Huang, Zhihui Li, Xiaojiang Chen, and Xin Wang. A comprehensive survey of neural architecture search: Challenges and solutions. *ACM Computing Surveys*, 54(4):76:1–76:34, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3447582.

Chen:2021:DLS

[2264] Kaixuan Chen, Dalin Zhang, Lina Yao, Bin Guo, Zhiwen Yu, and Yunhao Liu. Deep learning for sensor-based human activity recognition: Overview, challenges, and opportunities. *ACM Computing Surveys*, 54(4):77:1–77:40, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3447744.

Russo:2021:PSS

[2265] Daniel Russo and Klaas-Jan Stol. PLS-SEM for software engineering research: an introduction and survey. *ACM Computing Surveys*, 54(4): 78:1–78:38, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3447580.

Salam:2021:PRL

[2266] Abdus Salam, Rolf Schwitter, and Mehmet A. Orgun. Probabilistic rule learning systems: a survey. *ACM Computing Surveys*, 54(4):79:1–79:16, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3447581.

AlmarazLuengo:2021:RSR

[2267] Elena Almaraz Luengo and Luis Javier García Villalba. Recommendations on statistical randomness test batteries for cryptographic purposes. *ACM Computing Surveys*, 54(4):80:1–80:34, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3447773.

Seaborn:2021:VHA

[2268] Katie Seaborn, Norihisa P. Miyake, Peter Pennefather, and Mihoko Otake-Matsuura. Voice in human-agent interaction: a survey. *ACM Computing Surveys*, 54(4):81:1–81:43, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3386867.

Michel:2021:PDP

[2269] Oliver Michel, Roberto Bifulco, Gábor Rétvári, and Stefan Schmid. The programmable data plane: Abstractions, architectures, algorithms, and applications. *ACM Computing Surveys*, 54(4):82:1–82:36, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3447868.

Hu:2021:HIF

[2270] Wei Hu, Armaiti Ardeshiricham, and Ryan Kastner. Hardware information flow tracking. *ACM Computing Surveys*, 54(4):83:1–83:39, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3447867.

Boukerche:2021:VBA

[2271] Azzedine Boukerche and Xiren Ma. Vision-based autonomous vehicle recognition: a new challenge for deep learning-based systems. *ACM*

Computing Surveys, 54(4):84:1–84:37, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3447866.

Afsar:2021:API

[2272] Bekir Afsar, Kaisa Miettinen, and Francisco Ruiz. Assessing the performance of interactive multiobjective optimization methods: a survey. *ACM Computing Surveys*, 54(4):85:1–85:27, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3448301.

Tripathi:2021:ALD

[2273] Nikhil Tripathi and Neminath Hubballi. Application layer denial-of-service attacks and defense mechanisms: a survey. *ACM Computing Surveys*, 54(4):86:1–86:33, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3448291.

Tang:2021:DRM

[2274] Yunbo Tang, Dan Chen, and Xiaoli Li. Dimensionality reduction methods for brain imaging data analysis. *ACM Computing Surveys*, 54(4):87:1–87:36, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3448302.

Ridolfi:2021:SCC

[2275] Matteo Ridolfi, Abdil Kaya, Rafael Berkvens, Maarten Weyn, Wout Joseph, and Eli De Poorter. Self-calibration and collaborative localization for UWB positioning systems: a survey and future research directions. *ACM Computing Surveys*, 54(4):88:1–88:27, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3448303.

Laranjeiro:2021:SRS

[2276] Nuno Laranjeiro, João Agnelo, and Jorge Bernardino. A systematic review on software robustness assessment. *ACM Computing Surveys*, 54(4):89:1–89:65, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3448977.

Chen:2021:SSL

[2277] Boyuan Chen and Zhen Ming (Jack) Jiang. A survey of software log instrumentation. *ACM Computing Surveys*, 54(4):90:1–90:34, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3448976.

Lalapura:2021:RNN

[2278] Varsha S. Lalapura, J. Amudha, and Hariramn Selvamuruga Satheesh. Recurrent neural networks for edge intelligence: a survey. *ACM Computing Surveys*, 54(4):91:1–91:38, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3448974.

Bertolino:2021:SFB

[2279] Antonia Bertolino, Pietro Braione, Guglielmo De Angelis, Luca Gazzola, Fitsum Kifetew, Leonardo Mariani, Matteo Orrù, Mauro Pezzè, Roberto Pietrantuono, Stefano Russo, and Paolo Tonella. A survey of field-based testing techniques. *ACM Computing Surveys*, 54(5):92:1–92:39, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3447240.

Bruel:2021:RFS

[2280] Jean-Michel Bruel, Sophie Ebersold, Florian Galinier, Manuel Mazzara, Alexandr Naumchev, and Bertrand Meyer. The role of formalism in system requirements. *ACM Computing Surveys*, 54(5):93:1–93:36, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3448975.

Zhao:2021:EPB

[2281] Liang Zhao. Event prediction in the Big Data era: a systematic survey. *ACM Computing Surveys*, 54(5):94:1–94:37, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3450287.

Lo:2021:SLR

[2282] Sin Kit Lo, Qinghua Lu, Chen Wang, Hye-Young Paik, and Liming Zhu. A systematic literature review on federated machine learning: From a software engineering perspective. *ACM Computing Surveys*, 54(5):95:1–95:39, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3450288.

Alashaikh:2021:SUP

[2283] Abdulaziz Alashaikh, Eisa Alanazi, and Ala Al-Fuqaha. A survey on the use of preferences for virtual machine placement in cloud data centers. *ACM Computing Surveys*, 54(5):96:1–96:39, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3450517.

Huang:2021:CAD

[2284] Xing Huang, Tsung-Yi Ho, Wenzhong Guo, Bing Li, Krishnendu Chakrabarty, and Ulf Schlichtmann. Computer-aided design techniques for flow-based microfluidic lab-on-a-chip systems. *ACM Computing Surveys*, 54(5):97:1–97:29, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3450504.

Dunfield:2021:BT

[2285] Jana Dunfield and Neel Krishnaswami. Bidirectional typing. *ACM Computing Surveys*, 54(5):98:1–98:38, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3450952.

Abukmeil:2021:SUG

[2286] Mohanad Abukmeil, Stefano Ferrari, Angelo Genovese, Vincenzo Piuri, and Fabio Scotti. A survey of unsupervised generative models for exploratory data analysis and representation learning. *ACM Computing Surveys*, 54(5):99:1–99:40, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3450963.

Susungi:2021:IRE

[2287] Adilla Susungi and Claude Tadonki. Intermediate representations for explicitly parallel programs. *ACM Computing Surveys*, 54(5):100:1–100:24, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3452299.

Charles:2021:SNC

[2288] Subodha Charles and Prabhat Mishra. A survey of network-on-chip security attacks and countermeasures. *ACM Computing Surveys*, 54(5):101:1–101:36, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3450964.

Aljeraisy:2021:PLP

[2289] Atheer Aljeraisy, Masoud Barati, Omer Rana, and Charith Perera. Privacy laws and privacy by design schemes for the Internet of Things: a developer's perspective. *ACM Computing Surveys*, 54(5):102:1–102:38, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3450965.

Alhussain:2021:ASG

[2290] Arwa I. Alhussain and Aqil M. Azmi. Automatic story generation: a survey of approaches. *ACM Computing Surveys*, 54(5):103:1–103:38, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3453156.

Al-Ghossein:2021:SSB

[2291] Marie Al-Ghossein, Talel Abdessalem, and Anthony Barré. A survey on stream-based recommender systems. *ACM Computing Surveys*, 54(5):104:1–104:36, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3453443.

Jannach:2021:SCR

[2292] Dietmar Jannach, Ahtsham Manzoor, Wanling Cai, and Li Chen. A survey on conversational recommender systems. *ACM Computing Surveys*, 54(5):105:1–105:36, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3453154.

Luo:2021:DLB

[2293] Yuan Luo, Ya Xiao, Long Cheng, Guojun Peng, and Danfeng (Daphne) Yao. Deep learning-based anomaly detection in cyber-physical systems: Progress and opportunities. *ACM Computing Surveys*, 54(5):106:1–106:36, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3453155.

Dotan:2021:SBN

[2294] Maya Dotan, Yvonne-Anne Pignolet, Stefan Schmid, Saar Tochner, and Aviv Zohar. Survey on blockchain networking: Context, state-of-the-art, challenges. *ACM Computing Surveys*, 54(5):107:1–107:34, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3453161.

Rosenberg:2021:AML

[2295] Ishai Rosenberg, Asaf Shabtai, Yuval Elovici, and Lior Rokach. Adversarial machine learning attacks and defense methods in the cyber security domain. *ACM Computing Surveys*, 54(5):108:1–108:36, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3453158.

Pateria:2021:HRL

[2296] Shubham Pateria, Budhitama Subagdja, Ah hwee Tan, and Chai Quek. Hierarchical reinforcement learning: a comprehensive survey. *ACM Computing Surveys*, 54(5):109:1–109:35, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3453160.

Dwivedi:2021:LES

[2297] Vimal Dwivedi, Vishwajeet Pattanaik, Vipin Deval, Abhishek Dixit, Alex Norta, and Dirk Draheim. Legally enforceable smart-contract languages: a systematic literature review. *ACM Computing Surveys*, 54(5):110:1–110:34, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3453475.

Ashmore:2021:AML

[2298] Rob Ashmore, Radu Calinescu, and Colin Paterson. Assuring the machine learning lifecycle: Desiderata, methods, and challenges. *ACM Computing Surveys*, 54(5):111:1–111:39, June 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3453444.

Kietzmann:2021:GPN

[2299] Peter Kietzmann, Thomas C. Schmidt, and Matthias Wählisch. A guideline on pseudorandom number generation (PRNG) in the IoT. *ACM Computing Surveys*, 54(6):112:1–112:38, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3453159.

Badr:2021:IST

[2300] Eman Badr. Images in space and time: Real big data in healthcare. *ACM Computing Surveys*, 54(6):113:1–113:38, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3453657.

Jaiswal:2021:UMC

[2301] Swati Jaiswal, Uday P. Khedker, and Alan Mycroft. A unified model for context-sensitive program analyses:: The blind men and the elephant. *ACM Computing Surveys*, 54(6):114:1–114:37, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3456563.

Mehrabi:2021:SBF

[2302] Ninareh Mehrabi, Fred Morstatter, Nripsuta Saxena, Kristina Lerman, and Aram Galstyan. A survey on bias and fairness in machine learning. *ACM Computing Surveys*, 54(6):115:1–115:35, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3457607.

Vera-Olivera:2021:DMN

[2303] Harley Vera-Olivera, Ruizhe Guo, Ruben Cruz Huacarpuma, Ana Paula Bernardi Da Silva, Ari Melo Mariano, and Maristela Holanda. Data modeling and NoSQL databases — a systematic mapping review. *ACM Computing Surveys*, 54(6):116:1–116:26, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3457608.

Moussaileb:2021:SWB

[2304] Routa Moussaileb, Nora Cuppens, Jean-Louis Lanet, and Hélène Le Bouder. A survey on Windows-based ransomware taxonomy and detection mechanisms. *ACM Computing Surveys*, 54(6):117:1–117:36, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3453153.

Pal:2021:TBV

[2305] Ratnabali Pal, Arif Ahmed Sekh, Debi Prosad Dogra, Samarjit Kar, Partha Pratim Roy, and Dilip K. Prasad. Topic-based video analysis: a survey. *ACM Computing Surveys*, 54(6):118:1–118:34, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3459089.

Guerreiro:2021:HIC

[2306] Andreia P. Guerreiro, Carlos M. Fonseca, and Luís Paquete. The hypervolume indicator: Computational problems and algorithms. *ACM Computing Surveys*, 54(6):119:1–119:42, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3453474.

Itoh:2021:TIA

[2307] Yuta Itoh, Tobias Langlotz, Jonathan Sutton, and Alexander Plopski. Towards indistinguishable augmented reality: a survey on optical see-through head-mounted displays. *ACM Computing Surveys*, 54(6):120:1–120:36, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3453157.

Rauf:2021:ATE

[2308] Bilal Rauf, Haider Abbas, Muhammad Usman, Tanveer A. Zia, Waseem Iqbal, Yawar Abbas, and Hammad Afzal. Application threats to exploit northbound interface vulnerabilities in software defined networks. *ACM Computing Surveys*, 54(6):121:1–121:36, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3453648.

Lou:2021:SMS

[2309] Xiaoxuan Lou, Tianwei Zhang, Jun Jiang, and Yinqian Zhang. A survey of microarchitectural side-channel vulnerabilities, attacks, and defenses in cryptography. *ACM Computing Surveys*, 54(6):122:1–122:37, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3456629.

Papadogiannaki:2021:SEN

[2310] Eva Papadogiannaki and Sotiris Ioannidis. A survey on encrypted network traffic analysis applications, techniques, and countermeasures. *ACM Computing Surveys*, 54(6):123:1–123:35, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3457904.

Nguyen:2021:SPO

[2311] Thi Tuyet Hai Nguyen, Adam Jatowt, Mickael Coustaty, and Antoine Doucet. Survey of post-OCR processing approaches. *ACM Computing Surveys*, 54(6):124:1–124:37, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3453476.

Oikonomou:2021:UIM

[2312] Panagiotis Oikonomou, Anna Karanika, Christos Anagnostopoulos, and Kostas Kolomvatsos. On the use of intelligent models towards meeting the challenges of the edge mesh. *ACM Computing Surveys*, 54(6):125:1–125:42, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3456630.

Fei:2021:SVS

[2313] Shufan Fei, Zheng Yan, Wenxiu Ding, and Haomeng Xie. Security vulnerabilities of SGX and countermeasures: a survey. *ACM Computing Surveys*, 54(6):126:1–126:36, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3456631.

Padakandla:2021:SRL

[2314] Sindhu Padakandla. A survey of reinforcement learning algorithms for dynamically varying environments. *ACM Computing Surveys*, 54 (6):127:1–127:25, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3459991.

Cunningham:2021:KNN

[2315] Pádraig Cunningham and Sarah Jane Delany. k-nearest neighbour classifiers — a tutorial. *ACM Computing Surveys*, 54(6):128:1–128:25, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3459665.

Talbi:2021:MLM

[2316] El-Ghazali Talbi. Machine learning into metaheuristics: a survey and taxonomy. *ACM Computing Surveys*, 54(6):129:1–129:32, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3459664.

He:2021:SAL

[2317] Shilin He, Pinjia He, Zhuangbin Chen, Tianyi Yang, Yuxin Su, and Michael R. Lyu. A survey on automated log analysis for reliability engineering. *ACM Computing Surveys*, 54(6):130:1–130:37, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3460345.

Yin:2021:CSP

[2318] Xuefei Yin, Yanming Zhu, and Jiankun Hu. A comprehensive survey of privacy-preserving federated learning: a taxonomy, review, and future directions. *ACM Computing Surveys*, 54(6):131:1–131:36, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3460427.

Cai:2021:GAN

[2319] Zhipeng Cai, Zuobin Xiong, Honghui Xu, Peng Wang, Wei Li, and Yi Pan. Generative adversarial networks: a survey toward private and secure applications. *ACM Computing Surveys*, 54(6):132:1–132:38, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3459992.

Boukerche:2021:DGD

[2320] Azzedine Boukerche and Mingzhi Sha. Design guidelines on deep learning-based pedestrian detection methods for supporting autonomous vehicles. *ACM Computing Surveys*, 54(6):133:1–133:36, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3460770.

PlOtz:2021:AML

[2321] Thomas PlÖtz. Applying machine learning for sensor data analysis in interactive systems: Common pitfalls of pragmatic use and ways to avoid them. *ACM Computing Surveys*, 54(6):134:1–134:25, July 2021. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3459666.

Lohachab:2022:TIB

[2322] Ankur Lohachab, Saurabh Garg, Byeong Kang, Muhammad Bilal Amin, Junmin Lee, Shiping Chen, and Xiwei Xu. Towards interconnected blockchains: a comprehensive review of the role of interoperability among disparate blockchains. *ACM Computing Surveys*, 54(7):135:1–135:39, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3460287.

Zhang:2022:MTP

[2323] Lefeng Zhang, Tianqing Zhu, Ping Xiong, Wanlei Zhou, and Philip S. Yu. More than privacy: Adopting differential privacy in game-theoretic mechanism design. *ACM Computing Surveys*, 54(7):136:1–136:37, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3460771.

Braun:2022:AAU

[2324] Michael Braun, Florian Weber, and Florian Alt. Affective automotive user interfaces-reviewing the state of driver affect research and emotion regulation in the car. *ACM Computing Surveys*, 54(7):137:1–137:26, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3460938.

Drame-Maigne:2022:CDE

[2325] Sophie Dramé-Maigné, Maryline Laurent, Laurent Castillo, and Hervé Ganem. Centralized, distributed, and everything in between: Reviewing access control solutions for the IoT. *ACM Computing Surveys*, 54 (7):138:1–138:34, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3465170.

Miao:2022:MLB

[2326] Yuantian Miao, Chao Chen, Lei Pan, Qing-Long Han, Jun Zhang, and Yang Xiang. Machine learning-based cyber attacks targeting on controlled information: a survey. *ACM Computing Surveys*, 54(7): 139:1–139:36, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3465171.

Ignaczak:2022:TMC

[2327] Luciano Ignaczak, Guilherme Goldschmidt, Cristiano André Da Costa, and Rodrigo Da Rosa Righi. Text mining in cybersecurity: a systematic literature review. *ACM Computing Surveys*, 54(7):140:1–140:36, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3462477.

Fernando:2022:DLM

[2328] Tharindu Fernando, Harshala Gammulle, Simon Denman, Sridha Sridharan, and Clinton Fookes. Deep learning for medical anomaly detection — a survey. *ACM Computing Surveys*, 54(7):141:1–141:37, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3464423.

Resch:2022:BQC

[2329] Salonik Resch and Ulya R. Karpuzcu. Benchmarking quantum computers and the impact of quantum noise. *ACM Computing Surveys*, 54(7):142:1–142:35, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3464420.

Lima:2022:SMV

[2330] Hugo B. Lima, Carlos G. R. Dos Santos, and Bianchi S. Meiguins. A survey of music visualization techniques. *ACM Computing Surveys*, 54 (7):143:1–143:29, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3461835.

BonesckiGumiel:2022:TRE

[2331] Yohan Bonescki Gumiel, Lucas Emanuel Silva e Oliveira, Vincent Claveau, Natalia Grabar, Emerson Cabrera Paraiso, Claudia Moro, and Deborah Ribeiro Carvalho. Temporal relation extraction in clinical texts: a systematic review. *ACM Computing Surveys*, 54(7):144:1–144:36, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3462475.

Chauhan:2022:TMU

[2332] Uttam Chauhan and Apurva Shah. Topic modeling using latent Dirichlet allocation: a survey. *ACM Computing Surveys*, 54(7):145:1–145:35, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3462478.

Tamine:2022:SIR

[2333] Lynda Tamine and Lorraine Goeuriot. Semantic information retrieval on medical texts: Research challenges, survey, and open issues. *ACM Computing Surveys*, 54(7):146:1–146:38, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3462476.

Berger:2022:SRI

[2334] Christian Berger, Philipp Eichhammer, Hans P. Reiser, Jörg Domaschka, Franz J. Hauck, and Gerhard Habiger. A survey on resilience in the IoT: Taxonomy, classification, and discussion of resilience mechanisms. *ACM Computing Surveys*, 54(7):147:1–147:39, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3462513.

Tolmach:2022:SSC

[2335] Palina Tolmach, Yi Li, Shang-Wei Lin, Yang Liu, and Zengxiang Li. A survey of smart contract formal specification and verification. *ACM Computing Surveys*, 54(7):148:1–148:38, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3464421.

Park:2022:SPS

[2336] Jihyeok Park, Hongki Lee, and Sukyoung Ryu. A survey of parametric static analysis. *ACM Computing Surveys*, 54(7):149:1–149:37, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3464457.

DeMattos:2022:BMA

[2337] Douglas Paulo De Mattos, Débora C. Muchaluat-Saade, and Gheorghita Ghinea. Beyond multimedia authoring: On the need for mulsemedia authoring tools. *ACM Computing Surveys*, 54(7):150:1–150:31, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3464422.

Zhang:2022:ELE

[2338] Jie Zhang, Zhihao Qu, Chenxi Chen, Haozhao Wang, Yufeng Zhan, Baoliu Ye, and Song Guo. Edge learning: The enabling technology for distributed big data analytics in the edge. *ACM Computing Surveys*, 54(7):151:1–151:36, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3464419.

Baldassin:2022:PMS

[2339] Alexandro Baldassin, João Barreto, Daniel Castro, and Paolo Romano. Persistent memory: a survey of programming support and implementations. *ACM Computing Surveys*, 54(7):152:1–152:37, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3465402.

Juarez:2022:CRT

[2340] Julio Juárez, Cipriano (Pano) Santos, and Carlos A. Brizuela. A comprehensive review and a taxonomy proposal of team formation problems. *ACM Computing Surveys*, 54(7):153:1–153:33, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3465399.

Wang:2022:SSB

[2341] Shoujin Wang, Longbing Cao, Yan Wang, Quan Z. Sheng, Mehmet A. Orgun, and Defu Lian. A survey on session-based recommender systems. *ACM Computing Surveys*, 54(7):154:1–154:38, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3465401.

Magrofuoco:2022:TDS

[2342] Nathan Magrofuoco, Paolo Roselli, and Jean Vanderdonckt. Two-dimensional stroke gesture recognition: a survey. *ACM Computing Surveys*, 54(7):155:1–155:36, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3465400.

Chefrour:2022:OWD

[2343] Djalel Chefrour. One-way delay measurement from traditional networks to SDN: a survey. *ACM Computing Surveys*, 54(7):156:1–156:35, September 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3466167.

Jabbar:2022:SGA

[2344] Abdul Jabbar, Xi Li, and Bourahla Omar. A survey on generative adversarial networks: Variants, applications, and training. *ACM Computing Surveys*, 54(8):157:1–157:49, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3463475.

Chen:2022:SAA

[2345] Jianguo Chen, Kenli Li, Zhaolei Zhang, Keqin Li, and Philip S. Yu. A survey on applications of artificial intelligence in fighting against COVID-19. *ACM Computing Surveys*, 54(8):158:1–158:32, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3465398.

Zhang:2022:APD

[2346] Xingwei Zhang, Xiaolong Zheng, and Wenji Mao. Adversarial perturbation defense on deep neural networks. *ACM Computing Surveys*, 54(8):159:1–159:36, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3465397.

Zou:2022:IBC

[2347] Jinglin Zou, Debiao He, Sherali Zeadally, Neeraj Kumar, Huaqun Wang, and Kkwang Raymond Choo. Integrated blockchain and cloud computing systems: a systematic survey, solutions, and challenges. *ACM Computing Surveys*, 54(8):160:1–160:36, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3456628.

Telikani:2022:EML

[2348] Akbar Telikani, Amirhessam Tahmassebi, Wolfgang Banzhaf, and Amir H. Gandomi. Evolutionary machine learning: a survey. *ACM Computing Surveys*, 54(8):161:1–161:35, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3467477.

Zhang:2022:UST

[2349] Weijia Zhang, Jiuyong Li, and Lin Liu. A unified survey of treatment effect heterogeneity modelling and uplift modelling. *ACM Computing Surveys*, 54(8):162:1–162:36, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3466818.

Souza:2022:MPV

[2350] Vinicius Souza, Anderson Maciel, Luciana Nedel, and Regis Kopper. Measuring presence in virtual environments: a survey. *ACM Computing Surveys*, 54(8):163:1–163:37, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3466817`.

Ajaykumar:2022:SEU

[2351] Gopika Ajaykumar, Maureen Steele, and Chien-Ming Huang. A survey on end-user robot programming. *ACM Computing Surveys*, 54(8):164:1–164:36, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3466819`.

Lee:2022:TAR

[2352] Lik-Hang Lee, Tristan Braud, Simo Hosio, and Pan Hui. Towards augmented reality driven human-city interaction: Current research on mobile headsets and future challenges. *ACM Computing Surveys*, 54(8):165:1–165:38, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3467963`.

Roy:2022:TRN

[2353] Satyaki Roy, Preetam Ghosh, Nirnay Ghosh, and Sajal K. Das. Transcriptional regulatory network topology with applications to bio-inspired networking: a survey. *ACM Computing Surveys*, 54(8):166:1–166:36, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3468266`.

Tian:2022:DAA

[2354] Haiman Tian, Maria Presa-Reyes, Yudong Tao, Tianyi Wang, Samira Pouyanfar, Alonso Miguel, Steven Luis, Mei-Ling Shyu, Shu-Ching Chen, and Sundaraja Sitharama Iyengar. Data analytics for air travel data: a survey and new perspectives. *ACM Computing Surveys*, 54(8):167:1–167:35, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3469028`.

Belchior:2022:SBI

[2355] Rafael Belchior, André Vasconcelos, Sérgio Guerreiro, and Miguel Correia. A survey on blockchain interoperability: Past, present, and future trends. *ACM Computing Surveys*, 54(8):168:1–168:41, November 2022.

CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3471140.

Lee:2022:DNN

[2356] Royson Lee, Stylianos I. Venieris, and Nicholas D. Lane. Deep neural network-based enhancement for image and video streaming systems: a survey and future directions. *ACM Computing Surveys*, 54 (8):169:1–169:30, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3469094.

Murshed:2022:MLN

[2357] M. G. Sarwar Murshed, Christopher Murphy, Daqing Hou, Nazar Khan, Ganesh Ananthanarayanan, and Faraz Hussain. Machine learning at the network edge: a survey. *ACM Computing Surveys*, 54(8):170:1–170:37, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3469029.

Lamothe:2022:SRA

[2358] Maxime Lamothe, Yann-Gaël Guéhéneuc, and Weiyi Shang. A systematic review of API evolution literature. *ACM Computing Surveys*, 54(8):171:1–171:36, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3470133.

McBroom:2022:SAP

[2359] Jessica McBroom, Irena Koprinska, and Kalina Yacef. A survey of automated programming hint generation: The HINTS framework. *ACM Computing Surveys*, 54(8):172:1–172:27, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3469885.

Desolda:2022:HFP

[2360] Giuseppe Desolda, Lauren S. Ferro, Andrea Marrella, Tiziana Catarci, and Maria Francesca Costabile. Human factors in phishing attacks: a systematic literature review. *ACM Computing Surveys*, 54(8):173:1–173:35, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3469886.

Tian:2022:ELS

[2361] Ye Tian, Langchun Si, Xingyi Zhang, Ran Cheng, Cheng He, Kay Chen Tan, and Yaochu Jin. Evolutionary large-scale multi-objective optimization: a survey. *ACM Computing Surveys*, 54(8):174:1–174:34, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3470971.

S:2022:ADB

[2362] Shubhra Kanti Karmaker ("Santu"), Md. Mahadi Hassan, Micah J. Smith, Lei Xu, Chengxiang Zhai, and Kalyan Veeramachaneni. AutoML to date and beyond: Challenges and opportunities. *ACM Computing Surveys*, 54(8):175:1–175:36, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3470918.

Dias:2022:SLR

[2363] Alexandre H. T. Dias, Luiz. H. A. Correia, and Neumar Malheiros. A systematic literature review on virtual machine consolidation. *ACM Computing Surveys*, 54(8):176:1–176:38, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3470972.

Gu:2022:SDL

[2364] Fuqiang Gu, Mu-Huan Chung, Mark Chignell, Shahrokh Valaee, Baoding Zhou, and Xue Liu. A survey on deep learning for human activity recognition. *ACM Computing Surveys*, 54(8):177:1–177:34, November 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3472290.

Arakadakis:2022:FAP

[2365] Konstantinos Arakadakis, Pavlos Charalampidis, Antonis Makrogiannakis, and Alexandros Fragkiadakis. Firmware over-the-air programming techniques for IoT networks — a survey. *ACM Computing Surveys*, 54(9):178:1–178:36, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3472292.

Bustio-Martinez:2022:FGB

[2366] Lázaro Bustio-Martínez, René Cumplido, Martín Letras, Raudel Hernández-León, Claudia Feregrino-Uribe, and José Hernández-Palancar. FPGA/GPU-based acceleration for frequent itemsets mining: a comprehensive review. *ACM Computing Surveys*, 54(9):179:1–179:35, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3472289.

Ren:2022:SDA

[2367] Pengzhen Ren, Yun Xiao, Xiaojun Chang, Po-Yao Huang, Zhihui Li, Brij B. Gupta, Xiaojiang Chen, and Xin Wang. A survey of deep active learning. *ACM Computing Surveys*, 54(9):180:1–180:40, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3472291.

Kakaletsis:2022:CVA

[2368] Efstratios Kakaletsis, Charalampos Symeonidis, Maria Tzelepi, Ioannis Mademlis, Anastasios Tefas, Nikos Nikolaidis, and Ioannis Pitas. Computer vision for autonomous UAV flight safety: an overview and a vision-based safe landing pipeline example. *ACM Computing Surveys*, 54(9):181:1–181:37, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3472288.

Chou:2022:SDD

[2369] Dylan Chou and Meng Jiang. A survey on data-driven network intrusion detection. *ACM Computing Surveys*, 54(9):182:1–182:36, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3472753.

Xie:2022:WSN

[2370] Lingxi Xie, Xin Chen, Kaifeng Bi, Longhui Wei, Yuhui Xu, Lanfei Wang, Zhengsu Chen, An Xiao, Jianlong Chang, Xiaopeng Zhang, and Qi Tian. Weight-sharing neural architecture search: a battle to shrink the optimization gap. *ACM Computing Surveys*, 54(9):183:1–183:37, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3473330.

Bermejo:2022:SHT

[2371] Carlos Bermejo and Pan Hui. A survey on haptic technologies for mobile augmented reality. *ACM Computing Surveys*, 54(9):184:1–184:35, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3465396.

AlRidhawi:2022:DGC

[2372] Ismaeel Al Ridhawi, Ouns Bouachir, Moayad Aloqaily, and Azzedine Boukerche. Design guidelines for cooperative UAV-supported services and applications. *ACM Computing Surveys*, 54(9):185:1–185:35, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3467964.

Ranaweera:2022:MEU

[2373] Pasika Ranaweera, Anca Jurcut, and Madhusanka Liyanage. MEC-enabled 5G use cases: a survey on security vulnerabilities and countermeasures. *ACM Computing Surveys*, 54(9):186:1–186:37, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3474552.

Min:2022:SCQ

[2374] Xiongkuo Min, Ke Gu, Guangtao Zhai, Xiaokang Yang, Wenjun Zhang, Patrick Le Callet, and Chang Wen Chen. Screen content quality assessment: Overview, benchmark, and beyond. *ACM Computing Surveys*, 54(9):187:1–187:36, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3470970.

Siqueira:2022:SCI

[2375] Frank Siqueira and Joseph G. Davis. Service computing for Industry 4.0: State of the art, challenges, and research opportunities. *ACM Computing Surveys*, 54(9):188:1–188:38, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3478680.

Sato:2022:SCD

[2376] Denise Maria Vecino Sato, Sheila Cristiana De Freitas, Jean Paul Barddal, and Edson Emilio Scalabrin. A survey on concept drift in process mining. *ACM Computing Surveys*, 54(9):189:1–189:38, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3472752.

Zhang:2022:EEW

[2377] Bing Zhang, Jingyue Li, Jiadong Ren, and Guoyan Huang. Efficiency and effectiveness of Web application vulnerability detection approaches: a review. *ACM Computing Surveys*, 54(9):190:1–190:35, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3474553.

Abadal:2022:CGN

[2378] Sergi Abadal, Akshay Jain, Robert Guirado, Jorge López-Alonso, and Eduard Alarcón. Computing graph neural networks: a survey from algorithms to accelerators. *ACM Computing Surveys*, 54(9):191:1–191:38, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3477141.

Guerar:2022:GCE

[2379] Meriem Guerar, Luca Verderame, Mauro Migliardi, Francesco Palmieri, and Alessio Merlo. Gotta CAPTCHA 'em all: a survey of 20 years of the human-or-computer dilemma. *ACM Computing Surveys*, 54(9): 192:1–192:33, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3477142.

Mena:2022:SUE

[2380] José Mena, Oriol Pujol, and Jordi Vitrià. A survey on uncertainty estimation in deep learning classification systems from a Bayesian perspective. *ACM Computing Surveys*, 54(9):193:1–193:35, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3477140.

Schmid:2022:SCT

[2381] Josef Schmid, Alfred Höss, and Björn W. Schuller. A survey on client throughput prediction algorithms in wired and wireless networks. *ACM Computing Surveys*, 54(9):194:1–194:33, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3477204.

Aloufi:2022:CBD

[2382] Asma Aloufi, Peizhao Hu, Yongsoo Song, and Kristin Lauter. Computing blindfolded on data homomorphically encrypted under multiple keys: a survey. *ACM Computing Surveys*, 54(9):195:1–195:37, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3477139.

Liu:2022:OCC

[2383] Chao Liu, Xin Xia, David Lo, Cuiyun Gao, Xiaohu Yang, and John Grundy. Opportunities and challenges in code search tools. *ACM Computing Surveys*, 54(9):196:1–196:40, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3480027.

McIntosh:2022:RMM

[2384] Timothy McIntosh, A. S. M. Kayes, Yi-Ping Phoebe Chen, Alex Ng, and Paul Watters. Ransomware mitigation in the modern era: a comprehensive review, research challenges, and future directions. *ACM Computing Surveys*, 54(9):197:1–197:36, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3479393.

Mayrhofer:2022:AMM

[2385] René Mayrhofer and Stephan Sigg. Adversary models for mobile device authentication. *ACM Computing Surveys*, 54(9):198:1–198:35, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3477601.

Gevay:2022:HID

[2386] Gábor E. Gévay, Juan Soto, and Volker Markl. Handling iterations in distributed dataflow systems. *ACM Computing Surveys*, 54(9): 199:1–199:38, December 2022. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3477602.

Khan:2022:TVS

[2387] Salman Khan, Muzammal Naseer, Munawar Hayat, Syed Waqas Zamir, Fahad Shahbaz Khan, and Mubarak Shah. Transformers in vision: a survey. *ACM Computing Surveys*, 54(10s):200:1–200:??, January 2022. URL https://dl.acm.org/doi/10.1145/3505244.

Nanfack:2022:CED

[2388] Géraldin Nanfack, Paul Temple, and Benoît Frénay. Constraint enforcement on decision trees: a survey. *ACM Computing Surveys*, 54(10s): 201:1–201:??, January 2022. URL https://dl.acm.org/doi/10.1145/3506734.

Dao:2022:CSL

[2389] Nhu-Ngoc Dao, Anh-Tien Tran, Ngo Hoang Tu, Tran Thien Thanh, Vo Nguyen Quoc Bao, and Sungrae Cho. A contemporary survey on live video streaming from a computation-driven perspective. *ACM Computing Surveys*, 54(10s):202:1–202:??, January 2022. URL https://dl.acm.org/doi/10.1145/3519552.

Messina:2022:SDL

[2390] Pablo Messina, Pablo Pino, Denis Parra, Alvaro Soto, Cecilia Besa, Sergio Uribe, Marcelo Andía, Cristian Tejos, Claudia Prieto, and Daniel Capurro. A survey on deep learning and explainability for automatic report generation from medical images. *ACM Computing Surveys*, 54(10s): 203:1–203:??, January 2022. URL https://dl.acm.org/doi/10.1145/3522747.

Gruetzemacher:2022:DTL

[2391] Ross Gruetzemacher and David Paradice. Deep transfer learning & beyond: Transformer language models in information systems research.

ACM Computing Surveys, 54(10s):204:1–204:??, January 2022. URL `https://dl.acm.org/doi/10.1145/3505245`.

Ward:2022:PTG

[2392] Isaac Ronald Ward, Jack Joyner, Casey Lickfold, Yulan Guo, and Mohammed Bennamoun. A practical tutorial on graph neural networks. *ACM Computing Surveys*, 54(10s):205:1–205:??, January 2022. URL `https://dl.acm.org/doi/10.1145/3503043`.

Yang:2022:SDL

[2393] Yanming Yang, Xin Xia, David Lo, and John Grundy. A survey on deep learning for software engineering. *ACM Computing Surveys*, 54(10s):206:1–206:??, January 2022. URL `https://dl.acm.org/doi/10.1145/3505243`.

Zhao:2022:SDP

[2394] Ying Zhao and Jinjun Chen. A survey on differential privacy for unstructured data content. *ACM Computing Surveys*, 54(10s):207:1–207:??, January 2022. URL `https://dl.acm.org/doi/10.1145/3490237`.

Bansal:2022:SRD

[2395] Ms. Aayushi Bansal, Dr. Rewa Sharma, and Dr. Mamta Kathuria. A systematic review on data scarcity problem in deep learning: Solution and applications. *ACM Computing Surveys*, 54(10s):208:1–208:??, January 2022. URL `https://dl.acm.org/doi/10.1145/3502287`.

Wang:2022:BBP

[2396] Xin Wang, Sisi Duan, James Clavin, and Haibin Zhang. BFT in blockchains: From protocols to use cases. *ACM Computing Surveys*, 54(10s):209:1–209:??, January 2022. URL `https://dl.acm.org/doi/10.1145/3503042`.

Schlett:2022:FIQ

[2397] Torsten Schlett, Christian Rathgeb, Olaf Henniger, Javier Galbally, Julian Fierrez, and Christoph Busch. Face image quality assessment: a literature survey. *ACM Computing Surveys*, 54(10s):210:1–210:??, January 2022. URL `https://dl.acm.org/doi/10.1145/3507901`.

Yadav:2022:SOT

[2398] Vijay Kumar Yadav, Nitish Andola, Shekhar Verma, and S. Venkatesan. A survey of oblivious transfer protocol. *ACM Computing Surveys*, 54(10s):211:1–211:??, January 2022. URL `https://dl.acm.org/doi/10.1145/3503045`.

Du:2022:EEE

[2399] Hang Du, Hailin Shi, Dan Zeng, Xiao-Ping Zhang, and Tao Mei. The elements of end-to-end deep face recognition: a survey of recent advances. *ACM Computing Surveys*, 54(10s):212:1–212:??, January 2022. URL https://dl.acm.org/doi/10.1145/3507902.

DosSantos:2022:AOS

[2400] Claudio Filipi Gonçalves Dos Santos and João Paulo Papa. Avoiding overfitting: a survey on regularization methods for convolutional neural networks. *ACM Computing Surveys*, 54(10s):213:1–213:??, January 2022. URL https://dl.acm.org/doi/10.1145/3510413.

Junior:2022:DTT

[2401] Misael C. Júnior, Domenico Amalfitano, Lina Garcés, Anna Rita Fasolino, Stevão A. Andrade, and Márcio Delamaro. Dynamic testing techniques of non-functional requirements in mobile apps: a systematic mapping study. *ACM Computing Surveys*, 54(10s):214:1–214:??, January 2022. URL https://dl.acm.org/doi/10.1145/3507903.

Churchill:2022:ETM

[2402] Rob Churchill and Lisa Singh. The evolution of topic modeling. *ACM Computing Surveys*, 54(10s):215:1–215:??, January 2022. URL https://dl.acm.org/doi/10.1145/3507900.

Martin:2022:MVS

[2403] Daniel Martin, Sandra Malpica, Diego Gutierrez, Belen Masia, and Ana Serrano. Multimodality in VR: a survey. *ACM Computing Surveys*, 54(10s):216:1–216:??, January 2022. URL https://dl.acm.org/doi/10.1145/3508361.

Zhong:2022:MLB

[2404] Zhiheng Zhong, Minxian Xu, Maria Alejandra Rodriguez, Chengzhong Xu, and Rajkumar Buyya. Machine learning-based orchestration of containers: a taxonomy and future directions. *ACM Computing Surveys*, 54(10s):217:1–217:??, January 2022. URL https://dl.acm.org/doi/10.1145/3510415.

Zafar:2022:CCA

[2405] Farkhanda Zafar, Hasan Ali Khattak, Moayad Aloqaily, and Rasheed Hussain. Carpooling in connected and autonomous vehicles: Current solutions and future directions. *ACM Computing Surveys*, 54(10s):218:1–218:??, January 2022. URL https://dl.acm.org/doi/10.1145/3501295.

Alam:2022:SST

[2406] Md Mahbub Alam, Luis Torgo, and Albert Bifet. A survey on spatio-temporal data analytics systems. *ACM Computing Surveys*, 54(10s): 219:1–219:??, January 2022. URL https://dl.acm.org/doi/10.1145/3507904.

Li:2022:SCS

[2407] Zijun Li, Linsong Guo, Jiagan Cheng, Quan Chen, Bingsheng He, and Minyi Guo. The serverless computing survey: a technical primer for design architecture. *ACM Computing Surveys*, 54(10s):220:1–220:??, January 2022. URL https://dl.acm.org/doi/10.1145/3508360.

Liu:2022:SAD

[2408] Peng Liu, Lizhe Wang, Rajiv Ranjan, Guojin He, and Lei Zhao. A survey on active deep learning: From model driven to data driven. *ACM Computing Surveys*, 54(10s):221:1–221:??, January 2022. URL https://dl.acm.org/doi/10.1145/3510414.

Mampage:2022:HVR

[2409] Anupama Mampage, Shanika Karunasekera, and Rajkumar Buyya. A holistic view on resource management in serverless computing environments: Taxonomy and future directions. *ACM Computing Surveys*, 54 (11s):222:1–222:??, January 2022. URL https://dl.acm.org/doi/10.1145/3510412.

Sanchez:2022:PIR

[2410] Pablo Sánchez and Alejandro Bellogín. Point-of-interest recommender systems based on location-based social networks: a survey from an experimental perspective. *ACM Computing Surveys*, 54(11s):223:1–223:??, January 2022. URL https://dl.acm.org/doi/10.1145/3510409.

Delgado-Santos:2022:SPV

[2411] Paula Delgado-Santos, Giuseppe Stragapede, Ruben Tolosana, Richard Guest, Farzin Deravi, and Ruben Vera-Rodriguez. A survey of privacy vulnerabilities of mobile device sensors. *ACM Computing Surveys*, 54 (11s):224:1–224:??, January 2022. URL https://dl.acm.org/doi/10.1145/3510579.

Witharana:2022:SAB

[2412] Hasini Witharana, Yangdi Lyu, Subodha Charles, and Prabhat Mishra. A survey on assertion-based hardware verification. *ACM Computing Surveys*, 54(11s):225:1–225:??, January 2022. URL https://dl.acm.org/doi/10.1145/3510578.

Fagerholm:2022:CSE

[2413] Fabian Fagerholm, Michael Felderer, Davide Fucci, Michael Unterkalmsteiner, Bogdan Marculescu, Markus Martini, Lars Göran Wallgren Tengberg, Robert Feldt, Bettina Lehtelä, Balázs Nagyváradi, and Jehan Khattak. Cognition in software engineering: a taxonomy and survey of a half-century of research. *ACM Computing Surveys*, 54(11s):226:1–226:??, January 2022. URL https://dl.acm.org/doi/10.1145/3508359.

Yu:2022:SKE

[2414] Wenhao Yu, Chenguang Zhu, Zaitang Li, Zhiting Hu, Qingyun Wang, Heng Ji, and Meng Jiang. A survey of knowledge-enhanced text generation. *ACM Computing Surveys*, 54(11s):227:1–227:??, January 2022. URL https://dl.acm.org/doi/10.1145/3512467.

Korala:2022:STF

[2415] Harindu Korala, Dimitrios Georgakopoulos, Prem Prakash Jayaraman, and Ali Yavari. A survey of techniques for fulfilling the time-bound requirements of time-sensitive IoT applications. *ACM Computing Surveys*, 54(11s):228:1–228:??, January 2022. URL https://dl.acm.org/doi/10.1145/3510411.

Kayan:2022:CIC

[2416] Hakan Kayan, Matthew Nunes, Omer Rana, Pete Burnap, and Charith Perera. Cybersecurity of industrial cyber-physical systems: a review. *ACM Computing Surveys*, 54(11s):229:1–229:??, January 2022. URL https://dl.acm.org/doi/10.1145/3510410.

Zhu:2022:FSR

[2417] Xiaogang Zhu, Sheng Wen, Seyit Camtepe, and Yang Xiang. Fuzzing: a survey for roadmap. *ACM Computing Surveys*, 54(11s):230:1–230:??, January 2022. URL https://dl.acm.org/doi/10.1145/3512345.

Zadnik:2022:IVC

[2418] Jakub Žádník, Markku Mäkitalo, Jarno Vanne, and Pekka Jääskeläinen. Image and video coding techniques for ultra-low latency. *ACM Computing Surveys*, 54(11s):231:1–231:??, January 2022. URL https://dl.acm.org/doi/10.1145/3512342.

Chandramouli:2022:SPS

[2419] Anirudh Chandramouli, Ashish Choudhury, and Arpita Patra. A survey on perfectly secure verifiable secret-sharing. *ACM Computing Surveys*, 54(11s):232:1–232:??, January 2022. URL `https://dl.acm.org/doi/10.1145/3512344`.

Jamil:2022:RAT

[2420] Bushra Jamil, Humaira Ijaz, Mohammad Shojafar, Kashif Munir, and Rajkumar Buyya. Resource allocation and task scheduling in fog computing and Internet of everything environments: a taxonomy, review, and future directions. *ACM Computing Surveys*, 54(11s):233:1–233:??, January 2022. URL `https://dl.acm.org/doi/10.1145/3513002`.

Mittal:2022:AAB

[2421] Ajay Mittal, Sabrina Dhalla, Savita Gupta, and Aastha Gupta. Automated analysis of blood smear images for leukemia detection: a comprehensive review. *ACM Computing Surveys*, 54(11s):234:1–234:??, January 2022. URL `https://dl.acm.org/doi/10.1145/3514495`.

Hu:2022:MIA

[2422] Hongsheng Hu, Zoran Salcic, Lichao Sun, Gillian Dobbie, Philip S. Yu, and Xuyun Zhang. Membership inference attacks on machine learning: a survey. *ACM Computing Surveys*, 54(11s):235:1–235:??, January 2022. URL `https://dl.acm.org/doi/10.1145/3523273`.

Muralidhar:2022:EEC

[2423] Rajeev Muralidhar, Renata Borovica-Gajic, and Rajkumar Buyya. Energy efficient computing systems: Architectures, abstractions and modeling to techniques and standards. *ACM Computing Surveys*, 54(11s):236:1–236:??, January 2022. URL `https://dl.acm.org/doi/10.1145/3511094`.

Cardellini:2022:RAD

[2424] Valeria Cardellini, Francesco Lo Presti, Matteo Nardelli, and Gabriele Russo Russo. Runtime adaptation of data stream processing systems: The state of the art. *ACM Computing Surveys*, 54(11s):237:1–237:??, January 2022. URL `https://dl.acm.org/doi/10.1145/3514496`.

Oz:2022:SRE

[2425] Harun Oz, Ahmet Aris, Albert Levi, and A. Selcuk Uluagac. A survey on ransomware: Evolution, taxonomy, and defense solutions. *ACM Computing Surveys*, 54(11s):238:1–238:??, January 2022. URL `https://dl.acm.org/doi/10.1145/3514229`.

Shafiei:2022:SCS

[2426] Hossein Shafiei, Ahmad Khonsari, and Payam Mousavi. Serverless computing: a survey of opportunities, challenges, and applications. *ACM*

Computing Surveys, 54(11s):239:1–239:??, January 2022. URL https://dl.acm.org/doi/10.1145/3510611.

Suhail:2022:BBD

[2427] Sabah Suhail, Rasheed Hussain, Raja Jurdak, Alma Oracevic, Khaled Salah, Choong Seon Hong, and Raimundas Matulevičius. Blockchain-based digital twins: Research trends, issues, and future challenges. *ACM Computing Surveys*, 54(11s):240:1–240:??, January 2022. URL https://dl.acm.org/doi/10.1145/3517189.

Ribeiro:2022:LVS

[2428] Matheus A. O. Ribeiro and Fátima L. S. Nunes. Left ventricle segmentation in cardiac MR: a systematic mapping of the past decade. *ACM Computing Surveys*, 54(11s):241:1–241:??, January 2022. URL https://dl.acm.org/doi/10.1145/3517190.

Antonelli:2022:FSO

[2429] Simone Antonelli, Danilo Avola, Luigi Cinque, Donato Crisostomi, Gian Luca Foresti, Fabio Galasso, Marco Raoul Marini, Alessio Mecca, and Daniele Pannone. Few-shot object detection: a survey. *ACM Computing Surveys*, 54(11s):242:1–242:??, January 2022. URL https://dl.acm.org/doi/10.1145/3519022.

Liu:2022:STL

[2430] Shengmei Liu, Xiaokun Xu, and Mark Claypool. A survey and taxonomy of latency compensation techniques for network computer games. *ACM Computing Surveys*, 54(11s):243:1–243:??, January 2022. URL https://dl.acm.org/doi/10.1145/3519023.

Qi:2023:SOM

[2431] Shuren Qi, Yushu Zhang, Chao Wang, Jiantao Zhou, and Xiaochun Cao. A survey of orthogonal moments for image representation: Theory, implementation, and evaluation. *ACM Computing Surveys*, 55(1):1:1–1:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3479428.

Sarwar:2023:SPP

[2432] Kinza Sarwar, Sira Yongchareon, Jian Yu, and Saeed Ur Rehman. A survey on privacy preservation in fog-enabled Internet of Things. *ACM Computing Surveys*, 55(1):2:1–2:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3474554.

Cicala:2023:PFA

[2433] Fabrizio Cicala, Weicheng Wang, Tianhao Wang, Ninghui Li, Elisa Bertino, Faming Liang, and Yang Yang. PURE: a framework for analyzing proximity-based contact tracing protocols. *ACM Computing Surveys*, 55(1):3:1–3:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3485131`.

Meneguette:2023:VEC

[2434] Rodolfo Meneguette, Robson De Grande, Jo Ueyama, Geraldo P. Rocha Filho, and Edmundo Madeira. Vehicular edge computing: Architecture, resource management, security, and challenges. *ACM Computing Surveys*, 55(1):4:1–4:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3485129`.

Yu:2023:RLH

[2435] Chao Yu, Jiming Liu, Shamim Nemati, and Guosheng Yin. Reinforcement learning in healthcare: a survey. *ACM Computing Surveys*, 55(1):5:1–5:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3477600`.

Xu:2023:UPD

[2436] Fan Xu, Victor S. Sheng, and Mingwen Wang. A unified perspective for disinformation detection and truth discovery in social sensing: a survey. *ACM Computing Surveys*, 55(1):6:1–6:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3477138`.

Luca:2023:SDL

[2437] Massimiliano Luca, Gianni Barlacchi, Bruno Lepri, and Luca Pappalardo. A survey on deep learning for human mobility. *ACM Computing Surveys*, 55(1):7:1–7:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3485125`.

Machado:2023:AML

[2438] Gabriel Resende Machado, Eugênio Silva, and Ronaldo Ribeiro Goldschmidt. Adversarial machine learning in image classification: a survey toward the defender's perspective. *ACM Computing Surveys*, 55(1):8:1–8:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3485133`.

Hazra:2023:CSI

[2439] Abhishek Hazra, Mainak Adhikari, Tarachand Amgoth, and Satish Narayana Srirama. A comprehensive survey on interoperability for IIoT: Taxonomy, standards, and future directions. *ACM Computing Surveys*, 55(1):9:1–9:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3485130.

Barros:2023:SED

[2440] Claudio D. T. Barros, Matheus R. F. Mendonça, Alex B. Vieira, and Artur Ziviani. A survey on embedding dynamic graphs. *ACM Computing Surveys*, 55(1):10:1–10:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3483595.

Rosenfeld:2023:QPH

[2441] Viktor Rosenfeld, Sebastian Breß, and Volker Markl. Query processing on heterogeneous CPU/GPU systems. *ACM Computing Surveys*, 55(1):11:1–11:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3485126.

Bekoulis:2023:RFE

[2442] Giannis Bekoulis, Christina Papagiannopoulou, and Nikos Deligiannis. A review on fact extraction and verification. *ACM Computing Surveys*, 55(1):12:1–12:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3485127.

Jiang:2023:DLB

[2443] Junjun Jiang, Chenyang Wang, Xianming Liu, and Jiayi Ma. Deep learning-based face super-resolution: a survey. *ACM Computing Surveys*, 55(1):13:1–13:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3485132.

Ge:2023:NNB

[2444] Wenbo Ge, Pooia Lalbakhsh, Leigh Isai, Artem Lenskiy, and Hanna Suominen. Neural network-based financial volatility forecasting: a systematic review. *ACM Computing Surveys*, 55(1):14:1–14:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3483596.

Li:2023:ARA

[2445] Deqiang Li, Qianmu Li, Yanfang (Fanny) Ye, and Shouhuai Xu. Arms race in adversarial malware detection: a survey. *ACM Computing Surveys*, 55(1):15:1–15:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3484491.

Amadini:2023:SSC

[2446] Roberto Amadini. A survey on string constraint solving. *ACM Computing Surveys*, 55(1):16:1–16:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3484198.

Brant:2023:COP

[2447] Christopher Brant, Prakash Shrestha, Benjamin Mixon-Baca, Kejun Chen, Said Varlioglu, Nelly Elsayed, Yier Jin, Jedidiah Crandall, and Daniela Oliveira. Challenges and opportunities for practical and effective dynamic information flow tracking. *ACM Computing Surveys*, 55(1):17:1–17:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3483790.

Blanco:2023:SVA

[2448] Alison Fernandez Blanco, Alexandre Bergel, and Juan Pablo Sandoval Alcocer. Software visualizations to analyze memory consumption: a literature review. *ACM Computing Surveys*, 55(1):18:1–18:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3485134.

Alrabaee:2023:SBC

[2449] Saed Alrabaee, Mourad Debbabi, and Lingyu Wang. A survey of binary code fingerprinting approaches: Taxonomy, methodologies, and features. *ACM Computing Surveys*, 55(1):19:1–19:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3486860.

Hu:2023:AIS

[2450] Yupeng Hu, Wenxin Kuang, Zheng Qin, Kenli Li, Jiliang Zhang, Yansong Gao, Wenjia Li, and Keqin Li. Artificial intelligence security: Threats and countermeasures. *ACM Computing Surveys*, 55(1):20:1–20:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3487890.

Rugo:2023:SRU

[2451] Alessio Rugo, Claudio A. Ardagna, and Nabil El Ioini. A security review in the UAVNet era: Threats, countermeasures, and gap analysis. *ACM Computing Surveys*, 55(1):21:1–21:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3485272.

Li:2023:CDI

[2452] Huacheng Li, Chunhe Xia, Tianbo Wang, Sheng Wen, Chao Chen, and Yang Xiang. Capturing dynamics of information diffusion in SNS: a survey of methodology and techniques. *ACM Computing Surveys*, 55 (1):22:1–22:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3485273.

Nguyen:2023:CTD

[2453] Thanh Tuan Nguyen and Thanh Phuong Nguyen. A comprehensive taxonomy of dynamic texture representation. *ACM Computing Surveys*, 55(1):23:1–23:??, January 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3487892.

Ciccozzi:2023:CEL

[2454] Federico Ciccozzi, Lorenzo Addazi, Sara Abbaspour Asadollah, Björn Lisper, Abu Naser Masud, and Saad Mubeen. A comprehensive exploration of languages for parallel computing. *ACM Computing Surveys*, 55(2):24:1–24:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3485008.

Lai:2023:SGB

[2455] Zhao-Rong Lai and Haisheng Yang. A survey on gaps between mean-variance approach and exponential growth rate approach for portfolio optimization. *ACM Computing Surveys*, 55(2):25:1–25:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3485274.

Sai:2023:SEM

[2456] Ananya B. Sai, Akash Kumar Mohankumar, and Mitesh M. Khapra. A survey of evaluation metrics used for NLG systems. *ACM Computing Surveys*, 55(2):26:1–26:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3485766.

Khan:2023:LAD

[2457] Manzoor Ahmed Khan, Hesham El Sayed, Sumbal Malik, Talha Zia, Jalal Khan, Najla Alkaabi, and Henry Ignatious. Level-5 autonomous driving-are we there yet? A review of research literature. *ACM Computing Surveys*, 55(2):27:1–27:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3485767.

Adeleke:2023:NTG

[2458] Oluwamayowa Ade Adeleke, Nicholas Bastin, and Deniz Gurkan. Network traffic generation: a survey and methodology. *ACM Computing Surveys*, 55(2):28:1–28:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3488375.

Costa:2023:OFC

[2459] Breno Costa, Joao Bachiega, Leonardo Rebouças de Carvalho, and Aleteia P. F. Araujo. Orchestration in fog computing: a comprehensive survey. *ACM Computing Surveys*, 55(2):29:1–29:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3486221.

Aldausari:2023:VGA

[2460] Nuha Aldausari, Arcot Sowmya, Nadine Marcus, and Gelareh Mohammadi. Video generative adversarial networks: a review. *ACM Computing Surveys*, 55(2):30:1–30:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3487891.

Deng:2023:SRT

[2461] Libing Deng, Guoqi Xie, Hong Liu, Yunbo Han, Renfa Li, and Keqin Li. A survey of real-time Ethernet modeling and design methodologies: From AVB to TSN. *ACM Computing Surveys*, 55(2):31:1–31:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3487330.

Hasan:2023:PPR

[2462] Omar Hasan, Lionel Brunie, and Elisa Bertino. Privacy-preserving reputation systems based on blockchain and other cryptographic building blocks: a survey. *ACM Computing Surveys*, 55(2):32:1–32:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3490236.

Sarwar:2023:SUE

[2463] Tabinda Sarwar, Sattar Seifollahi, Jeffrey Chan, Xiuzhen Zhang, Vural Aksakalli, Irene Hudson, Karin Verspoor, and Lawrence Cavedon. The secondary use of electronic health records for data mining: Data characteristics and challenges. *ACM Computing Surveys*, 55(2):33:1–33:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3490234`.

dosSantos:2023:GRB

[2464] Claudio Filipi Gonçalves dos Santos, Diego de Souza Oliveira, Leandro A. Passos, Rafael Gonçalves Pires, Daniel Felipe Silva Santos, Lucas Pascotti Valem, Thierry P. Moreira, Marcos Cleison S. Santana, Mateus Roder, Jo Paulo Papa, and Danilo Colombo. Gait recognition based on deep learning: a survey. *ACM Computing Surveys*, 55(2):34:1–34:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3490235`.

Jin:2023:BQA

[2465] Qiao Jin, Zheng Yuan, Guangzhi Xiong, Qianlan Yu, Huaiyuan Ying, Chuanqi Tan, Mosha Chen, Songfang Huang, Xiaozhong Liu, and Sheng Yu. Biomedical question answering: a survey of approaches and challenges. *ACM Computing Surveys*, 55(2):35:1–35:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3490238`.

Xie:2023:SRC

[2466] Yiqun Xie, Shashi Shekhar, and Yan Li. Statistically-robust clustering techniques for mapping spatial hotspots: a survey. *ACM Computing Surveys*, 55(2):36:1–36:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3487893`.

Alemany:2023:RPD

[2467] J. Alemany, E. Del Val, and A. García-Fornes. A review of privacy decision-making mechanisms in online social networks. *ACM Computing Surveys*, 55(2):37:1–37:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3494067`.

Zhou:2023:NRL

[2468] Jingya Zhou, Ling Liu, Wenqi Wei, and Jianxi Fan. Network representation learning: From preprocessing, feature extraction to node embedding. *ACM Computing Surveys*, 55(2):38:1–38:??, March 2023. CODEN

CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3491206.

Kaur:2023:TAI

[2469] Davinder Kaur, Suleyman Uslu, Kaley J. Rittichier, and Arjan Durresi. Trustworthy artificial intelligence: a review. *ACM Computing Surveys*, 55(2):39:1–39:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3491209.

Fahy:2023:SLN

[2470] Conor Fahy, Shengxiang Yang, and Mario Gongora. Scarcity of labels in non-stationary data streams: a survey. *ACM Computing Surveys*, 55(2):40:1–40:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3494832.

Fernandes:2023:SAU

[2471] José Marcelo Fernandes, Jorge Sá Silva, André Rodrigues, and Fernando Boavida. A survey of approaches to unobtrusive sensing of humans. *ACM Computing Surveys*, 55(2):41:1–41:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3491208.

Rolnick:2023:TCC

[2472] David Rolnick, Priya L. Donti, Lynn H. Kaack, Kelly Kochanski, Alexandre Lacoste, Kris Sankaran, Andrew Slavin Ross, Nikola Milojevic-Dupont, Natasha Jaques, Anna Waldman-Brown, Alexandra Sasha Luccioni, Tegan Maharaj, Evan D. Sherwin, S. Karthik Mukkavilli, Konrad P. Kording, Carla P. Gomes, Andrew Y. Ng, Demis Hassabis, John C. Platt, Felix Creutzig, Jennifer Chayes, and Yoshua Bengio. Tackling climate change with machine learning. *ACM Computing Surveys*, 55(2):42:1–42:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3485128.

Sharma:2023:CRM

[2473] Shallu Sharma and Pravat Kumar Mandal. A comprehensive report on machine learning-based early detection of Alzheimer's disease using multi-modal neuroimaging data. *ACM Computing Surveys*, 55(2):43:1–43:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3492865.

Bang:2023:ARA

[2474] Ankur O. Bang, Udai Pratap Rao, Pallavi Kaliyar, and Mauro Conti. Assessment of routing attacks and mitigation techniques with RPL control messages: a survey. *ACM Computing Surveys*, 55(2):44:1–44:??, March 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3494524.

Anand:2023:ECC

[2475] Sanjay Kumar Anand and Suresh Kumar. Experimental comparisons of clustering approaches for data representation. *ACM Computing Surveys*, 55(3):45:1–45:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3490384.

Alyahya:2023:SBS

[2476] Tasniem Nasser Alyahya, Mohamed El Bachir Menai, and Hassan Mathkour. On the structure of the Boolean satisfiability problem: a survey. *ACM Computing Surveys*, 55(3):46:1–46:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3491210.

RobertoeSouza:2023:SDV

[2477] Marcos Roberto e Souza, Helena de Almeida Maia, and Helio Pedrini. Survey on digital video stabilization: Concepts, methods, and challenges. *ACM Computing Surveys*, 55(3):47:1–47:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3494525.

Muske:2023:SAP

[2478] Tukaram Muske and Alexander Serebrenik. Survey of approaches for postprocessing of static analysis alarms. *ACM Computing Surveys*, 55(3):48:1–48:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3494521.

Hettiachchi:2023:STA

[2479] Danula Hettiachchi, Vassilis Kostakos, and Jorge Goncalves. A survey on task assignment in crowdsourcing. *ACM Computing Surveys*, 55(3):49:1–49:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3494522.

Singh:2023:TMS

[2480] Raj Mohan Singh, Lalit Kumar Awasthi, and Geeta Sikka. Towards metaheuristic scheduling techniques in cloud and fog: an extensive taxonomic review. *ACM Computing Surveys*, 55(3):50:1–50:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3494520.

Pessach:2023:RFM

[2481] Dana Pessach and Erez Shmueli. A review on fairness in machine learning. *ACM Computing Surveys*, 55(3):51:1–51:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3494672.

Li:2023:LNT

[2482] Chenning Li and Zhichao Cao. LoRa networking techniques for large-scale and long-term IoT: a down-to-top survey. *ACM Computing Surveys*, 55(3):52:1–52:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3494673.

Plopski:2023:EER

[2483] Alexander Plopski, Teresa Hirzle, Nahal Norouzi, Long Qian, Gerd Bruder, and Tobias Langlotz. The eye in extended reality: a survey on gaze interaction and eye tracking in head-worn extended reality. *ACM Computing Surveys*, 55(3):53:1–53:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3491207.

Wu:2023:SML

[2484] Nan Wu and Yuan Xie. A survey of machine learning for computer architecture and systems. *ACM Computing Surveys*, 55(3):54:1–54:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3494523.

Reisinger:2023:SPU

[2485] Thomas Reisinger, Isabel Wagner, and Eerke Albert Boiten. Security and privacy in unified communication. *ACM Computing Surveys*, 55(3):55:1–55:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3498335.

Li:2023:BOU

[2486] Ruiqi Li, Xiang Zhao, and Marie-Francine Moens. A brief overview of universal sentence representation methods: a linguistic view. *ACM*

Computing Surveys, 55(3):56:1–56:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3482853.

Li:2023:SDQ

[2487] Huan Li, Hua Lu, Christian S. Jensen, Bo Tang, and Muhammad Aamir Cheema. Spatial data quality in the Internet of Things: Management, exploitation, and prospects. *ACM Computing Surveys*, 55(3):57:1–57:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3498338.

Mahmoud:2023:ELA

[2488] Dina G. Mahmoud, Vincent Lenders, and Mirjana Stojilović. Electrical-level attacks on CPUs, FPGAs, and GPUs: Survey and implications in the heterogeneous era. *ACM Computing Surveys*, 55(3):58:1–58:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3498337.

Soldani:2023:ADF

[2489] Jacopo Soldani and Antonio Brogi. Anomaly detection and failure root cause analysis in (micro) service-based cloud applications: a survey. *ACM Computing Surveys*, 55(3):59:1–59:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3501297.

Nguyen:2023:FLS

[2490] Dinh C. Nguyen, Quoc-Viet Pham, Pubudu N. Pathirana, Ming Ding, Aruna Seneviratne, Zihuai Lin, Octavia Dobre, and Won-Joo Hwang. Federated learning for smart healthcare: a survey. *ACM Computing Surveys*, 55(3):60:1–60:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3501296.

Berenberg:2023:DAC

[2491] Anna Berenberg and Brad Calder. Deployment archetypes for cloud applications. *ACM Computing Surveys*, 55(3):61:1–61:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3498336.

Gavrilut:2023:COO

[2492] Voica Gavrilut, Aleksander Pruski, and Michael Stübert Berger. Constructive or optimized: an overview of strategies to design networks for time-critical applications. *ACM Computing Surveys*, 55(3):62:1–62:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3501294.

Barth:2023:UOP

[2493] Susanne Barth, Dan Ionita, and Pieter Hartel. Understanding online privacy — a systematic review of privacy visualizations and privacy by design guidelines. *ACM Computing Surveys*, 55(3):63:1–63:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3502288.

Cao:2023:AFC

[2494] Longbing Cao. AI in finance: Challenges, techniques, and opportunities. *ACM Computing Surveys*, 55(3):64:1–64:??, April 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3502289.

Brauwers:2023:SAB

[2495] Gianni Brauwers and Flavius Frasincar. A survey on aspect-based sentiment classification. *ACM Computing Surveys*, 55(4):65:1–65:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3503044.

Willard:2023:ISK

[2496] Jared Willard, Xiaowei Jia, Shaoming Xu, Michael Steinbach, and Vipin Kumar. Integrating scientific knowledge with machine learning for engineering and environmental systems. *ACM Computing Surveys*, 55(4):66:1–66:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3514228.

Santos:2023:ESS

[2497] Daniel S. Santos, Brauner R. N. Oliveira, Rick Kazman, and Elisa Y. Nakagawa. Evaluation of systems-of-systems software architectures: State of the art and future perspectives. *ACM Computing Surveys*, 55(4):67:1–67:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3519020.

daSilveira:2023:SGE

[2498] Thiago L. T. da Silveira, Paulo G. L. Pinto, Jeffri Murrugarra-Llerena, and Cláudio R. Jung. 3D scene geometry estimation from 360° imagery: a survey. *ACM Computing Surveys*, 55(4):68:1–68:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3519021.

Ferrari:2023:FMR

[2499] Alessio Ferrari and Maurice H. Ter Beek. Formal methods in railways: a systematic mapping study. *ACM Computing Surveys*, 55(4):69:1–69:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3520480.

Qu:2023:BEF

[2500] Youyang Qu, Md Palash Uddin, Chenquan Gan, Yong Xiang, Longxiang Gao, and John Yearwood. Blockchain-enabled federated learning: a survey. *ACM Computing Surveys*, 55(4):70:1–70:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3524104.

Kanakis:2023:MLC

[2501] Marios Evangelos Kanakis, Ramin Khalili, and Lin Wang. Machine learning for computer systems and networking: a survey. *ACM Computing Surveys*, 55(4):71:1–71:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3523057.

Troya:2023:MTT

[2502] Javier Troya, Sergio Segura, Lola Burgueño, and Manuel Wimmer. Model transformation testing and debugging: a survey. *ACM Computing Surveys*, 55(4):72:1–72:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3523056.

Husen:2023:SRF

[2503] Arif Husen, Muhammad Hasanain Chaudary, and Farooq Ahmad. A survey on requirements of future intelligent networks: Solutions and future research directions. *ACM Computing Surveys*, 55(4):73:1–73:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3524106.

Cui:2023:SSM

[2504] Yingan Cui, Xue Li, Junhuai Li, Huaijun Wang, and Xiaogang Chen. A survey of sampling method for social media embeddedness relationship. *ACM Computing Surveys*, 55(4):74:1–74:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3524105.

Gomes:2023:SSS

[2505] Heitor Murilo Gomes, Maciej Grzenda, Rodrigo Mello, Jesse Read, Minh Huong Le Nguyen, and Albert Bifet. A survey on semi-supervised learning for delayed partially labelled data streams. *ACM Computing Surveys*, 55(4):75:1–75:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3523055.

Jiang:2023:EDM

[2506] Shouyong Jiang, Juan Zou, Shengxiang Yang, and Xin Yao. Evolutionary dynamic multi-objective optimisation: a survey. *ACM Computing Surveys*, 55(4):76:1–76:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3524495.

Lamsal:2023:SES

[2507] Rabindra Lamsal, Aaron Harwood, and Maria Rodriguez Read. Socially enhanced situation awareness from microblogs using artificial intelligence: a survey. *ACM Computing Surveys*, 55(4):77:1–77:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3524498.

Chitty-Venkata:2023:NAS

[2508] Krishna Teja Chitty-Venkata and Arun K. Somani. Neural architecture search survey: a hardware perspective. *ACM Computing Surveys*, 55(4):78:1–78:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3524500.

Li:2023:EBE

[2509] Xiang Li, Yazhou Zhang, Prayag Tiwari, Dawei Song, Bin Hu, Meihong Yang, Zhigang Zhao, Neeraj Kumar, and Pekka Marttinen. EEG based emotion recognition: a tutorial and review. *ACM Computing Surveys*, 55(4):79:1–79:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3524499.

Liu:2023:RAM

[2510] Wu Liu, Qian Bao, Yu Sun, and Tao Mei. Recent advances of monocular 2D and 3D human pose estimation: a deep learning perspective. *ACM Computing Surveys*, 55(4):80:1–80:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3524497.

Fan:2023:DLM

[2511] Zhaoxin Fan, Yazhi Zhu, Yulin He, Qi Sun, Hongyan Liu, and Jun He. Deep learning on monocular object pose detection and tracking: a comprehensive overview. *ACM Computing Surveys*, 55(4):81:1–81:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3524496.

Vowels:2023:DLD

[2512] Matthew J. Vowels, Necati Cihan Camgoz, and Richard Bowden. D'ya like DAGs? A survey on structure learning and causal discovery. *ACM Computing Surveys*, 55(4):82:1–82:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3527154.

Armeniakos:2023:HAT

[2513] Giorgos Armeniakos, Georgios Zervakis, Dimitrios Soudris, and Jörg Henkel. Hardware approximate techniques for deep neural network accelerators: a survey. *ACM Computing Surveys*, 55(4):83:1–83:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3527156.

Yan:2023:SVA

[2514] Chen Yan, Xiaoyu Ji, Kai Wang, Qinhong Jiang, Zizhi Jin, and Wenyuan Xu. A survey on voice assistant security: Attacks and countermeasures. *ACM Computing Surveys*, 55(4):84:1–84:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3527153.

AlmarazLuengo:2023:GPR

[2515] Elena Almaraz Luengo. Gamma pseudo random number generators. *ACM Computing Surveys*, 55(4):85:1–85:33, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3527157.

Baksi:2023:SFA

[2516] Anubhab Baksi, Shivam Bhasin, Jakub Breier, Dirmanto Jap, and Dhiman Saha. A survey on fault attacks on symmetric key cryptosystems. *ACM Computing Surveys*, 55(4):86:1–86:??, May 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3530054.

Orphanou:2023:MBA

[2517] Kalia Orphanou, Jahna Otterbacher, Styliani Kleanthous, Khuyagbaatar Batsuren, Fausto Giunchiglia, Veronika Bogina, Avital Shulner Tal, Alan Hartman, and Tsvi Kuflik. Mitigating bias in algorithmic systems — a fish-eye view. *ACM Computing Surveys*, 55(5):87:1–87:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3527152.

Xiao:2023:SWD

[2518] Jiang Xiao, Huichuwu Li, Minrui Wu, Hai Jin, M. Jamal Deen, and Jiannong Cao. A survey on wireless device-free human sensing: Application scenarios, current solutions, and open issues. *ACM Computing Surveys*, 55(5):88:1–88:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3530682.

He:2023:CTC

[2519] Yuan He, Xiuzhen Guo, Xiaolong Zheng, Zihao Yu, Jia Zhang, Haotian Jiang, Xin Na, and Jiacheng Zhang. Cross-technology communication for the Internet of Things: a survey. *ACM Computing Surveys*, 55(5):89:1–89:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3530049.

Matsubara:2023:SCE

[2520] Yoshitomo Matsubara, Marco Levorato, and Francesco Restuccia. Split computing and early exiting for deep learning applications: Survey and research challenges. *ACM Computing Surveys*, 55(5):90:1–90:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3527155.

Motger:2023:SBD

[2521] Quim Motger, Xavier Franch, and Jordi Marco. Software-based dialogue systems: Survey, taxonomy, and challenges. *ACM Computing Surveys*, 55(5):91:1–91:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3527450.

Vouros:2023:EDR

[2522] George A. Vouros. Explainable deep reinforcement learning: State of the art and challenges. *ACM Computing Surveys*, 55(5):92:1–92:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3527448.

Alhijawi:2023:SOR

[2523] Bushra Alhijawi, Arafat Awajan, and Salam Fraihat. Survey on the objectives of recommender systems: Measures, solutions, evaluation methodology, and new perspectives. *ACM Computing Surveys*, 55(5): 93:1–93:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3527449`.

Kammoun:2023:GAN

[2524] Amina Kammoun, Rim Slama, Hedi Tabia, Tarek Ouni, and Mohmed Abid. Generative adversarial networks for face generation: a survey. *ACM Computing Surveys*, 55(5):94:1–94:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3527850`.

Karimi:2023:SAR

[2525] Amir-Hossein Karimi, Gilles Barthe, Bernhard Schölkopf, and Isabel Valera. A survey of algorithmic recourse: Contrastive explanations and consequential recommendations. *ACM Computing Surveys*, 55(5):95:1–95:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3527848`.

Alamir:2023:RGA

[2526] Manal Alamir and Manal Alghamdi. The role of generative adversarial network in medical image analysis: an in-depth survey. *ACM Computing Surveys*, 55(5):96:1–96:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3527849`.

Wu:2023:GNN

[2527] Shiwen Wu, Fei Sun, Wentao Zhang, Xu Xie, and Bin Cui. Graph neural networks in recommender systems: a survey. *ACM Computing Surveys*, 55(5):97:1–97:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3535101`.

Massoli:2023:LAQ

[2528] Fabio Valerio Massoli, Lucia Vadicamo, Giuseppe Amato, and Fabrizio Falchi. A leap among quantum computing and quantum neural networks: a survey. *ACM Computing Surveys*, 55(5):98:1–98:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3529756`.

Cruz:2023:EDS

[2529] Pedro Cruz, Nadjib Achir, and Aline Carneiro Viana. On the edge of the deployment: a survey on multi-access edge computing. *ACM Computing Surveys*, 55(5):99:1–99:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3529758.

Le:2023:SDD

[2530] Triet H. M. Le, Huaming Chen, and M. Ali Babar. A survey on data-driven software vulnerability assessment and prioritization. *ACM Computing Surveys*, 55(5):100:1–100:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3529757.

Yates:2023:DMS

[2531] Darren Yates and Md Zahidul Islam. Data mining on smartphones: an introduction and survey. *ACM Computing Surveys*, 55(5):101:1–101:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3529753.

Ma:2023:MDS

[2532] Congbo Ma, Wei Emma Zhang, Mingyu Guo, Hu Wang, and Quan Z. Sheng. Multi-document summarization via deep learning techniques: a survey. *ACM Computing Surveys*, 55(5):102:1–102:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3529754.

ElZini:2023:ENL

[2533] Julia El Zini and Mariette Awad. On the explainability of natural language processing deep models. *ACM Computing Surveys*, 55(5):103:1–103:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3529755.

Lee:2023:SSA

[2534] Hansoo Lee, Joonyoung Park, and Uichin Lee. A systematic survey on Android API usage for data-driven analytics with smartphones. *ACM Computing Surveys*, 55(5):104:1–104:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3530814.

Chen:2023:MLE

[2535] Zhiyan Chen, Jinxin Liu, Yu Shen, Murat Simsek, Burak Kantarci, Hussein T. Mouftah, and Petar Djukic. Machine learning-enabled IoT security: Open issues and challenges under advanced persistent threats. *ACM Computing Surveys*, 55(5):105:1–105:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3530812.

Sozzo:2023:PLA

[2536] Emanuele Del Sozzo, Davide Conficconi, Alberto Zeni, Mirko Salaris, Donatella Sciuto, and Marco D. Santambrogio. Pushing the level of abstraction of digital system design: a survey on how to program FPGAs. *ACM Computing Surveys*, 55(5):106:1–106:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3532989.

Alavizadeh:2023:SCS

[2537] Hooman Alavizadeh, Julian Jang-Jaccard, Simon Yusuf Enoch, Harith Al-Sahaf, Ian Welch, Seyit A. Camtepe, and Dan Dongseong Kim. A survey on cyber situation-awareness systems: Framework, techniques, and insights. *ACM Computing Surveys*, 55(5):107:1–107:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3530809.

Muralidharan:2023:FPM

[2538] Trivikram Muralidharan, Aviad Cohen, Noa Gerson, and Nir Nissim. File packing from the malware perspective: Techniques, analysis approaches, and directions for enhancements. *ACM Computing Surveys*, 55(5):108:1–108:??, June 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3530810.

Tay:2023:ETS

[2539] Yi Tay, Mostafa Dehghani, Dara Bahri, and Donald Metzler. Efficient transformers: a survey. *ACM Computing Surveys*, 55(6):109:1–109:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3530811.

Fahmideh:2023:EBB

[2540] Mahdi Fahmideh, John Grundy, Aakash Ahmad, Jun Shen, Jun Yan, Davoud Mougouei, Peng Wang, Aditya Ghose, Anuradha Gunawardana, Uwe Aickelin, and Babak Abedin. Engineering blockchain-based software systems: Foundations, survey, and future directions. *ACM Computing Surveys*, 55(6):110:1–110:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3530813.

Guo:2023:EED

[2541] Binglei Guo, Jiong Yu, Dexian Yang, Hongyong Leng, and Bin Liao. Energy-efficient database systems: a systematic survey. *ACM Computing Surveys*, 55(6):111:1–111:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3538225.

Roy:2023:STA

[2542] Shanto Roy, Nazia Sharmin, Jaime C. Acosta, Christopher Kiekintveld, and Aron Laszka. Survey and taxonomy of adversarial reconnaissance techniques. *ACM Computing Surveys*, 55(6):112:1–112:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3538704.

Xia:2023:HNA

[2543] Dan Xia, Chun Jiang, Jiafu Wan, Jiong Jin, Victor C. M. Leung, and Miguel Martínez-García. Heterogeneous network access and fusion in smart factory: a survey. *ACM Computing Surveys*, 55(6):113:1–113:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3530815.

Paleyes:2023:CDM

[2544] Andrei Paleyes, Raoul-Gabriel Urma, and Neil D. Lawrence. Challenges in deploying machine learning: a survey of case studies. *ACM Computing Surveys*, 55(6):114:1–114:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3533378.

Goncalves:2023:SRC

[2545] Guilherme Gonçalves, Hugo Coelho, Pedro Monteiro, Miguel Melo, and Maximino Bessa. Systematic review of comparative studies of the impact of realism in immersive virtual experiences. *ACM Computing Surveys*, 55(6):115:1–115:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3533377.

Schafer:2023:SSA

[2546] Alexander Schäfer, Gerd Reis, and Didier Stricker. A survey on synchronous augmented, virtual, and mixed reality remote collaboration systems. *ACM Computing Surveys*, 55(6):116:1–116:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3533376.

Zehlike:2023:FRPa

[2547] Meike Zehlike, Ke Yang, and Julia Stoyanovich. Fairness in ranking, Part II: Learning-to-rank and recommender systems. *ACM Computing Surveys*, 55(6):117:1–117:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3533380.

Zehlike:2023:FRPb

[2548] Meike Zehlike, Ke Yang, and Julia Stoyanovich. Fairness in ranking, Part I: Score-based ranking. *ACM Computing Surveys*, 55(6):118:1–118:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3533379.

Erdogmus:2023:BHT

[2549] Hakan Erdogmus. Bayesian hypothesis testing illustrated: an introduction for software engineering researchers. *ACM Computing Surveys*, 55(6):119:1–119:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3533383.

Topham:2023:HBP

[2550] Luke K. Topham, Wasiq Khan, Dhiya Al-Jumeily, and Abir Hussain. Human body pose estimation for gait identification: a comprehensive survey of datasets and models. *ACM Computing Surveys*, 55(6):120:1–120:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3533384.

Benidis:2023:DLT

[2551] Konstantinos Benidis, Syama Sundar Rangapuram, Valentin Flunkert, Yuyang Wang, Danielle Maddix, Caner Turkmen, Jan Gasthaus, Michael Bohlke-Schneider, David Salinas, Lorenzo Stella, François-Xavier Aubet, Laurent Callot, and Tim Januschowski. Deep learning for time series forecasting: Tutorial and literature survey. *ACM Computing Surveys*, 55(6):121:1–121:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3533382.

Jeong:2023:ECS

[2552] Jongkil Jay Jeong, Yevhen Zolotavkin, and Robin Doss. Examining the current status and emerging trends in continuous authentication technologies through citation network analysis. *ACM Computing Surveys*, 55(6):122:1–122:??, July 2023. CODEN CMSVAN. ISSN 0360-

0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3533705.

Parkinson:2023:SES

[2553] Simon Parkinson and Saad Khan. A survey on empirical security analysis of access-control systems: a real-world perspective. *ACM Computing Surveys*, 55(6):123:1–123:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3533703.

Jero:2023:TTA

[2554] Samuel Jero, Nathan Burow, Bryan Ward, Richard Skowyra, Roger Khazan, Howard Shrobe, and Hamed Okhravi. TAG: Tagged Architecture Guide. *ACM Computing Surveys*, 55(6):124:1–124:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3533704.

Branco:2023:CRH

[2555] Rodrigo Branco and Ben Lee. Cache-related hardware capabilities and their impact on information security. *ACM Computing Surveys*, 55(6):125:1–125:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3534962.

Olugbade:2023:HMD

[2556] Temitayo Olugbade, Marta Bieńkiewicz, Giulia Barbareschi, Vincenzo D'amato, Luca Oneto, Antonio Camurri, Catherine Holloway, Mårten Björkman, Peter Keller, Martin Clayton, Amanda C. De C. Williams, Nicolas Gold, Cristina Becchio, Benoît Bardy, and Nadia Bianchi-Berthouze. Human movement datasets: an interdisciplinary scoping review. *ACM Computing Surveys*, 55(6):126:1–126:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3534970.

Arcile:2023:TAF

[2557] Johan Arcile and Étienne André. Timed automata as a formalism for expressing security: a survey on theory and practice. *ACM Computing Surveys*, 55(6):127:1–127:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3534967.

Chen:2023:IMS

[2558] Lu Chen, Yunjun Gao, Xuan Song, Zheng Li, Yifan Zhu, Xiaoye Miao, and Christian S. Jensen. Indexing metric spaces for exact similarity search. *ACM Computing Surveys*, 55(6):128:1–128:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3534963.

Keyvan:2023:HAA

[2559] Kimiya Keyvan and Jimmy Xiangji Huang. How to approach ambiguous queries in conversational search: a survey of techniques, approaches, tools, and challenges. *ACM Computing Surveys*, 55(6):129:1–129:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3534965.

Kleyko:2023:SHCa

[2560] Denis Kleyko, Dmitri A. Rachkovskij, Evgeny Osipov, and Abbas Rahimi. A survey on hyperdimensional computing aka vector symbolic architectures, Part I: Models and data transformations. *ACM Computing Surveys*, 55(6):130:1–130:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3538531.

Sallaberry:2023:APA

[2561] Lucas H. Sallaberry, Romero Tori, and Fátima L. S. Nunes. Automatic performance assessment in three-dimensional interactive haptic medical simulators: a systematic review. *ACM Computing Surveys*, 55(7):131:1–131:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3539222.

Chebolu:2023:SAC

[2562] Siva Uday Sampreeth Chebolu, Paolo Rosso, Sudipta Kar, and Thamar Solorio. Survey on aspect category detection. *ACM Computing Surveys*, 55(7):132:1–132:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3544557.

Adhikari:2023:CSI

[2563] Deepak Adhikari, Wei Jiang, Jinyu Zhan, Zhiyuan He, Danda B. Rawat, Uwe Aickelin, and Hadi A. Khorshidi. A comprehensive survey on imputation of missing data in Internet of Things. *ACM Computing Surveys*, 55(7):133:1–133:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3533381.

Wang:2023:TTS

[2564] Zhibo Wang, Jingjing Ma, Xue Wang, Jiahui Hu, Zhan Qin, and Kui Ren. Threats to training: a survey of poisoning attacks and defenses on machine learning systems. *ACM Computing Surveys*, 55(7):134:1–134:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3538707.

Zipperle:2023:PBI

[2565] Michael Zipperle, Florian Gottwalt, Elizabeth Chang, and Tharam Dillon. Provenance-based intrusion detection systems: a survey. *ACM Computing Surveys*, 55(7):135:1–135:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3539605.

Han:2023:HCI

[2566] Rong Han, Zheng Yan, Xueqin Liang, and Laurence T. Yang. How can incentive mechanisms and blockchain benefit with each other? A survey. *ACM Computing Surveys*, 55(7):136:1–136:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3539604.

Yun:2023:FES

[2567] Joobeom Yun, Fayozbek Rustamov, Juhwan Kim, and Youngjoo Shin. Fuzzing of embedded systems: a survey. *ACM Computing Surveys*, 55(7):137:1–137:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3538644.

Carrion:2023:KST

[2568] Carmen Carrión. Kubernetes scheduling: Taxonomy, ongoing issues and challenges. *ACM Computing Surveys*, 55(7):138:1–138:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3539606.

Benmoussa:2023:IFA

[2569] Ahmed Benmoussa, Chaker Abdelaziz Kerrache, Nasreddine Lagraa, Spyridon Mastorakis, Abderrahmane Lakas, and Abdou El Karim Tahari. Interest flooding attacks in named data networking: Survey of existing solutions, open issues, requirements, and future directions. *ACM Computing Surveys*, 55(7):139:1–139:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3539730.

Opdahl:2023:SKG

[2570] Andreas L. Opdahl, Tareq Al-Moslmi, Duc-Tien Dang-Nguyen, Marc Gallofré Ocaña, Bjørnar Tessem, and Csaba Veres. Semantic knowledge graphs for the news: a review. *ACM Computing Surveys*, 55(7):140:1–140:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3543508.

Tao:2023:SDD

[2571] Yudong Tao, Chuang Yang, Tianyi Wang, Erik Coltey, Yanxiu Jin, Yinghao Liu, Renhe Jiang, Zipei Fan, Xuan Song, Ryosuke Shibasaki, Shu-Ching Chen, Mei-Ling Shyu, and Steven Luis. A survey on data-driven COVID-19 and future pandemic management. *ACM Computing Surveys*, 55(7):141:1–141:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3542818.

Naghibijouybari:2023:MAH

[2572] Hoda Naghibijouybari, Esmaeil Mohammadian Koruyeh, and Nael Abu-Ghazaleh. Microarchitectural attacks in heterogeneous systems: a survey. *ACM Computing Surveys*, 55(7):142:1–142:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3544102.

Sarsenbayeva:2023:MSA

[2573] Zhanna Sarsenbayeva, Niels Van Berkel, Eduardo Velloso, Jorge Goncalves, and Vassilis Kostakos. Methodological standards in accessibility research on motor impairments: a survey. *ACM Computing Surveys*, 55(7):143:1–143:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3543509.

Idowu:2023:AMM

[2574] Samuel Idowu, Daniel Strüber, and Thorsten Berger. Asset management in machine learning: State-of-research and state-of-practice. *ACM Computing Surveys*, 55(7):144:1–144:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3543847.

Afsar:2023:RLB

[2575] M. Mehdi Afsar, Trafford Crump, and Behrouz Far. Reinforcement learning based recommender systems: a survey. *ACM Computing Surveys*, 55(7):145:1–145:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3543846.

Bayer:2023:SDA

[2576] Markus Bayer, Marc-André Kaufhold, and Christian Reuter. A survey on data augmentation for text classification. *ACM Computing Surveys*, 55(7):146:1–146:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3544558.

Perez-Cerrolaza:2023:GDS

[2577] Jon Perez-Cerrolaza, Jaume Abella, Leonidas Kosmidis, Alejandro J. Calderon, Francisco Cazorla, and Jose Luis Flores. GPU devices for safety-critical systems: a survey. *ACM Computing Surveys*, 55(7):147:1–147:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3549526.

Tran:2023:AAI

[2578] Tung Minh Tran, Tu N. Vu, Nguyen D. Vo, Tam V. Nguyen, and Khang Nguyen. Anomaly analysis in images and videos: a comprehensive review. *ACM Computing Surveys*, 55(7):148:1–148:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3544014.

Liu:2023:SDF

[2579] Li Liu and Fanzhang Li. A survey on dynamic fuzzy machine learning. *ACM Computing Surveys*, 55(7):149:1–149:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3544013.

Sleeman:2023:MCC

[2580] William C. Sleeman, Rishabh Kapoor, and Preetam Ghosh. Multimodal classification: Current landscape, taxonomy and future directions. *ACM Computing Surveys*, 55(7):150:1–150:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3543848.

Rejiba:2023:CSK

[2581] Zeineb Rejiba and Javad Chamanara. Custom scheduling in Kubernetes: a survey on common problems and solution approaches. *ACM Computing Surveys*, 55(7):151:1–151:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3544788.

Goudarzi:2023:SIA

[2582] Mohammad Goudarzi, Marimuthu Palaniswami, and Rajkumar Buyya. Scheduling IoT applications in edge and fog computing environments: a taxonomy and future directions. *ACM Computing Surveys*, 55(7):152:1–152:??, July 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3544836.

Liu:2023:DLA

[2583] Yue Liu, Chakkrit Tantithamthavorn, Li Li, and Yepang Liu. Deep learning for Android malware defenses: a systematic literature review. *ACM Computing Surveys*, 55(8):153:1–153:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3544968.

Koh:2023:ESL

[2584] Huan Yee Koh, Jiaxin Ju, Ming Liu, and Shirui Pan. An empirical survey on long document summarization: Datasets, models, and metrics. *ACM Computing Surveys*, 55(8):154:1–154:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3545176.

Madsen:2023:PHI

[2585] Andreas Madsen, Siva Reddy, and Sarath Chandar. Post-hoc interpretability for neural NLP: a survey. *ACM Computing Surveys*, 55(8):155:1–155:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3546577.

Weld:2023:SJI

[2586] Henry Weld, Xiaoqi Huang, Siqu Long, Josiah Poon, and Soyeon Caren Han. A survey of joint intent detection and slot filling models in natural language understanding. *ACM Computing Surveys*, 55(8):156:1–156:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3547138.

Mohseni:2023:TML

[2587] Sina Mohseni, Haotao Wang, Chaowei Xiao, Zhiding Yu, Zhangyang Wang, and Jay Yadawa. Taxonomy of machine learning safety: a survey and primer. *ACM Computing Surveys*, 55(8):157:1–157:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3551385.

Gunawardena:2023:ETT

[2588] Nishan Gunawardena, Jeewani Anupama Ginige, and Bahman Javadi. Eye-tracking technologies in mobile devices using edge computing: a systematic review. *ACM Computing Surveys*, 55(8):158:1–158:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3546938.

Abdullah:2023:DLS

[2589] Tariq Abdullah and Ahmed Ahmet. Deep learning in sentiment analysis: Recent architectures. *ACM Computing Surveys*, 55(8):159:1–159:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3548772.

Blanco-Justicia:2023:CRU

[2590] Alberto Blanco-Justicia, David Sánchez, Josep Domingo-Ferrer, and Krishnamurty Muralidhar. A critical review on the use (and misuse) of differential privacy in machine learning. *ACM Computing Surveys*, 55 (8):160:1–160:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3547139.

Liu:2023:PIS

[2591] Chi Liu, Tianqing Zhu, Jun Zhang, and Wanlei Zhou. Privacy intelligence: a survey on image privacy in online social networks. *ACM Computing Surveys*, 55(8):161:1–161:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3547299.

Lyu:2023:SDE

[2592] Minzhao Lyu, Hassan Habibi Gharakheili, and Vijay Sivaraman. A survey on DNS encryption: Current development, malware misuse, and inference techniques. *ACM Computing Surveys*, 55(8):162:1–162:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3547331.

Zhou:2023:AAD

[2593] Shuai Zhou, Chi Liu, Dayong Ye, Tianqing Zhu, Wanlei Zhou, and Philip S. Yu. Adversarial attacks and defenses in deep learning: From a perspective of cybersecurity. *ACM Computing Surveys*, 55(8):163:1–163:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3547330.

Serrano:2023:QSC

[2594] Manuel A. Serrano, José A. Cruz-Lemus, Ricardo Perez-Castillo, and Mario Piattini. Quantum software components and platforms: Overview and quality assessment. *ACM Computing Surveys*, 55(8):164:1–164:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3548679.

Velayudhan:2023:RAB

[2595] Divya Velayudhan, Taimur Hassan, Ernesto Damiani, and Naoufel Werghi. Recent advances in baggage threat detection: a comprehensive and systematic survey. *ACM Computing Surveys*, 55(8):165:1–165:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3549932.

Tian:2023:CSP

[2596] Zhiyi Tian, Lei Cui, Jie Liang, and Shui Yu. A comprehensive survey on poisoning attacks and countermeasures in machine learning. *ACM Computing Surveys*, 55(8):166:1–166:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3551636.

Heinl:2023:REV

[2597] Michael P. Heinl, Simon Gölz, and Christoph Bösch. Remote electronic voting in uncontrolled environments: a classifying survey. *ACM Computing Surveys*, 55(8):167:1–167:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3551386.

Roscoe:2023:FCA

[2598] Sarah Roscoe, Minal Khatri, Adam Voshall, Surinder Batra, Sukhwinder Kaur, and Jitender Deogun. Formal concept analysis applications in bioinformatics. *ACM Computing Surveys*, 55(8):168:1–168:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3554728.

Chakraborty:2023:HBA

[2599] Nilesh Chakraborty, Jianqiang Li, Victor C. M. Leung, Samrat Mondal, Yi Pan, Chengwen Luo, and Mithun Mukherjee. Honeyword-based authentication techniques for protecting passwords: a survey. *ACM Computing Surveys*, 55(8):169:1–169:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3552431.

Zangerle:2023:ERS

[2600] Eva Zangerle and Christine Bauer. Evaluating recommender systems: Survey and framework. *ACM Computing Surveys*, 55(8):170:1–170:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3556536`.

Almeida:2023:SLR

[2601] André Luís Barroso Almeida, Joubert de Castro Lima, and Marco Antonio M. Carvalho. Systematic literature review on parallel trajectory-based metaheuristics. *ACM Computing Surveys*, 55(8):171:1–171:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3550484`.

Yang:2023:AME

[2602] Tianbao Yang and Yiming Ying. AUC maximization in the era of big data and AI: a survey. *ACM Computing Surveys*, 55(8):172:1–172:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3554729`.

Dong:2023:SNL

[2603] Chenhe Dong, Yinghui Li, Haifan Gong, Miaoxin Chen, Junxin Li, Ying Shen, and Min Yang. A survey of natural language generation. *ACM Computing Surveys*, 55(8):173:1–173:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3554727`.

Kong:2023:ECD

[2604] Linghe Kong, Jinlin Tan, Junqin Huang, Guihai Chen, Shuaitian Wang, Xi Jin, Peng Zeng, Muhammad Khan, and Sajal K. Das. Edge-computing-driven Internet of Things: a survey. *ACM Computing Surveys*, 55(8):174:1–174:??, August 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3555308`.

Kleyko:2023:SHCb

[2605] Denis Kleyko, Dmitri Rachkovskij, Evgeny Osipov, and Abbas Rahimi. A survey on hyperdimensional computing aka vector symbolic architectures, Part II: Applications, cognitive models, and challenges. *ACM Computing Surveys*, 55(9):175:1–175:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3558000`.

McDuff:2023:CMP

[2606] Daniel McDuff. Camera measurement of physiological vital signs. *ACM Computing Surveys*, 55(9):176:1–176:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3558518.

Li:2023:TAP

[2607] Bo Li, Peng Qi, Bo Liu, Shuai Di, Jingen Liu, Jiquan Pei, Jinfeng Yi, and Bowen Zhou. Trustworthy AI: From principles to practices. *ACM Computing Surveys*, 55(9):177:1–177:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3555803.

Benedetto:2023:SRA

[2608] Luca Benedetto, Paolo Cremonesi, Andrew Caines, Paula Buttery, Andrea Cappelli, Andrea Giussani, and Roberto Turrin. A survey on recent approaches to question difficulty estimation from text. *ACM Computing Surveys*, 55(9):178:1–178:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3556538.

North:2023:LCP

[2609] Kai North, Marcos Zampieri, and Matthew Shardlow. Lexical complexity prediction: an overview. *ACM Computing Surveys*, 55(9):179:1–179:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3557885.

Pattnaik:2023:SUP

[2610] Nandita Pattnaik, Shujun Li, and Jason R. C. Nurse. A survey of user perspectives on security and privacy in a home networking environment. *ACM Computing Surveys*, 55(9):180:1–180:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3558095.

Park:2023:EOS

[2611] Eun Hee Park and Veda C. Storey. Emotion ontology studies: a framework for expressing feelings digitally and its application to sentiment analysis. *ACM Computing Surveys*, 55(9):181:1–181:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3555719.

Fotia:2023:TEB

[2612] Lidia Fotia, Flávia Delicato, and Giancarlo Fortino. Trust in edge-based Internet of Things architectures: State of the art and research challenges. *ACM Computing Surveys*, 55(9):182:1–182:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3558779`.

Bitton:2023:ECR

[2613] Ron Bitton, Nadav Maman, Inderjeet Singh, Satoru Momiyama, Yuval Elovici, and Asaf Shabtai. Evaluating the cybersecurity risk of real-world, machine learning production systems. *ACM Computing Surveys*, 55(9):183:1–183:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3559104`.

Hua:2023:ECA

[2614] Haochen Hua, Yutong Li, Tonghe Wang, Nanqing Dong, Wei Li, and Junwei Cao. Edge computing with artificial intelligence: a machine learning perspective. *ACM Computing Surveys*, 55(9):184:1–184:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3555802`.

Yoshizawa:2023:SSP

[2615] Takahito Yoshizawa, Dave Singelée, Jan Tobias Muehlberg, Stephane Delbruel, Amir Taherkordi, Danny Hughes, and Bart Preneel. A survey of security and privacy issues in V2X communication systems. *ACM Computing Surveys*, 55(9):185:1–185:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3558052`.

Liatifis:2023:ASO

[2616] Athanasios Liatifis, Panagiotis Sarigiannidis, Vasileios Argyriou, and Thomas Lagkas. Advancing SDN from OpenFlow to P4: a survey. *ACM Computing Surveys*, 55(9):186:1–186:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3556973`.

Senanayake:2023:ASC

[2617] Janaka Senanayake, Harsha Kalutarage, Mhd Omar Al-Kadri, Andrei Petrovski, and Luca Piras. Android source code vulnerability detection: a systematic literature review. *ACM Computing Surveys*, 55(9):187:1–187:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3556974.

Liu:2023:SVM

[2618] Meng Liu, Liqiang Nie, Yunxiao Wang, Meng Wang, and Yong Rui. A survey on video moment localization. *ACM Computing Surveys*, 55 (9):188:1–188:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3556537.

Cao:2023:MAR

[2619] Jacky Cao, Kit-Yung Lam, Lik-Hang Lee, Xiaoli Liu, Pan Hui, and Xiang Su. Mobile augmented reality: User interfaces, frameworks, and intelligence. *ACM Computing Surveys*, 55(9):189:1–189:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3557999.

Sim:2023:TRA

[2620] Junsik Sim, Beomjoong Kim, Kiseok Jeon, Moonho Joo, Jihun Lim, Junghee Lee, and Kim-Kwang Raymond Choo. Technical requirements and approaches in personal data control. *ACM Computing Surveys*, 55(9):190:1–190:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3558766.

Issa:2023:BBF

[2621] Wael Issa, Nour Moustafa, Benjamin Turnbull, Nasrin Sohrabi, and Zahir Tari. Blockchain-based federated learning for securing Internet of Things: a comprehensive survey. *ACM Computing Surveys*, 55(9):191:1–191:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3560816.

Ahmad:2023:RCS

[2622] Hussain Ahmad, Isuru Dharmadasa, Faheem Ullah, and Muhammad Ali Babar. A review on C3I systems' security: Vulnerabilities, attacks, and countermeasures. *ACM Computing Surveys*, 55(9):192:1–192:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3558001.

Luo:2023:PPU

[2623] Junhai Luo, Zhiyan Wang, Ming Xia, Linyong Wu, Yuxin Tian, and Yu Chen. Path planning for UAV communication networks: Related technologies, solutions, and opportunities. *ACM Computing Surveys*, 55(9):193:1–193:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3560261.

Dwivedi:2023:EAX

[2624] Rudresh Dwivedi, Devam Dave, Het Naik, Smiti Singhal, Rana Omer, Pankesh Patel, Bin Qian, Zhenyu Wen, Tejal Shah, Graham Morgan, and Rajiv Ranjan. Explainable AI (XAI): Core ideas, techniques, and solutions. *ACM Computing Surveys*, 55(9):194:1–194:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3561048.

Liu:2023:PTP

[2625] Pengfei Liu, Weizhe Yuan, Jinlan Fu, Zhengbao Jiang, Hiroaki Hayashi, and Graham Neubig. Pre-train, prompt, and predict: a systematic survey of prompting methods in natural language processing. *ACM Computing Surveys*, 55(9):195:1–195:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3560815.

Wang:2023:EIT

[2626] Ping Wang, Haichang Gao, Xiaoyan Guo, Chenxuan Xiao, Fuqi Qi, and Zheng Yan. An experimental investigation of text-based CAPTCHA attacks and their robustness. *ACM Computing Surveys*, 55(9):196:1–196:??, September 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3559754.

Rogers:2023:QDE

[2627] Anna Rogers, Matt Gardner, and Isabelle Augenstein. QA dataset explosion: a taxonomy of NLP resources for question answering and reading comprehension. *ACM Computing Surveys*, 55(10):197:1–197:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3560260.

Chiarot:2023:TSC

[2628] Giacomo Chiarot and Claudio Silvestri. Time series compression survey. *ACM Computing Surveys*, 55(10):198:1–198:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3560814.

Brophy:2023:GAN

[2629] Eoin Brophy, Zhengwei Wang, Qi She, and Tomás Ward. Generative adversarial networks in time series: a systematic literature review.

ACM Computing Surveys, 55(10):199:1–199:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3559540.

Ullah:2023:CRV

[2630] Fath U Min Ullah, Mohammad S. Obaidat, Amin Ullah, Khan Muhammad, Mohammad Hijji, and Sung Wook Baik. A comprehensive review on vision-based violence detection in surveillance videos. *ACM Computing Surveys*, 55(10):200:1–200:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3561971.

Zhao:2023:SSJ

[2631] Yunhua Zhao, Kostadin Damevski, and Hui Chen. A systematic survey of just-in-time software defect prediction. *ACM Computing Surveys*, 55(10):201:1–201:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3567550.

Quina-Mera:2023:GSM

[2632] Antonio Quiña-Mera, Pablo Fernandez, José María García, and Antonio Ruiz-Cortés. GraphQL: a systematic mapping study. *ACM Computing Surveys*, 55(10):202:1–202:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3561818.

Rethmeier:2023:PCP

[2633] Nils Rethmeier and Isabelle Augenstein. A primer on contrastive pretraining in language processing: Methods, lessons learned, and perspectives. *ACM Computing Surveys*, 55(10):203:1–203:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3561970.

Ganapathi:2023:SER

[2634] Iyyakutti Iyappan Ganapathi, Syed Sadaf Ali, Surya Prakash, Ngoc-Son Vu, and Naoufel Werghi. A survey of 3D ear recognition techniques. *ACM Computing Surveys*, 55(10):204:1–204:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3560884.

Parmar:2023:OWM

[2635] Jitendra Parmar, Satyendra Chouhan, Vaskar Raychoudhury, and Santosh Rathore. Open-world machine learning: Applications, challenges, and opportunities. *ACM Computing Surveys*, 55(10):205:1–205:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3561381.

Ibrahim:2023:ECN

[2636] Rami Ibrahim and M. Omair Shafiq. Explainable convolutional neural networks: a taxonomy, review, and future directions. *ACM Computing Surveys*, 55(10):206:1–206:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3563691.

Sun:2023:FFI

[2637] Ling Sun, Yuan Rao, Lianwei Wu, Xiangbo Zhang, Yuqian Lan, and Ambreen Nazir. Fighting false information from propagation process: a survey. *ACM Computing Surveys*, 55(10):207:1–207:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3563388.

Pasdar:2023:CAB

[2638] Amirmohammad Pasdar, Young Choon Lee, and Zhongli Dong. Connect API with blockchain: a survey on blockchain oracle implementation. *ACM Computing Surveys*, 55(10):208:1–208:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3567582.

Catania:2023:CAT

[2639] Fabio Catania, Micol Spitale, and Franca Garzotto. Conversational agents in therapeutic interventions for neurodevelopmental disorders: a survey. *ACM Computing Surveys*, 55(10):209:1–209:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3564269.

Gonnord:2023:SPD

[2640] Laure Gonnord, Ludovic Henrio, Lionel Morel, and Gabriel Radanne. A survey on parallelism and determinism. *ACM Computing Surveys*, 55(10):210:1–210:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3564529.

Sado:2023:EGD

[2641] Fatai Sado, Chu Kiong Loo, Wei Shiung Liew, Matthias Kerzel, and Stefan Wermter. Explainable goal-driven agents and robots — a comprehensive review. *ACM Computing Surveys*, 55(10):211:1–211:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3564240.

Chen:2023:SED

[2642] Jou-An Chen, Wei Niu, Bin Ren, Yanzhi Wang, and Xipeng Shen. Survey: Exploiting data redundancy for optimization of deep learning. *ACM Computing Surveys*, 55(10):212:1–212:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3564663.

Antonyshyn:2023:MMR

[2643] Luke Antonyshyn, Jefferson Silveira, Sidney Givigi, and Joshua Marshall. Multiple mobile robot task and motion planning: a survey. *ACM Computing Surveys*, 55(10):213:1–213:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3564696.

deOliveira:2023:VRS

[2644] Tainã Ribeiro de Oliveira, Brenda Biancardi Rodrigues, Matheus Moura da Silva, Rafael Antonio N. Spinassé, Gabriel Giesen Ludke, Mateus Ruy Soares Gaudio, Guilherme Iglesias Rocha Gomes, Luan Guio Cotini, Daniel da Silva Vargens, Marcelo Queiroz Schimidt, Rodrigo Varejão Andreão, and Mário Mestria. Virtual reality solutions employing artificial intelligence methods: a systematic literature review. *ACM Computing Surveys*, 55(10):214:1–214:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3565020.

Nafees:2023:SGC

[2645] Muhammad Nouman Nafees, Neetesh Saxena, Alvaro Cardenas, Santiago Grijalva, and Pete Burnap. Smart grid cyber-physical situational awareness of complex operational technology attacks: a review. *ACM Computing Surveys*, 55(10):215:1–215:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3565570.

Papagiannopoulos:2023:SCM

[2646] Kostas Papagiannopoulos, Ognjen Glamočanin, Melissa Azouaoui, Dorian Ros, Francesco Regazzoni, and Mirjana Stojilović. The side-channel metrics cheat sheet. *ACM Computing Surveys*, 55(10):216:1–216:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3565571.

Boulila:2023:WWP

[2647] Elyssa Boulila and Marc Dacier. WPAD: Waiting patiently for an announced disaster. *ACM Computing Surveys*, 55(10):217:1–217:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3565361.

Yuan:2023:SMS

[2648] Gongsheng Yuan, Jiaheng Lu, Zhengtong Yan, and Sai Wu. A survey on mapping semi-structured data and graph data to relational data. *ACM Computing Surveys*, 55(10):218:1–218:??, October 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3567444.

Georgoulias:2023:BBM

[2649] Dimitrios Georgoulias, Jens Myrup Pedersen, Morten Falch, and Emmanouil Vasilomanolakis. Botnet business models, takedown attempts, and the darkweb market: a survey. *ACM Computing Surveys*, 55(11):219:1–219:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3575808.

DiGrazia:2023:CSS

[2650] Luca Di Grazia and Michael Pradel. Code search: a survey of techniques for finding code. *ACM Computing Surveys*, 55(11):220:1–220:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3565971.

Viola:2023:SVN

[2651] Roberto Viola, Ángel Martín, Mikel Zorrilla, Jon Montalbán, Pablo Angueira, and Gabriel-Miro Muntean. A survey on virtual network functions for media streaming: Solutions and future challenges. *ACM Computing Surveys*, 55(11):221:1–221:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3567826.

Valero:2023:CEA

[2652] José María Jorquera Valero, Pedro Miguel Sánchez Sánchez, Manuel Gil Pérez, Alberto Huertas Celdrán, and Gregorio Martinez Perez. Cutting-edge assets for trust in 5G and beyond: Requirements, state of the art, trends, and challenges. *ACM Computing Surveys*, 55(11):222:1–222:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3572717.

Choudhary:2023:SSS

[2653] Priyankar Choudhary, Neeraj Goel, and Mukesh Saini. A survey on seismic sensor based target detection, localization, identification, and activity recognition. *ACM Computing Surveys*, 55(11):223:1–223:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3568671.

Abdelrahman:2023:KTS

[2654] Ghodai Abdelrahman, Qing Wang, and Bernardo Nunes. Knowledge tracing: a survey. *ACM Computing Surveys*, 55(11):224:1–224:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3569576.

Dann:2023:NRD

[2655] Jonas Dann, Daniel Ritter, and Holger Fröning. Non-relational databases on FPGAs: Survey, design decisions, challenges. *ACM Computing Surveys*, 55(11):225:1–225:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3568990.

Li:2023:PGD

[2656] Yang Li, Michael Purcell, Thierry Rakotoarivelo, David Smith, Thilina Ranbaduge, and Kee Siong Ng. Private graph data release: a survey. *ACM Computing Surveys*, 55(11):226:1–226:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3569085.

Picek:2023:SDL

[2657] Stjepan Picek, Guilherme Perin, Luca Mariot, Lichao Wu, and Lejla Batina. SoK: Deep learning-based physical side-channel analysis. *ACM Computing Surveys*, 55(11):227:1–227:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3569577.

Seifert:2023:HCA

[2658] Michael Seifert, Stephan Kuehnel, and Stefan Sackmann. Hybrid clouds arising from software as a service adoption: Challenges, solutions, and future research directions. *ACM Computing Surveys*, 55(11):228:1–228:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3570156.

Ranathunga:2023:NMT

[2659] Surangika Ranathunga, En-Shiun Annie Lee, Marjana Prifti Skenduli, Ravi Shekhar, Mehreen Alam, and Rishemjit Kaur. Neural machine translation for low-resource languages: a survey. *ACM Computing Surveys*, 55(11):229:1–229:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3567592.

Huang:2023:SRA

[2660] Bo Huang, Mengchu Zhou, Xiaoyu Sean Lu, and Abdullah Abusorrah. Scheduling of resource allocation systems with timed Petri nets: a survey. *ACM Computing Surveys*, 55(11):230:1–230:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3570326.

Chen:2023:CDW

[2661] Chen Chen, Gang Zhou, and Youfang Lin. Cross-domain WiFi sensing with channel state information: a survey. *ACM Computing Surveys*, 55(11):231:1–231:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3570325.

Li:2023:SSR

[2662] Ziqiang Li, Muhammad Usman, Rentuo Tao, Pengfei Xia, Chaoyue Wang, Huanhuan Chen, and Bin Li. A systematic survey of regularization and normalization in GANs. *ACM Computing Surveys*, 55(11):232:1–232:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3569928.

Mishra:2023:TLS

[2663] Rahul Mishra and Hari Gupta. Transforming large-size to lightweight deep neural networks for IoT applications. *ACM Computing Surveys*, 55(11):233:1–233:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3570955.

Jones:2023:PPU

[2664] Michael Jones, Soufiene Djahel, and Kristopher Welsh. Path-planning for unmanned aerial vehicles with environment complexity considerations: a survey. *ACM Computing Surveys*, 55(11):234:1–234:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3570723.

Shen:2023:FFR

[2665] Li-Hsiang Shen, Kai-Ten Feng, and Lajos Hanzo. Five facets of 6G: Research challenges and opportunities. *ACM Computing Surveys*, 55 (11):235:1–235:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3571072.

Legaard:2023:CNN

[2666] Christian Legaard, Thomas Schranz, Gerald Schweiger, Ján Drgoňa, Basak Falay, Cláudio Gomes, Alexandros Iosifidis, Mahdi Abkar, and Peter Larsen. Constructing neural network based models for simulating dynamical systems. *ACM Computing Surveys*, 55(11):236:1–236:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3567591.

Rajapaksha:2023:ABI

[2667] Sampath Rajapaksha, Harsha Kalutarage, M. Omar Al-Kadri, Andrei Petrovski, Garikayi Madzudzo, and Madeline Cheah. AI-Based intrusion detection systems for in-vehicle networks: a survey. *ACM Computing Surveys*, 55(11):237:1–237:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3570954.

Xu:2023:SDE

[2668] Jiahua Xu, Krzysztof Paruch, Simon Cousaert, and Yebo Feng. SoK: Decentralized exchanges (DEX) with automated market maker (AMM) protocols. *ACM Computing Surveys*, 55(11):238:1–238:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3570639.

Hijma:2023:OTG

[2669] Pieter Hijma, Stijn Heldens, Alessio Sclocco, Ben van Werkhoven, and Henri E. Bal. Optimization techniques for GPU programming. *ACM Computing Surveys*, 55(11):239:1–239:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3570638.

Zhu:2023:BEF

[2670] Juncen Zhu, Jiannong Cao, Divya Saxena, Shan Jiang, and Houda Ferradi. Blockchain-empowered federated learning: Challenges, solutions, and future directions. *ACM Computing Surveys*, 55(11):240:1–240:??, November 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3570953.

Rahman:2023:WAD

[2671] Md Rayhanur Rahman, Rezvan Mahdavi Hezaveh, and Laurie Williams. What are the attackers doing now? Automating cyberthreat intelligence extraction from text on pace with the changing threat landscape: a survey. *ACM Computing Surveys*, 55(12):241:1–241:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3571726.

Jeyaraj:2023:RMC

[2672] Rathinaraja Jeyaraj, Anandkumar Balasubramaniam, Ajay Kumara M. A., Nadra Guizani, and Anand Paul. Resource management in cloud and cloud-influenced technologies for Internet of Things applications. *ACM Computing Surveys*, 55(12):242:1–242:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3571729.

Rathi:2023:ENC

[2673] Nitin Rathi, Indranil Chakraborty, Adarsh Kosta, Abhronil Sengupta, Aayush Ankit, Priyadarshini Panda, and Kaushik Roy. Exploring neuromorphic computing based on spiking neural networks: Algorithms to hardware. *ACM Computing Surveys*, 55(12):243:1–243:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3571155.

Gao:2023:SSG

[2674] Jianhua Gao, Weixing Ji, Fangli Chang, Shiyu Han, Bingxin Wei, Zeming Liu, and Yizhuo Wang. A systematic survey of general sparse matrix–matrix multiplication. *ACM Computing Surveys*, 55(12):244:1–244:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3571157.

Zhang:2023:SPO

[2675] Yun Zhang, Linwei Zhu, Gangyi Jiang, Sam Kwong, and C.-C. Jay Kuo. A survey on perceptually optimized video coding. *ACM Computing Surveys*, 55(12):245:1–245:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3571727.

Dey:2023:PMC

[2676] Jayashree Dey and Ratna Dutta. Progress in multivariate cryptography: Systematic review, challenges, and research directions. *ACM Computing Surveys*, 55(12):246:1–246:??, December 2023. CODEN CMSVAN. ISSN

0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3571071.

Heidari:2023:MLA

[2677] Arash Heidari, Nima Jafari Navimipour, Mehmet Unal, and Guodao Zhang. Machine learning applications in Internet-of-Drones: Systematic review, recent deployments, and open issues. *ACM Computing Surveys*, 55(12):247:1–247:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3571728.

Ji:2023:SHN

[2678] Ziwei Ji, Nayeon Lee, Rita Frieske, Tiezheng Yu, Dan Su, Yan Xu, Etsuko Ishii, Ye Jin Bang, Andrea Madotto, and Pascale Fung. Survey of hallucination in natural language generation. *ACM Computing Surveys*, 55(12):248:1–248:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3571730.

Martinez:2023:CRS

[2679] Antonio López Martínez, Manuel Gil Pérez, and Antonio Ruiz-Martínez. A comprehensive review of the state-of-the-art on security and privacy issues in healthcare. *ACM Computing Surveys*, 55(12):249:1–249:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3571156.

Wu:2023:SDS

[2680] Caesar Wu, Rui Zhang, Ramamohanarao Kotagiri, and Pascal Bouvry. Strategic decisions: Survey, taxonomy, and future directions from artificial intelligence perspective. *ACM Computing Surveys*, 55(12):250:1–250:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3571807.

Buser:2023:SES

[2681] Maxime Buser, Rafael Dowsley, Muhammed Esgin, Clémentine Gritti, Shabnam Kasra Kermanshahi, Veronika Kuchta, Jason Legrow, Joseph Liu, Raphaël Phan, Amin Sakzad, Ron Steinfeld, and Jiangshan Yu. A survey on exotic signatures for post-quantum blockchain: Challenges and research directions. *ACM Computing Surveys*, 55(12):251:1–251:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3572771.

Damsgaard:2023:AOE

[2682] Hans Jakob Damsgaard, Aleksandr Ometov, and Jari Nurmi. Approximation opportunities in edge computing hardware: a systematic literature review. *ACM Computing Surveys*, 55(12):252:1–252:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3572772.

Catalyurek:2023:MRA

[2683] Ümit Çatalyürek, Karen Devine, Marcelo Faraj, Lars Gottesbüren, Tobias Heuer, Henning Meyerhenke, Peter Sanders, Sebastian Schlag, Christian Schulz, Daniel Seemaier, and Dorothea Wagner. More recent advances in (hyper)Graph partitioning. *ACM Computing Surveys*, 55 (12):253:1–253:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3571808.

Lin:2023:PIV

[2684] Weiwei Lin, Chennian Xiong, Wentai Wu, Fang Shi, Keqin Li, and Minxian Xu. Performance interference of virtual machines: a survey. *ACM Computing Surveys*, 55(12):254:1–254:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3573009.

Smith-Miles:2023:ISA

[2685] Kate Smith-Miles and Mario Andrés Muñoz. Instance space analysis for algorithm testing: Methodology and software tools. *ACM Computing Surveys*, 55(12):255:1–255:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3572895.

Kotti:2023:MLS

[2686] Zoe Kotti, Rafaila Galanopoulou, and Diomidis Spinellis. Machine learning for software engineering: a tertiary study. *ACM Computing Surveys*, 55(12):256:1–256:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3572905.

Sha:2023:DPG

[2687] Tong Sha, Wei Zhang, Tong Shen, Zhoujun Li, and Tao Mei. Deep person generation: a survey from the perspective of face, pose, and cloth synthesis. *ACM Computing Surveys*, 55(12):257:1–257:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3575656.

Xiang:2023:SID

[2688] Wei Xiang and Bang Wang. A survey of implicit discourse relation recognition. *ACM Computing Surveys*, 55(12):258:1–258:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3574134.

Menghani:2023:EDL

[2689] Gaurav Menghani. Efficient deep learning: a survey on making deep learning models smaller, faster, and better. *ACM Computing Surveys*, 55(12):259:1–259:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3578938.

Hertel:2023:DLT

[2690] Robert Hertel and Rachid Benlamri. Deep learning techniques for COVID-19 diagnosis and prognosis based on radiological imaging. *ACM Computing Surveys*, 55(12):260:1–260:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3576898.

Wang:2023:SDB

[2691] Qin Wang, Jiangshan Yu, Shiping Chen, and Yang Xiang. SoK: DAG-based blockchain systems. *ACM Computing Surveys*, 55(12):261:1–261:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3576899.

Zolfaghari:2023:CPD

[2692] Behrouz Zolfaghari, Leila Mirsadeghi, Khodakhast Bibak, and Kaveh Kavousi. Cancer prognosis and diagnosis methods based on ensemble learning. *ACM Computing Surveys*, 55(12):262:1–262:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3580218.

Wang:2023:WPM

[2693] Xiaojie Wang, Jiameng Li, Zhaolong Ning, Qingyang Song, Lei Guo, Song Guo, and Mohammad S. Obaidat. Wireless powered mobile edge computing networks: a survey. *ACM Computing Surveys*, 55(13s):263:1–263:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3579992.

Garg:2023:HBT

[2694] Tanmay Garg, Sarah Masud, Tharun Suresh, and Tanmoy Chakraborty. Handling bias in toxic speech detection: a survey. *ACM Computing Surveys*, 55(13s):264:1–264:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3580494`.

Cunha:2023:CSI

[2695] Washington Cunha, Felipe Viegas, Celso França, Thierson Rosa, Leonardo Rocha, and Marcos André Gonçalves. A comparative survey of instance selection methods applied to non-neural and transformer-based text classification. *ACM Computing Surveys*, 55(13s):265:1–265:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3582000`.

Liu:2023:COC

[2696] Mingyu Liu, Li Pan, and Shijun Liu. Cost optimization for cloud storage from user perspectives: Recent advances, taxonomy, and survey. *ACM Computing Surveys*, 55(13s):266:1–266:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3582883`.

Dalzochio:2023:PMM

[2697] Jovani Dalzochio, Rafael Kunst, Jorge Luis Victória Barbosa, Pedro Clarindo da Silva Neto, Edison Pignaton, Carla Schwengber ten Caten, and Alex de Lima Teodoro da Penha. Predictive maintenance in the military domain: a systematic review of the literature. *ACM Computing Surveys*, 55(13s):267:1–267:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3586100`.

Gonzalez-Sabbagh:2023:SUC

[2698] Salma P. González-Sabbagh and Antonio Robles-Kelly. A survey on underwater computer vision. *ACM Computing Surveys*, 55(13s):268:1–268:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3578516`.

deCarnavalet:2023:SAT

[2699] Xavier de Carné de Carnavalet and Paul C. van Oorschot. A survey and analysis of TLS interception mechanisms and motivations: Exploring how end-to-end TLS is made “end-to-me” for web traffic. *ACM Computing Surveys*, 55(13s):269:1–269:??, December 2023. CODEN CMSVAN.

ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3580522.

Das:2023:MSA

[2700] Ringki Das and Thoudam Doren Singh. Multimodal sentiment analysis: a survey of methods, trends, and challenges. *ACM Computing Surveys*, 55(13s):270:1–270:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3586075.

Song:2023:CSF

[2701] Yisheng Song, Ting Wang, Puyu Cai, Subrota K. Mondal, and Jyoti Prakash Sahoo. A comprehensive survey of few-shot learning: Evolution, applications, challenges, and opportunities. *ACM Computing Surveys*, 55(13s):271:1–271:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3582688.

Gammulle:2023:CHA

[2702] Harshala Gammulle, David Ahmedt-Aristizabal, Simon Denman, Lachlan Tychsen-Smith, Lars Petersson, and Clinton Fookes. Continuous human action recognition for human-machine interaction: a review. *ACM Computing Surveys*, 55(13s):272:1–272:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3587931.

Abbas:2023:SAE

[2703] Haider Abbas, Naina Emmanuel, Muhammad Faisal Amjad, Tahreem Yaqoob, Mohammed Atiquzzaman, Zafar Iqbal, Narmeen Shafqat, Waleed Bin Shahid, Ali Tanveer, and Umer Ashfaq. Security assessment and evaluation of VPNs: a comprehensive survey. *ACM Computing Surveys*, 55(13s):273:1–273:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3579162.

Greca:2023:SPA

[2704] Renan Greca, Breno Miranda, and Antonia Bertolino. State of practical applicability of regression testing research: a live systematic literature review. *ACM Computing Surveys*, 55(13s):274:1–274:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3579851.

Casadei:2023:MCS

[2705] Roberto Casadei. Macroprogramming: Concepts, state of the art, and opportunities of macroscopic behaviour modelling. *ACM Computing Surveys*, 55(13s):275:1–275:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3579353.

Lee:2023:REC

[2706] JunKyu Lee, Lev Mukhanov, Amir Sabbagh Molahosseini, Umar Minhas, Yang Hua, Jesus Martinez del Rincon, Kiril Dichev, Cheol-Ho Hong, and Hans Vandierendonck. Resource-efficient convolutional networks: a survey on model-, arithmetic-, and implementation-level techniques. *ACM Computing Surveys*, 55(13s):276:1–276:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3587095.

Andre:2023:FUS

[2707] Étienne André, Shuang Liu, Yang Liu, Christine Choppy, Jun Sun, and Jin Song Dong. Formalizing UML state machines for automated verification — a survey. *ACM Computing Surveys*, 55(13s):277:1–277:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3579821.

Xu:2023:SBC

[2708] Jie Xu, Cong Wang, and Xiaohua Jia. A survey of blockchain consensus protocols. *ACM Computing Surveys*, 55(13s):278:1–278:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3579845.

Gui:2023:CST

[2709] Jie Gui, Xiaofeng Cong, Yuan Cao, Wenqi Ren, Jun Zhang, Jing Zhang, Jiuxin Cao, and Dacheng Tao. A comprehensive survey and taxonomy on single image dehazing based on deep learning. *ACM Computing Surveys*, 55(13s):279:1–279:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3576918.

Veiga:2023:RAS

[2710] Tiago Veiga and Jennifer Renoux. From reactive to active sensing: a survey on information gathering in decision-theoretic planning. *ACM Computing Surveys*, 55(13s):280:1–280:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3583068.

Wang:2023:ECS

[2711] Tian Wang, Yuzhu Liang, Xuewei Shen, Xi Zheng, Adnan Mahmood, and Quan Z. Sheng. Edge computing and sensor-cloud: Overview, solutions, and directions. *ACM Computing Surveys*, 55(13s):281:1–281:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3582270.

Rajapakse:2023:IEE

[2712] Visal Rajapakse, Ishan Karunanayake, and Nadeem Ahmed. Intelligence at the extreme edge: a survey on reformable TinyML. *ACM Computing Surveys*, 55(13s):282:1–282:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3583683.

Kosch:2023:SMC

[2713] Thomas Kosch, Jakob Karolus, Johannes Zagermann, Harald Reiterer, Albrecht Schmidt, and Paweł W. Woźniak. A survey on measuring cognitive workload in human-computer interaction. *ACM Computing Surveys*, 55(13s):283:1–283:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3582272.

Starzynska-Grzes:2023:CVB

[2714] Małgorzata B. Starzyńska-Grześ, Robin Roussel, Sam Jacoby, and Ali Asadipour. Computer vision-based analysis of buildings and built environments: a systematic review of current approaches. *ACM Computing Surveys*, 55(13s):284:1–284:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3578552.

Liu:2023:AEP

[2715] Chang Liu and Han Yu. AI-empowered persuasive video generation: a survey. *ACM Computing Surveys*, 55(13s):285:1–285:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3588764.

Hasan:2023:PLP

[2716] Md Rezwan Hasan, Richard Guest, and Farzin Deravi. Presentation-level privacy protection techniques for automated face recognition — a survey. *ACM Computing Surveys*, 55(13s):286:1–286:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3583135.

Wang:2023:RAB

[2717] Xilu Wang, Yaochu Jin, Sebastian Schmitt, and Markus Olhofer. Recent advances in Bayesian optimization. *ACM Computing Surveys*, 55 (13s):287:1–287:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3582078.

Schiappa:2023:SSL

[2718] Madeline C. Schiappa, Yogesh S. Rawat, and Mubarak Shah. Self-supervised learning for videos: a survey. *ACM Computing Surveys*, 55 (13s):288:1–288:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3577925.

Guo:2023:RTT

[2719] Huihui Guo, Fan Wu, Yunchuan Qin, Ruihui Li, Keqin Li, and Kenli Li. Recent trends in task and motion planning for robotics: a survey. *ACM Computing Surveys*, 55(13s):289:1–289:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3583136.

Wang:2023:EBI

[2720] Gang Wang, Qin Wang, and Shiping Chen. Exploring blockchains interoperability: a systematic survey. *ACM Computing Surveys*, 55(13s): 290:1–290:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3582882.

Zhang:2023:RMM

[2721] Xiaojie Zhang and Saptarshi Debroy. Resource management in mobile edge computing: a comprehensive survey. *ACM Computing Surveys*, 55(13s):291:1–291:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3589639.

Sharma:2023:SMI

[2722] Yogesh Sharma, Deval Bhamare, Nishanth Sastry, Bahman Javadi, and Rajkumar Buyya. SLA management in intent-driven service management systems: a taxonomy and future directions. *ACM Computing Surveys*, 55(13s):292:1–292:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3589339.

Norambuena:2023:SEB

[2723] Brian Felipe Keith Norambuena, Tanushree Mitra, and Chris North. A survey on event-based news narrative extraction. *ACM Computing Surveys*, 55(14s):300:1–300:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3584741.

Zhong:2023:GDM

[2724] Zhiwei Zhong, Xianming Liu, Junjun Jiang, Debin Zhao, and Xiangyang Ji. Guided depth map super-resolution: a survey. *ACM Computing Surveys*, 55(14s):301:1–301:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3584860.

Kumar:2023:DFC

[2725] Vijay Kumar and Kolin Paul. Device fingerprinting for cyber-physical systems: a survey. *ACM Computing Surveys*, 55(14s):302:1–302:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3584944.

Chung:2023:IDE

[2726] Mu-Huan Chung, Yuhong Yang, Lu Wang, Greg Cento, Khilan Jerath, Abhay Raman, David Lie, and Mark H. Chignell. Implementing data exfiltration defense in situ: a survey of countermeasures and human involvement. *ACM Computing Surveys*, 55(14s):303:1–303:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3582077.

Fournier:2023:PSF

[2727] Quentin Fournier, Gaétan Marceau Caron, and Daniel Aloise. A practical survey on faster and lighter transformers. *ACM Computing Surveys*, 55 (14s):304:1–304:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3586074.

Olson:2023:DRI

[2728] Karl Olson, Jack Wampler, and Eric Keller. Doomed to repeat with IPv6? Characterization of NAT-centric security in SOHO routers. *ACM Computing Surveys*, 55(14s):305:1–305:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3586007.

Reghenzani:2023:SFT

[2729] Federico Reghenzani, Zhishan Guo, and William Fornaciari. Software fault tolerance in real-time systems: Identifying the future research questions. *ACM Computing Surveys*, 55(14s):306:1–306:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3589950.

Ding:2023:SAE

[2730] Jiepin Ding, Mingsong Chen, Ting Wang, Junlong Zhou, Xin Fu, and Keqin Li. A survey of AI-enabled dynamic manufacturing scheduling: From directed heuristics to autonomous learning. *ACM Computing Surveys*, 55(14s):307:1–307:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3590163.

Ihle:2023:IMP

[2731] Cornelius Ihle, Dennis Trautwein, Moritz Schubotz, Norman Meuschke, and Bela Gipp. Incentive mechanisms in peer-to-peer networks — a systematic literature review. *ACM Computing Surveys*, 55(14s):308:1–308:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3578581.

Carvalho:2023:SPP

[2732] Tânia Carvalho, Nuno Moniz, Pedro Faria, and Luís Antunes. Survey on privacy-preserving techniques for microdata publication. *ACM Computing Surveys*, 55(14s):309:1–309:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3588765.

Fulcini:2023:RTM

[2733] Tommaso Fulcini, Riccardo Coppola, Luca Ardito, and Marco Torchiano. A review on tools, mechanics, benefits, and challenges of gamified software testing. *ACM Computing Surveys*, 55(14s):310:1–310:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3582273.

Kalakanti:2023:CCA

[2734] Arun Kumar Kalakanti and Shrisha Rao. Computational challenges and approaches for electric vehicles. *ACM Computing Surveys*, 55(14s):311:1–311:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3582076.

Pittaras:2023:CBK

[2735] Nikiforos Pittaras, George Giannakopoulos, Panagiotis Stamatopoulos, and Vangelis Karkaletsis. Content-based and knowledge-enriched representations for classification across modalities: a survey. *ACM Computing Surveys*, 55(14s):312:1–312:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3583682`.

Breit:2023:CML

[2736] Anna Breit, Laura Waltersdorfer, Fajar J. Ekaputra, Marta Sabou, Andreas Ekelhart, Andreea Iana, Heiko Paulheim, Jan Portisch, Artem Revenko, Annette Ten Teije, and Frank Van Harmelen. Combining machine learning and semantic Web: a systematic mapping study. *ACM Computing Surveys*, 55(14s):313:1–313:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3586163`.

Al-Meer:2023:PUF

[2737] Abdulaziz Al-Meer and Saif Al-Kuwari. Physical unclonable functions (PUF) for IoT devices. *ACM Computing Surveys*, 55(14s):314:1–314:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3591464`.

Saini:2023:STR

[2738] Shalini Saini and Nitesh Saxena. A survey of threats to research literature-dependent medical AI solutions. *ACM Computing Surveys*, 55(14s):315:1–315:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3592597`.

Hammi:2023:STC

[2739] Badis Hammi, Sherali Zeadally, and Jamel Nebhen. Security threats, countermeasures, and challenges of digital supply chains. *ACM Computing Surveys*, 55(14s):316:1–316:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3588999`.

Storey:2023:CMT

[2740] Veda C. Storey, Roman Lukyanenko, and Arturo Castellanos. Conceptual modeling: Topics, themes, and technology trends. *ACM Computing Surveys*, 55(14s):317:1–317:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3589338`.

Dhelim:2023:DMD

[2741] Sahraoui Dhelim, Liming Chen, Sajal K. Das, Huansheng Ning, Chris Nugent, Gerard Leavey, Dirk Pesch, Eleanor Bantry-White, and Devin Burns. Detecting mental distresses using social behavior analysis in the context of COVID-19: a survey. *ACM Computing Surveys*, 55 (14s):318:1–318:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3589784.

Govers:2023:RHD

[2742] Jarod Govers, Philip Feldman, Aaron Dant, and Panos Patros. Down the rabbit hole: Detecting online extremism, radicalisation, and politicised hate speech. *ACM Computing Surveys*, 55(14s):319:1–319:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3583067.

Nurgalieva:2023:NRF

[2743] Leysan Nurgalieva, Alisa Frik, and Gavin Doherty. A narrative review of factors affecting the implementation of privacy and security practices in software development. *ACM Computing Surveys*, 55(14s):320:1–320:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3589951.

Pallewatta:2023:PMB

[2744] Samodha Pallewatta, Vassilis Kostakos, and Rajkumar Buyya. Placement of microservices-based IoT applications in fog computing: a taxonomy and future directions. *ACM Computing Surveys*, 55(14s): 321:1–321:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3592598.

Will:2023:ISG

[2745] Newton C. Will and Carlos A. Maziero. Intel Software Guard Extensions applications: a survey. *ACM Computing Surveys*, 55(14s):322:1–322:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3593021.

Pan:2023:DPS

[2746] Bofeng Pan, Natalia Stakhanova, and Suprio Ray. Data provenance in security and privacy. *ACM Computing Surveys*, 55(14s):323:1–323:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3593294.

Oliynyk:2023:KWY

[2747] Daryna Oliynyk, Rudolf Mayer, and Andreas Rauber. I know what you trained last summer: a survey on stealing machine learning models and defences. *ACM Computing Surveys*, 55(14s):324:1–324:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3595292.

Zoni:2023:SRT

[2748] Davide Zoni, Andrea Galimberti, and William Fornaciari. A survey on run-time power monitors at the edge. *ACM Computing Surveys*, 55 (14s):325:1–325:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3593044.

Ivanov:2023:STM

[2749] Nikolay Ivanov, Chenning Li, Qiben Yan, Zhiyuan Sun, Zhichao Cao, and Xiapu Luo. Security threat mitigation for smart contracts: a comprehensive survey. *ACM Computing Surveys*, 55(14s):326:1–326:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3593293.

Goknil:2023:SRD

[2750] Arda Goknil, Phu Nguyen, Sagar Sen, Dimitra Politaki, Harris Niavis, Karl John Pedersen, Abdillah Suyuthi, Abhilash Anand, and Amina Ziegenbein. A systematic review of data quality in CPS and IoT for Industry 4.0. *ACM Computing Surveys*, 55(14s):327:1–327:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3593043.

Han:2023:IAE

[2751] Sicong Han, Chenhao Lin, Chao Shen, Qian Wang, and Xiaohong Guan. Interpreting adversarial examples in deep learning: a review. *ACM Computing Surveys*, 55(14s):328:1–328:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3594869.

Zhang:2023:SOW

[2752] Xiao Zhang, Griffin Klevering, Xinyu Lei, Yiwen Hu, Li Xiao, and Guan-Hua Tu. The security in optical wireless communication: a survey. *ACM Computing Surveys*, 55(14s):329:1–329:??, December 2023. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3594718.

Klaiber:2024:DLV

[2753] Janice Klaiber and Clemens Van Dinther. Deep learning for variable renewable energy: a systematic review. *ACM Computing Surveys*, 56(1):1:1–1:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3586006`.

Coullon:2024:CBD

[2754] Héléne Coullon, Ludovic Henrio, Frédéric Loulergue, and Simon Robillard. Component-based distributed software reconfiguration: a verification-oriented survey. *ACM Computing Surveys*, 56(1):2:1–2:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3595376`.

Amanullah:2024:TAM

[2755] Mohamed Ahzam Amanullah, Seng W. Loke, Mohan Baruwal Chhetri, and Robin Doss. A taxonomy and analysis of misbehaviour detection in cooperative intelligent transport systems: a systematic review. *ACM Computing Surveys*, 56(1):3:1–3:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3596598`.

Houy:2024:SAC

[2756] Sabine Houy, Philipp Schmid, and Alexandre Bartel. Security aspects of cryptocurrency wallets — a systematic literature review. *ACM Computing Surveys*, 56(1):4:1–4:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3596906`.

Roy:2024:RQF

[2757] Prasenjeet Roy and Suman Kundu. Review on query-focused multi-document summarization (QMDS) with comparative analysis. *ACM Computing Surveys*, 56(1):5:1–5:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3597299`.

Vatter:2024:EDS

[2758] Jana Vatter, Ruben Mayer, and Hans-Arno Jacobsen. The evolution of distributed systems for graph neural networks and their origin in graph processing and deep learning: a survey. *ACM Computing Surveys*, 56(1):6:1–6:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3597428`.

Ji:2024:SDL

[2759] Shulei Ji, Xinyu Yang, and Jing Luo. A survey on deep learning for symbolic music generation: Representations, algorithms, evaluations, and challenges. *ACM Computing Surveys*, 56(1):7:1–7:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3597493.

Brcic:2024:IRA

[2760] Mario Brcic and Roman V. Yampolskiy. Impossibility results in AI: a survey. *ACM Computing Surveys*, 56(1):8:1–8:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3603371.

Xu:2024:MUS

[2761] Heng Xu, Tianqing Zhu, Lefeng Zhang, Wanlei Zhou, and Philip S. Yu. Machine unlearning: a survey. *ACM Computing Surveys*, 56(1):9:1–9:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3603620.

Zolfaghari:2024:SBL

[2762] Samaneh Zolfaghari, Sumaiya Suravee, Daniele Riboni, and Kristina Yordanova. Sensor-based locomotion data mining for supporting the diagnosis of neurodegenerative disorders: a survey. *ACM Computing Surveys*, 56(1):10:1–10:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3603495.

Zheng:2024:DLB

[2763] Ce Zheng, Wenhan Wu, Chen Chen, Taojiannan Yang, Sijie Zhu, Ju Shen, Nasser Kehtarnavaz, and Mubarak Shah. Deep learning-based human pose estimation: a survey. *ACM Computing Surveys*, 56(1):11:1–11:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3603618.

Hossain:2024:NLB

[2764] Bayzid Ashik Hossain, Md. Saddam Hossain Mukta, Md Adnanul Islam, Akib Zaman, and Rolf Schwitter. Natural language-based conceptual modelling frameworks: State of the art and future opportunities. *ACM Computing Surveys*, 56(1):12:1–12:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3596597.

Ning:2024:MEC

[2765] Zhaolong Ning, Hao Hu, Xiaojie Wang, Lei Guo, Song Guo, Guoyin Wang, and Xinbo Gao. Mobile edge computing and machine learning in the Internet of Unmanned Aerial Vehicles: a survey. *ACM Computing Surveys*, 56(1):13:1–13:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3604933.

Lien:2024:COB

[2766] Chi-Wei Lien and Sudip Vhaduri. Challenges and opportunities of biometric user authentication in the age of IoT: a survey. *ACM Computing Surveys*, 56(1):14:1–14:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3603705.

Liu:2024:SQC

[2767] Yaochen Liu, Qiuchi Li, Benyou Wang, Yazhou Zhang, and Dawei Song. A survey of quantum-cognitively inspired sentiment analysis models. *ACM Computing Surveys*, 56(1):15:1–15:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3604550.

Margara:2024:MSD

[2768] Alessandro Margara, Gianpaolo Cugola, Nicolò Felicioni, and Stefano Cilloni. A model and survey of distributed data-intensive systems. *ACM Computing Surveys*, 56(1):16:1–16:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3604801.

Zabihi:2024:RLM

[2769] Zeinab Zabihi, Amir Masoud Eftekhari Moghadam, and Mohammad Hossein Rezvani. Reinforcement learning methods for computation offloading: a systematic review. *ACM Computing Surveys*, 56(1):17:1–17:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3603703.

Parizotto:2024:OML

[2770] Ricardo Parizotto, Bruno Loureiro Coelho, Diego Cardoso Nunes, Israat Haque, and Alberto Schaeffer-Filho. Offloading machine learning to programmable data planes: a systematic survey. *ACM Computing Surveys*, 56(1):18:1–18:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3605153.

Fu:2024:DLM

[2771] Zhe Fu, Xi Niu, and Mary Lou Maher. Deep learning models for serendipity recommendations: a survey and new perspectives. *ACM Computing Surveys*, 56(1):19:1–19:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3605145.

Xu:2024:SDO

[2772] Rui Xu, Sheng Ma, Yang Guo, and Dongsheng Li. A survey of design and optimization for systolic array-based DNN accelerators. *ACM Computing Surveys*, 56(1):20:1–20:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3604802.

Xiao:2024:SAP

[2773] Guoqing Xiao, Chuanghui Yin, Tao Zhou, Xueqi Li, Yuedan Chen, and Kenli Li. A survey of accelerating parallel sparse linear algebra. *ACM Computing Surveys*, 56(1):21:1–21:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3604606.

Donoso:2024:SSP

[2774] Diego Donoso and Jose M. Saavedra. Survey on sketch-to-photo translation. *ACM Computing Surveys*, 56(1):22:1–22:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3606694.

Shen:2024:SNG

[2775] Zhishu Shen, Jiong Jin, Cheng Tan, Atsushi Tagami, Shangguang Wang, Qing Li, Qiushi Zheng, and Jingling Yuan. A survey of next-generation computing technologies in space-air-ground integrated networks. *ACM Computing Surveys*, 56(1):23:1–23:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3606018.

Antelmi:2024:SHR

[2776] Alessia Antelmi, Gennaro Cordasco, Mirko Polato, Vittorio Scarano, Carmine Spagnuolo, and Dingqi Yang. A survey on hypergraph representation learning. *ACM Computing Surveys*, 56(1):24:1–24:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3605776.

Kim:2024:BCS

[2777] Kisub Kim, Sankalp Ghatpande, Dongsun Kim, Xin Zhou, Kui Liu, Tegawendé F. Bissyandé, Jacques Klein, and Yves Le Traon. Big Code search: a bibliography. *ACM Computing Surveys*, 56(1):25:1–25:??, January 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3604905.

Badshah:2024:TSE

[2778] Afzal Badshah, Anwar Ghani, Ali Daud, Ateeqa Jalal, Muhammad Bilal, and Jon Crowcroft. Towards smart education through Internet of Things: a survey. *ACM Computing Surveys*, 56(2):26:1–26:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3610401.

Ehrmann:2024:NER

[2779] Maud Ehrmann, Ahmed Hamdi, Elvys Linhares Pontes, Matteo Romanello, and Antoine Doucet. Named entity recognition and classification in historical documents: a survey. *ACM Computing Surveys*, 56 (2):27:1–27:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3604931.

Brohet:2024:STM

[2780] Marco Brohet and Francesco Regazzoni. A survey on thwarting memory corruption in RISC-V. *ACM Computing Surveys*, 56(2):28:1–28:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3604906.

Alaei:2024:DIQ

[2781] Alireza Alaei, Vinh Bui, David Doermann, and Umapada Pal. Document image quality assessment: a survey. *ACM Computing Surveys*, 56(2):29:1–29:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3606692.

Min:2024:RAN

[2782] Bonan Min, Hayley Ross, Elior Sulem, Amir Pouran Ben Veyseh, Thien Huu Nguyen, Oscar Sainz, Eneko Agirre, Ilana Heintz, and Dan Roth. Recent advances in natural language processing via large pretrained language models: a survey. *ACM Computing Surveys*, 56(2):30:1–30:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3605943.

Besta:2024:DGD

[2783] Maciej Besta, Robert Gerstenberger, Emanuel Peter, Marc Fischer, Michał Podstawski, Claude Barthels, Gustavo Alonso, and Torsten Hoefler. Demystifying graph databases: Analysis and taxonomy of data organization, system designs, and graph queries. *ACM Computing Surveys*, 56(2):31:1–31:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3604932.

Pennekamp:2024:ISI

[2784] Jan Pennekamp, Roman Matzutt, Christopher Klinkmüller, Lennart Bader, Martin Serror, Eric Wagner, Sidra Malik, Maria Spiß, Jessica Rahn, Tan Gürpinar, Eduard Vlad, Sander J. J. Leemans, Salil S. Kanhere, Volker Stich, and Klaus Wehrle. An interdisciplinary survey on information flows in supply chains. *ACM Computing Surveys*, 56(2):32:1–32:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3606693.

Fujihashi:2024:SDS

[2785] Takuya Fujihashi, Toshiaki Koike-Akino, and Takashi Watanabe. Soft delivery: Survey on a new paradigm for wireless and mobile multimedia streaming. *ACM Computing Surveys*, 56(2):33:1–33:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3607139.

Lei:2024:EER

[2786] Yaxiong Lei, Shijing He, Mohamed Khamis, and Juan Ye. An end-to-end review of gaze estimation and its interactive applications on handheld mobile devices. *ACM Computing Surveys*, 56(2):34:1–34:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3606947.

Destras:2024:SAF

[2787] Oceane Destras, Sébastien Le Beux, Felipe Gohring De Magalhães, and Gabriela Nicolescu. Survey on activation functions for optical neural networks. *ACM Computing Surveys*, 56(2):35:1–35:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3607533.

Deldar:2024:DLZ

[2788] Fatemeh Deldar and Mahdi Abadi. Deep learning for zero-day malware detection and classification: a survey. *ACM Computing Surveys*, 56(2):36:1–36:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3605775.

Mehrpour:2024:STS

[2789] Sahar Mehrpour and Thomas D. Latoza. A survey of tool support for working with design decisions in code. *ACM Computing Surveys*, 56 (2):37:1–37:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3607868.

Roy:2024:TUP

[2790] Satyaki Roy, Nirnay Ghosh, Nitish Uplavikar, and Preetam Ghosh. Towards a unified pandemic management architecture: Survey, challenges, and future directions. *ACM Computing Surveys*, 56(2):38:1–38:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3609324.

Chen:2024:PFF

[2791] Huiqiang Chen, Tianqing Zhu, Tao Zhang, Wanlei Zhou, and Philip S. Yu. Privacy and fairness in federated learning: On the perspective of tradeoff. *ACM Computing Surveys*, 56(2):39:1–39:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3606017.

Amira:2024:SMA

[2792] Abdelouahab Amira, Abdelouahid Derhab, Elmouatez Billah Karbab, and Omar Nouali. A survey of malware analysis using community detection algorithms. *ACM Computing Surveys*, 56(2):40:1–40:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3610223.

Li:2024:SED

[2793] Nan Li, Lianbo Ma, Guo Yu, Bing Xue, Mengjie Zhang, and Yaochu Jin. Survey on evolutionary deep learning: Principles, algorithms, applications, and open issues. *ACM Computing Surveys*, 56(2):41:1–41:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3603704.

Ghasempouri:2024:SAA

[2794] Tara Ghasempouri, Jaan Raik, Cezar Reinbrecht, Said Hamdioui, and Mottaqiallah Taouil. Survey on architectural attacks: a unified classification and attack model. *ACM Computing Surveys*, 56(2):42:1–42:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3604803`.

Barrios:2024:SCC

[2795] Carlos Barrios and Mohan Kumar. Service caching and computation reuse strategies at the edge: a survey. *ACM Computing Surveys*, 56 (2):43:1–43:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3609504`.

Xu:2024:KGB

[2796] Rongxin Xu, Qiujun Lan, Shiva Raj Pokhrel, and Gang Li. A knowledge graph-based survey on distributed ledger technology for IoT verticals. *ACM Computing Surveys*, 56(2):44:1–44:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3609503`.

Yamout:2024:BSH

[2797] Youssef Yamout, Tashaffi Samin Yeasar, Shahrear Iqbal, and Mohammad Zulkernine. Beyond smart homes: an in-depth analysis of smart aging care system security. *ACM Computing Surveys*, 56(2):45:1–45:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3610225`.

Bez:2024:APH

[2798] Jean Luca Bez, Suren Byna, and Shadi Ibrahim. I/O access patterns in HPC applications: a 360-degree survey. *ACM Computing Surveys*, 56(2):46:1–46:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3611007`.

Buchner:2024:BII

[2799] Stefan Buchner and Dirk Riehle. The business impact of inner source and how to quantify it. *ACM Computing Surveys*, 56(2):47:1–47:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3611648`.

Amini:2024:WCD

[2800] Maryam Amini, Razvan Stanica, and Catherine Rosenberg. Where are the (cellular) data? *ACM Computing Surveys*, 56(2):48:1–48:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3610402`.

Debie:2024:SRS

[2801] Essam Debie, Kathryn Kasmarik, and Matt Garratt. Swarm robotics: a survey from a multi-tasking perspective. *ACM Computing Surveys*, 56(2):49:1–49:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3611652.

Sun:2024:CSC

[2802] Danfeng Sun, Junjie Hu, Huifeng Wu, Jia Wu, Jian Yang, Quan Z. Sheng, and Schahram Dustdar. A comprehensive survey on collaborative data-access enablers in the IIoT. *ACM Computing Surveys*, 56(2):50:1–50:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3612918.

Ameur:2024:SAH

[2803] Asma Ameur, Sana Hamdi, and Sadok Ben Yahia. Sentiment analysis for hotel reviews: a systematic literature review. *ACM Computing Surveys*, 56(2):51:1–51:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3605152.

Smith:2024:BRL

[2804] Benjamin Smith, Anahita Khojandi, and Rama Vasudevan. Bias in reinforcement learning: a review in healthcare applications. *ACM Computing Surveys*, 56(2):52:1–52:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3609502.

Schuerkamp:2024:EFC

[2805] Ryan Schuerkamp and Philippe J. Giabbanelli. Extensions of fuzzy cognitive maps: a systematic review. *ACM Computing Surveys*, 56(2):53:1–53:??, February 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3610771.

Guo:2024:FRT

[2806] Yulan Guo, Hanyun Wang, Longguang Wang, Yinjie Lei, Li Liu, and Mohammed Bennamoun. 3D face recognition: Two decades of progress and prospects. *ACM Computing Surveys*, 56(3):54:1–54:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3615863.

Wang:2024:PTL

[2807] Benyou Wang, Qianqian Xie, Jiahuan Pei, Zhihong Chen, Prayag Tiwari, Zhao Li, and Jie Fu. Pre-trained language models in biomedical domain: a systematic survey. *ACM Computing Surveys*, 56(3):55:1–55:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3611651`.

He:2024:TLM

[2808] Tianzhang He and Rajkumar Buyya. A taxonomy of live migration management in cloud computing. *ACM Computing Surveys*, 56(3):56:1–56:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3615353`.

Bringhenti:2024:ANS

[2809] Daniele Bringhenti, Guido Marchetto, Riccardo Sisto, and Fulvio Valenza. Automation for network security configuration: State of the art and research trends. *ACM Computing Surveys*, 56(3):57:1–57:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3616401`.

Amalfitano:2024:AIA

[2810] Domenico Amalfitano, Stefano Faralli, Jean Carlo Rossa Hauck, Santiago Matalonga, and Damiano Distante. Artificial intelligence applied to software testing: a tertiary study. *ACM Computing Surveys*, 56(3):58:1–58:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3616372`.

Queiroz:2024:CBV

[2811] Rui Queiroz, Tiago Cruz, Jérôme Mendes, Pedro Sousa, and Paulo Simões. Container-based virtualization for real-time industrial systems — a systematic review. *ACM Computing Surveys*, 56(3):59:1–59:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3617591`.

Qiu:2024:DLP

[2812] Guoying Qiu, Guoming Tang, Chuandong Li, Lailong Luo, Deke Guo, and Yulong Shen. Differentiated location privacy protection in mobile communication services: a survey from the semantic perception perspective. *ACM Computing Surveys*, 56(3):60:1–60:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3617589`.

Tan:2024:SDS

[2813] Kheng Leong Tan, Chi-Hung Chi, and Kwok-Yan Lam. Survey on digital sovereignty and identity: From digitization to digitalization. *ACM Computing Surveys*, 56(3):61:1–61:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3616400.

Ghandi:2024:DLA

[2814] Taraneh Ghandi, Hamidreza Pourreza, and Hamidreza Mahyar. Deep learning approaches on image captioning: a review. *ACM Computing Surveys*, 56(3):62:1–62:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3617592.

Wu:2024:SSK

[2815] Haiqin Wu, Boris Düdder, Liangmin Wang, Zhenfu Cao, Jun Zhou, and Xia Feng. Survey on secure keyword search over outsourced data: From cloud to blockchain-assisted architecture. *ACM Computing Surveys*, 56(3):63:1–63:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3617824.

Zhang:2024:SCT

[2816] Hanqing Zhang, Haolin Song, Shaoyu Li, Ming Zhou, and Dawei Song. A survey of controllable text generation using transformer-based pre-trained language models. *ACM Computing Surveys*, 56(3):64:1–64:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3617680.

Castro:2024:LHP

[2817] Oscar Castro, Pierrick Bruneau, Jean-Sébastien Sottet, and Dario Torregrossa. Landscape of high-performance Python to develop data science and machine learning applications. *ACM Computing Surveys*, 56(3):65:1–65:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3617588.

Meedeniya:2024:SDL

[2818] Dulani Meedeniya, Isuru Ariyarathne, Meelan Bandara, Roshinie Jayasundara, and Charith Perera. A survey on deep learning based forest environment sound classification at the edge. *ACM Computing Surveys*, 56(3):66:1–66:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3618104.

Jia:2024:TAD

[2819] Qi Jia, Yizhu Liu, Siyu Ren, and Kenny Q. Zhu. Taxonomy of abstractive dialogue summarization: Scenarios, approaches, and future directions. *ACM Computing Surveys*, 56(3):67:1–67:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3622933.

Hamissi:2024:SUA

[2820] Asma Hamissi and Amine Dhraief. A survey on the unmanned aircraft system traffic management. *ACM Computing Surveys*, 56(3):68:1–68:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3617992.

Jose-Garcia:2024:MBA

[2821] Adán José-García, Julie Jacques, Vincent Sobanski, and Clarisse Dhaenens. Metaheuristic biclustering algorithms: From state-of-the-art to future opportunities. *ACM Computing Surveys*, 56(3):69:1–69:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3617590.

Gemeinhardt:2024:QCO

[2822] Felix Gemeinhardt, Antonio Garmendia, Manuel Wimmer, Benjamin Weder, and Frank Leymann. Quantum combinatorial optimization in the NISQ era: a systematic mapping study. *ACM Computing Surveys*, 56(3):70:1–70:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3620668.

Mallissery:2024:DFM

[2823] Sanoop Mallissery and Yu-Sung Wu. Demystify the fuzzing methods: a comprehensive survey. *ACM Computing Surveys*, 56(3):71:1–71:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3623375.

Arora:2024:DHC

[2824] Arnav Arora, Preslav Nakov, Momchil Hardalov, Sheikh Muhammad Sarwar, Vibha Nayak, Yoan Dinkov, Dimitrina Zlatkova, Kyle Dent, Ameya Bhatawdekar, Guillaume Bouchard, and Isabelle Augenstein. Detecting harmful content on online platforms: What platforms need vs. where research efforts go. *ACM Computing Surveys*, 56(3):72:1–72:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3603399.

Christen:2024:RMH

[2825] Peter Christen, David J. Hand, and Nishadi Kirielle. A review of the F-measure: Its history, properties, criticism, and alternatives. *ACM Computing Surveys*, 56(3):73:1–73:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3606367.

Fiolhais:2024:TEA

[2826] Luís Fiolhais and Leonel Sousa. Transient-execution attacks: a computer architect perspective. *ACM Computing Surveys*, 56(3):74:1–74:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3603619.

Scotti:2024:PSM

[2827] Vincenzo Scotti, Licia Sbattella, and Roberto Tedesco. A primer on Seq2Seq models for generative chatbots. *ACM Computing Surveys*, 56(3):75:1–75:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3604281.

Unsal:2024:ITA

[2828] Ayse Ünsal and Melek Önen. Information-theoretic approaches to differential privacy. *ACM Computing Surveys*, 56(3):76:1–76:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3604904.

LaCava:2024:FRR

[2829] Simone Maurizio La Cava, Giulia Orrù, Martin Drahansky, Gian Luca Marcialis, and Fabio Roli. 3D face reconstruction: The road to forensics. *ACM Computing Surveys*, 56(3):77:1–77:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3625288.

Xia:2024:SUE

[2830] Xiaoyu Xia, Sheik Mohammad Mostakim Fattah, and Muhammad Ali Babar. A survey on UAV-enabled edge computing: Resource management perspective. *ACM Computing Surveys*, 56(3):78:1–78:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3626566.

Ye:2024:HFL

[2831] Mang Ye, Xiuwen Fang, Bo Du, Pong C. Yuen, and Dacheng Tao. Heterogeneous federated learning: State-of-the-art and research challenges. *ACM Computing Surveys*, 56(3):79:1–79:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3625558.

Xie:2024:CMN

[2832] Guoyang Xie, Yawen Huang, Jinbao Wang, Jiayi Lyu, Feng Zheng, Yefeng Zheng, and Yaochu Jin. Cross-modality neuroimage synthesis: a survey. *ACM Computing Surveys*, 56(3):80:1–80:??, March 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3625227.

Davis:2024:BAC

[2833] Ernest Davis. Benchmarks for automated commonsense reasoning: a survey. *ACM Computing Surveys*, 56(4):81:1–81:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3615355.

Hoffmann:2024:TID

[2834] Marcel André Hoffmann and Rainer Lasch. Tackling industrial downtimes with artificial intelligence in data-driven maintenance. *ACM Computing Surveys*, 56(4):82:1–82:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3623378.

Auda:2024:SSC

[2835] Jonas Auda, Uwe Gruenefeld, Sarah Faltaous, Sven Mayer, and Stefan Schneegass. A scoping survey on cross-reality systems. *ACM Computing Surveys*, 56(4):83:1–83:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3616536.

Diaz-de-Arcaya:2024:JSC

[2836] Josu Diaz de Arcaya, Ana I. Torre-Bastida, Gorka Zárate, Raúl Miñón, and Aitor Almeida. A joint study of the challenges, opportunities, and roadmap of MLOps and AIOps: a systematic survey. *ACM Computing Surveys*, 56(4):84:1–84:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3625289.

Patricio:2024:EDL

[2837] Cristiano Patrício, João C. Neves, and Luís F. Teixeira. Explainable deep learning methods in medical image classification: a survey. *ACM Computing Surveys*, 56(4):85:1–85:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3625287`.

Sambo:2024:WUS

[2838] Damien Wohwe Sambo and Anna Förster. Wireless underground sensor networks: a comprehensive survey and tutorial. *ACM Computing Surveys*, 56(4):86:1–86:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3625388`.

Deldjoo:2024:RMF

[2839] Yashar Deldjoo, Fatemeh Nazary, Arnau Ramisa, Julian McAuley, Giovanni Pellegrini, Alejandro Bellogin, and Tommaso Di Noia. A review of modern fashion recommender systems. *ACM Computing Surveys*, 56(4):87:1–87:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3624733`.

Ibrohim:2024:SAN

[2840] Muhammad Okky Ibrohim, Cristina Bosco, and Valerio Basile. Sentiment analysis for the natural environment: a systematic review. *ACM Computing Surveys*, 56(4):88:1–88:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3604605`.

Qin:2024:TLP

[2841] Meng Qin and Dit-Yan Yeung. Temporal link prediction: a unified framework, taxonomy, and review. *ACM Computing Surveys*, 56(4):89:1–89:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3625820`.

Xia:2024:SDG

[2842] Weihao Xia and Jing-Hao Xue. A survey on deep generative 3D-aware image synthesis. *ACM Computing Surveys*, 56(4):90:1–90:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3626193`.

Zhang:2024:GAN

[2843] Chenhan Zhang, Shui Yu, Zhiyi Tian, and James J. Q. Yu. Generative adversarial networks: a survey on attack and defense perspective. *ACM Computing Surveys*, 56(4):91:1–91:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3615336`.

Hu:2024:DMI

[2844] Li Hu, Anli Yan, Hongyang Yan, Jin Li, Teng Huang, Yingying Zhang, Changyu Dong, and Chunsheng Yang. Defenses to membership inference attacks: a survey. *ACM Computing Surveys*, 56(4):92:1–92:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3620667`.

Kapp:2024:GMS

[2845] Alexandra Kapp, Julia Hansmeyer, and Helena Mihaljević. Generative models for synthetic urban mobility data: a systematic literature review. *ACM Computing Surveys*, 56(4):93:1–93:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3610224`.

Zhong:2024:CSA

[2846] Lingfeng Zhong, Jia Wu, Qian Li, Hao Peng, and Xindong Wu. A comprehensive survey on automatic knowledge graph construction. *ACM Computing Surveys*, 56(4):94:1–94:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3618295`.

Moas:2024:AQA

[2847] Pedro Miguel Moás and Carla Teixeira Lopes. Automatic quality assessment of Wikipedia articles — a systematic literature review. *ACM Computing Surveys*, 56(4):95:1–95:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3625286`.

Habler:2024:AAS

[2848] Edan Habler, Ron Bitton, and Asaf Shabtai. Assessing aircraft security: a comprehensive survey and methodology for evaluation. *ACM Computing Surveys*, 56(4):96:1–96:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3610772`.

Marvasti-Zadeh:2024:EDB

[2849] S. Mojtaba Marvasti-Zadeh, Devin Goodsman, Nilanjan Ray, and Nadir Erbilgin. Early detection of bark beetle attack using remote sensing and machine learning: a review. *ACM Computing Surveys*, 56(4):97:1–97:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3625387.

DosAnjos:2024:SCL

[2850] Julio C. S. Dos Anjos, Kassiano J. Matteussi, Fernanda C. Orlandi, Jorge L. V. Barbosa, Jorge Sá Silva, Luiz F. Bittencourt, and Cláudio F. R. Geyer. A survey on collaborative learning for intelligent autonomous systems. *ACM Computing Surveys*, 56(4):98:1–98:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3625544.

Huawei:2024:ESM

[2851] Huang Huawei, Zhang Qinnan, Li Taotao, Yang Qinglin, Yin Zhaokang, Wu Junhao, Zehui Xiong, Zhu Jianming, Jiajing Wu, and Zibin Zheng. Economic systems in the metaverse: Basics, state of the art, and challenges. *ACM Computing Surveys*, 56(4):99:1–99:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3626315.

DeSouzaSantos:2024:DSC

[2852] Ronnie De Souza Santos, Paul Ralph, Arham Arshad, and Klaas-Jan Stol. Distributed scrum: a case meta-analysis. *ACM Computing Surveys*, 56(4):100:1–100:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3626519.

Rigaki:2024:SPA

[2853] Maria Rigaki and Sebastian Garcia. A survey of privacy attacks in machine learning. *ACM Computing Surveys*, 56(4):101:1–101:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3624010.

Paton:2024:DDE

[2854] Norman W. Paton, Jiaoyan Chen, and Zhenyu Wu. Dataset discovery and exploration: a survey. *ACM Computing Surveys*, 56(4):102:1–102:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3626521.

Su:2024:SSI

[2855] Zhipeng Su, Yixiong Zhang, Jianghong Shi, and Xiao-Ping Zhang. A survey of single image rain removal based on deep learning. *ACM Computing Surveys*, 56(4):103:1–103:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3625818`.

Rahman:2024:DCC

[2856] Akond Rahman, Dibyendu Brinto Bose, Farhat Lamia Barsha, and Rahul Pandita. Defect categorization in compilers: a multi-vocal literature review. *ACM Computing Surveys*, 56(4):104:1–104:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3626313`.

Yang:2024:DMC

[2857] Ling Yang, Zhilong Zhang, Yang Song, Shenda Hong, Runsheng Xu, Yue Zhao, Wentao Zhang, Bin Cui, and Ming-Hsuan Yang. Diffusion models: a comprehensive survey of methods and applications. *ACM Computing Surveys*, 56(4):105:1–105:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3626235`.

Wyrich:2024:YDC

[2858] Marvin Wyrich, Justus Bogner, and Stefan Wagner. 40 years of designing code comprehension experiments: a systematic mapping study. *ACM Computing Surveys*, 56(4):106:1–106:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3626522`.

Heinis:2024:SIE

[2859] Thomas Heinis, Roman Sokolovskii, and Jamie J. Alnasir. Survey of information encoding techniques for DNA. *ACM Computing Surveys*, 56(4):107:1–107:??, April 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3626233`.

Marani:2024:RST

[2860] Amin Hosseiny Marani and Eric P. S. Baumer. A review of stability in topic modeling: Metrics for assessing and techniques for improving stability. *ACM Computing Surveys*, 56(5):108:1–108:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3623269`.

Beyan:2024:CLH

[2861] Cigdem Beyan, Alessandro Vinciarelli, and Alessio Del Bue. Co-located human-human interaction analysis using nonverbal cues: a survey. *ACM Computing Surveys*, 56(5):109:1–109:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3626516.

Becker:2024:EXA

[2862] Artur Becker and Carla M. Dal Sasso Freitas. Evaluation of XR applications: a tertiary review. *ACM Computing Surveys*, 56(5):110:1–110:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3626517.

Fei:2024:SRI

[2863] Wen Fei, Hiroyuki Ohno, and Srinivas Sampalli. A systematic review of IoT security: Research potential, challenges, and future directions. *ACM Computing Surveys*, 56(5):111:1–111:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3625094.

Hu:2024:LRR

[2864] Xuke Hu, Zhiyong Zhou, Hao Li, Yingjie Hu, Fuqiang Gu, Jens Kersten, Hongchao Fan, and Friederike Klan. Location reference recognition from texts: a survey and comparison. *ACM Computing Surveys*, 56(5):112:1–112:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3625819.

Huang:2024:SDL

[2865] Qihan Huang, Haofei Zhang, Mengqi Xue, Jie Song, and Mingli Song. A survey of deep learning for low-shot object detection. *ACM Computing Surveys*, 56(5):113:1–113:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3626312.

Paananen:2024:DME

[2866] Ville Paananen, Mohammad Sina Kiarostami, Lee Lik-Hang, Tristan Braud, and Simo Hosio. From digital media to empathic spaces: a systematic review of empathy research in extended reality environments. *ACM Computing Surveys*, 56(5):114:1–114:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3626518.

Seyyedi:2024:MLP

[2867] Azra Seyyedi, Mahdi Bohlouli, and Seyedehsan Nedaaee Oskoee. Machine learning and physics: a survey of integrated models. *ACM Computing Surveys*, 56(5):115:1–115:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3611383`.

Li:2024:SCM

[2868] Johann Li, Guangming Zhu, Cong Hua, Mingtao Feng, Basheer Bennamoun, Ping Li, Xiaoyuan Lu, Juan Song, Peiyi Shen, Xu Xu, Lin Mei, Liang Zhang, Syed Afaq Ali Shah, and Mohammed Bennamoun. A systematic collection of medical image datasets for deep learning. *ACM Computing Surveys*, 56(5):116:1–116:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3615862`.

Mann:2024:TPS

[2869] Zoltán Ádám Mann, Christian Weinert, Daphnee Chabal, and Joppe W. Bos. Towards practical secure neural network inference: The journey so far and the road ahead. *ACM Computing Surveys*, 56(5):117:1–117:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3628446`.

Luo:2024:SCV

[2870] Jiayun Luo, Boyang Li, and Cyril Leung. A survey of computer vision technologies in urban and controlled-environment agriculture. *ACM Computing Surveys*, 56(5):118:1–118:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3626186`.

Li:2024:SSS

[2871] Feng Li, Jianfeng Ma, Yinbin Miao, Ximeng Liu, Jianting Ning, and Robert H. Deng. A survey on searchable symmetric encryption. *ACM Computing Surveys*, 56(5):119:1–119:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3617991`.

Jain:2024:CCA

[2872] Vaibhav Jain, Devendra Kumar Sharma, Hari Mohan Gaur, Ashutosh Kumar Singh, and Xiaoqing Wen. Comprehensive and comparative analysis of QCA-based circuit designs for next-generation computation. *ACM Computing Surveys*, 56(5):120:1–120:??, May 2024. CODEN CMSVAN.

ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3622932.

Ding:2024:CTF

[2873] Yujuan Ding, Zhihui Lai, P. Y. Mok, and Tat-Seng Chua. Computational technologies for fashion recommendation: a survey. *ACM Computing Surveys*, 56(5):121:1–121:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3627100.

Huang:2024:SCD

[2874] Bing Huang, Dipankar Chaki, Athman Bouguettaya, and Kwok-Yan Lam. A survey on conflict detection in IoT-based smart homes. *ACM Computing Surveys*, 56(5):122:1–122:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3629517.

Zhou:2024:RCA

[2875] Dawei Zhou and Jingrui He. Rare category analysis for complex data: a review. *ACM Computing Surveys*, 56(5):123:1–123:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3626520.

Khalid:2024:CSQ

[2876] Adnan Khalid, Zohaib Mushtaq, Saad Arif, Kamran Zeb, Muhammad Attique Khan, and Sambit Bakshi. Control schemes for quadrotor UAV: Taxonomy and survey. *ACM Computing Surveys*, 56(5):124:1–124:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3617652.

Hickling:2024:EDR

[2877] Thomas Hickling, Abdelhafid Zenati, Nabil Aouf, and Phillippa Spencer. Explainability in deep reinforcement learning: a review into current methods and applications. *ACM Computing Surveys*, 56(5):125:1–125:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3623377.

Chen:2024:BGB

[2878] Zhiqian Chen, Fanglan Chen, Lei Zhang, Taoran Ji, Kaiqun Fu, Liang Zhao, Feng Chen, Lingfei Wu, Charu Aggarwal, and Chang-Tien Lu. Bridging the gap between spatial and spectral domains: a unified framework for graph neural networks. *ACM Computing Surveys*, 56(5):126:1–

126:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3627816`.

Cheng:2024:DDC

[2879] Debo Cheng, Jiuyong Li, Lin Liu, Jixue Liu, and Thuc Duy Le. Data-driven causal effect estimation based on graphical causal modelling: a survey. *ACM Computing Surveys*, 56(5):127:1–127:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3636423`.

Villarreal-Narvaez:2024:BNG

[2880] Santiago Villarreal-Narvaez, Arthur Sluÿters, Jean Vanderdonckt, and Radu-Daniel Vatavu. Brave new GES world: a systematic literature review of gestures and referents in gesture elicitation studies. *ACM Computing Surveys*, 56(5):128:1–128:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3636458`.

Liao:2024:APG

[2881] Fangjian Liao, Xingxing Zou, and Waikeung Wong. Appearance and pose-guided human generation: a survey. *ACM Computing Surveys*, 56(5):129:1–129:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3637060`.

Li:2024:ECR

[2882] Shiwei Li, Huifeng Guo, Xing Tang, Ruiming Tang, Lu Hou, Ruixuan Li, and Rui Zhang. Embedding compression in recommender systems: a survey. *ACM Computing Surveys*, 56(5):130:1–130:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3637841`.

Kebande:2024:IIT

[2883] Victor R. Kebande and Ali Ismail Awad. Industrial Internet of Things ecosystems security and digital forensics: Achievements, open challenges, and future directions. *ACM Computing Surveys*, 56(5):131:1–131:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3635030`.

Jayasena:2024:DTG

[2884] Aruna Jayasena and Prabhat Mishra. Directed test generation for hardware validation: a survey. *ACM Computing Surveys*, 56(5):132:1–132:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3638046.

Gecer:2024:FLM

[2885] Melike Gecer and Benoit Garbinato. Federated learning for mobility applications. *ACM Computing Surveys*, 56(5):133:1–133:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3637868.

Zhang:2024:RCB

[2886] Gengrui Zhang, Fei Pan, Yunhao Mao, Sofia Tijanic, Michael Dang'ana, Shashank Motepalli, Shiquan Zhang, and Hans-Arno Jacobsen. Reaching consensus in the Byzantine empire: a comprehensive review of BFT consensus algorithms. *ACM Computing Surveys*, 56(5):134:1–134:??, May 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3636553.

Vincenzi:2024:SRS

[2887] Marco De Vincenzi, Gianpiero Costantino, Ilaria Matteucci, Florian Fenzl, Christian Plappert, Roland Rieke, and Daniel Zelle. A systematic review on security attacks and countermeasures in automotive Ethernet. *ACM Computing Surveys*, 56(6):135:1–135:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3637059.

Wong:2024:MHM

[2888] Andrew Wei-Loong Wong, Say Leng Goh, Mohammad Kamrul Hasan, and Salmah Fattah. Multi-hop and mesh for LoRa networks: Recent advancements, issues, and recommended applications. *ACM Computing Surveys*, 56(6):136:1–136:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3638241.

Liu:2024:BHV

[2889] Yanbin Liu, Girish Dwivedi, Farid Boussaid, and Mohammed Bennamoun. 3D brain and heart volume generative models: a survey. *ACM Computing Surveys*, 56(6):137:1–137:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3638044.

Li:2024:SRS

[2890] Yanjie Li, Bin Xie, Songtao Guo, Yuanyuan Yang, and Bin Xiao. A survey of robustness and safety of 2D and 3D deep learning models against adversarial attacks. *ACM Computing Surveys*, 56(6):138:1–138:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3636551.

Yang:2024:SBE

[2891] Changlin Yang, Kwan-Wu Chin, Jiguang Wang, Xiaodong Wang, Ying Liu, and Zibin Zheng. Scaling blockchains with error correction codes: a survey on coded blockchains. *ACM Computing Surveys*, 56(6):139:1–139:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3637224.

Islam:2024:SFI

[2892] Sk Maidul Islam, Subhankar Joardar, and Arif Ahmed Sekh. A survey on fashion image retrieval. *ACM Computing Surveys*, 56(6):140:1–140:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3636552.

Ahmadilivani:2024:SLR

[2893] Mohammad Hasan Ahmadilivani, Mahdi Taheri, Jaan Raik, Masoud Daneshtalab, and Maksim Jenihhin. A systematic literature review on hardware reliability assessment methods for deep neural networks. *ACM Computing Surveys*, 56(6):141:1–141:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3638242.

Falazi:2024:CCS

[2894] Ghareeb Falazi, Uwe Breitenbücher, Frank Leymann, and Stefan Schulte. Cross-chain smart contract invocations: a systematic multi-vocal literature review. *ACM Computing Surveys*, 56(6):142:1–142:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3638045.

Gomes:2024:SEN

[2895] João Eduardo Costa Gomes, Ricardo Rodrigues Ehlert, Rodrigo Murillo Boesche, Vinicius Santosde Lima, Jorgito Matiuzzi Stocchero, Dante A. C. Barone, JulianoAraujo Wickboldt, Edison Pignaton de Freitas, Julio C. S. dos Anjos, and Ricardo Queiroz de Araujo Fernandes. Surveying emerging network approaches for military command and control systems. *ACM Computing Surveys*, 56(6):143:1–143:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3626090.

Szymoniak:2024:KDA

[2896] Sabina Szymoniak. Key distribution and authentication protocols in wireless sensor networks: a survey. *ACM Computing Surveys*, 56 (6):144:1–144:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3638043.

Maniriho:2024:SRA

[2897] Pascal Maniriho, Abdun Naser Mahmood, and Mohammad Jabed Morshed Chowdhury. A survey of recent advances in deep learning models for detecting malware in desktop and mobile platforms. *ACM Computing Surveys*, 56(6):145:1–145:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3638240.

Ye:2024:DLW

[2898] Zhisheng Ye, Wei Gao, Qinghao Hu, Peng Sun, Xiaolin Wang, Yingwei Luo, Tianwei Zhang, and Yonggang Wen. Deep learning workload scheduling in GPU datacenters: a survey. *ACM Computing Surveys*, 56(6):146:1–146:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3638757.

Ghosheh:2024:SGA

[2899] Ghadeer O. Ghosheh, Jin Li, and Tingting Zhu. A survey of generative adversarial networks for synthesizing structured electronic health records. *ACM Computing Surveys*, 56(6):147:1–147:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3636424.

Gaber:2024:MDA

[2900] Matthew G. Gaber, Mohiuddin Ahmed, and Helge Janicke. Malware detection with artificial intelligence: a systematic literature review. *ACM Computing Surveys*, 56(6):148:1–148:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3638552.

Pato:2024:SRS

[2901] Matilde Pato, Márcia Barros, and Francisco M. Couto. Survey on recommender systems for biomedical items in life and health sciences. *ACM Computing Surveys*, 56(6):149:1–149:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3639047.

Razniewski:2024:CRN

[2902] Simon Razniewski, Hiba Arnaout, Shrestha Ghosh, and Fabian Suchanek. Completeness, recall, and negation in open-world knowledge bases: a survey. *ACM Computing Surveys*, 56(6):150:1–150:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3639563`.

Chen:2024:SML

[2903] Huaming Chen and M. Ali Babar. Security for machine learning-based software systems: a survey of threats, practices, and challenges. *ACM Computing Surveys*, 56(6):151:1–151:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3638531`.

Mo:2024:SPI

[2904] Kanghua Mo, Peigen Ye, Xiaojun Ren, Shaowei Wang, Wenjun Li, and Jin Li. Security and privacy issues in deep reinforcement learning: Threats and countermeasures. *ACM Computing Surveys*, 56(6):152:1–152:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3640312`.

Yao:2024:DLP

[2905] Jianping Yao, Son N. Tran, Saurabh Garg, and Samantha Sawyer. Deep learning for plant identification and disease classification from leaf images: Multi-prediction approaches. *ACM Computing Surveys*, 56(6):153:1–153:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3639816`.

Khan:2024:MDB

[2906] Simon Khan, Charles Devlen, Michael Manno, and Daqing Hou. Mouse dynamics behavioral biometrics: a survey. *ACM Computing Surveys*, 56(6):154:1–154:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3640311`.

Hughes:2024:ACC

[2907] Jack Hughes, Sergio Pastrana, Alice Hutchings, Sadia Afroz, Sagar Samtani, Weifeng Li, and Ericsson Santana Marin. The art of cybercrime community research. *ACM Computing Surveys*, 56(6):155:1–155:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3639362`.

Subagdja:2024:MLR

[2908] Budhitama Subagdja, D. Shanthoshigaa, Zhaoxia Wang, and Ah-Hwee Tan. Machine learning for refining knowledge graphs: a survey. *ACM Computing Surveys*, 56(6):156:1–156:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3640313.

Zahid:2024:MBT

[2909] Maryam Zahid, Alessio Bucaioni, and Francesco Flammini. Model-based trustworthiness evaluation of autonomous cyber-physical production systems: a systematic mapping study. *ACM Computing Surveys*, 56(6):157:1–157:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3640314.

Dou:2024:DDI

[2910] Mingliang Dou, Jijun Tang, Prayag Tiwari, Yijie Ding, and Fei Guo. Drug-drug interaction relation extraction based on deep learning: a review. *ACM Computing Surveys*, 56(6):158:1–158:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3645089.

Cao:2024:KGE

[2911] Jiahang Cao, Jinyuan Fang, Zaiqiao Meng, and Shangsong Liang. Knowledge graph embedding: a survey from the perspective of representation spaces. *ACM Computing Surveys*, 56(6):159:1–159:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3643806.

Becherer:2024:TRS

[2912] Marius Becherer, Omar Khadeer Hussain, Yu Zhang, Frank den Hartog, and Elizabeth Chang. On trust recommendations in the Social Internet of Things — a survey. *ACM Computing Surveys*, 56(6):160:1–160:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3645100.

Ciatto:2024:SKE

[2913] Giovanni Ciatto, Federico Sabbatini, Andrea Agiollo, Matteo Magnini, and Andrea Omicini. Symbolic knowledge extraction and injection with sub-symbolic predictors: a systematic literature review. *ACM Computing Surveys*, 56(6):161:1–161:??, June 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3645103.

Calegari:2024:ISI

[2914] Roberta Calegari, Fosca Giannotti, Francesca Pratesi, and Michela Milano. Introduction to special issue on trustworthy artificial intelligence. *ACM Computing Surveys*, 56(7):162:1–162:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3649452.

Zhang:2024:EBM

[2915] Peiyun Zhang, Song Ding, and Qinglin Zhao. Exploiting blockchain to make AI trustworthy: a software development lifecycle view. *ACM Computing Surveys*, 56(7):163:1–163:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3614424.

Conlon:2024:SAM

[2916] Nicholas Conlon, Nisar R. Ahmed, and Daniel Szafir. A survey of algorithmic methods for competency self-assessments in human-autonomy teaming. *ACM Computing Surveys*, 56(7):164:1–164:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3616010.

Xing:2024:NIM

[2917] Xiaodan Xing, Huanjun Wu, Lichao Wang, Iain Stenson, May Yong, Javier Del Ser, Simon Walsh, and Guang Yang. Non-imaging medical data synthesis for trustworthy AI: a comprehensive survey. *ACM Computing Surveys*, 56(7):165:1–165:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3614425.

Caton:2024:FML

[2918] Simon Caton and Christian Haas. Fairness in machine learning: a survey. *ACM Computing Surveys*, 56(7):166:1–166:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3616865.

Lorena:2024:TMP

[2919] Ana C. Lorena, Pedro Y. A. Paiva, and Ricardo B. C. Prudêncio. Trusting my predictions: On the value of instance-level analysis. *ACM Computing Surveys*, 56(7):167:1–167:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3615354.

Milani:2024:ERL

[2920] Stephanie Milani, Nicholay Topin, Manuela Veloso, and Fei Fang. Explainable reinforcement learning: a survey and comparative review. *ACM Computing Surveys*, 56(7):168:1–168:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3616864.

Guerraoui:2024:BML

[2921] Rachid Guerraoui, Nirupam Gupta, and Rafael Pinot. Byzantine machine learning: a primer. *ACM Computing Surveys*, 56(7):169:1–169:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3616537.

Qayyum:2024:STA

[2922] Adnan Qayyum, Muhammad Atif Butt, Hassan Ali, Muhammad Usman, Osama Halabi, Ala Al-Fuqaha, Qammer H. Abbasi, Muhammad Ali Imran, and Junaid Qadir. Secure and trustworthy artificial intelligence-extended reality (AI-XR) for metaverses. *ACM Computing Surveys*, 56(7):170:1–170:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3614426.

Prado-Romero:2024:SGC

[2923] Mario Alfonso Prado-Romero, Bardh Prenkaj, Giovanni Stilo, and Fosca Giannotti. A survey on graph counterfactual explanations: Definitions, methods, evaluation, and research challenges. *ACM Computing Surveys*, 56(7):171:1–171:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3618105.

Wan:2024:SDR

[2924] Zhijing Wan, Zhixiang Wang, Cheukting Chung, and Zheng Wang. A survey of dataset refinement for problems in computer vision datasets. *ACM Computing Surveys*, 56(7):172:1–172:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3627157.

Lu:2024:RAP

[2925] Qinghua Lu, Liming Zhu, Xiwei Xu, Jon Whittle, Didar Zowghi, and Aurelie Jacquet. Responsible AI pattern catalogue: a collection of best practices for AI governance and engineering. *ACM Computing Surveys*, 56(7):173:1–173:??, July 2024. CODEN CMSVAN. ISSN 0360-

0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3626234.

Xiong:2024:IAA

[2926] Peiyu Xiong, Michael Tegegn, Jaskeerat Singh Sarin, Shubhraneel Pal, and Julia Rubin. It is all about data: a survey on the effects of data on adversarial robustness. *ACM Computing Surveys*, 56(7):174:1–174:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3627817.

Chaalan:2024:PDR

[2927] Tarek Chaalan, Shaoning Pang, Joarder Kamruzzaman, Iqbal Gondal, and Xuyun Zhang. The path to defence: a roadmap to characterising data poisoning attacks on victim models. *ACM Computing Surveys*, 56(7):175:1–175:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3627536.

Perez-Cerrolaza:2024:AIS

[2928] Jon Perez-Cerrolaza, Jaume Abella, Markus Borg, Carlo Donzella, Jesús Cerquides, Francisco J. Cazorla, Cristofer Englund, Markus Tauber, George Nikolakopoulos, and Jose Luis Flores. Artificial intelligence for safety-critical systems in industrial and transportation domains: a survey. *ACM Computing Surveys*, 56(7):176:1–176:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3626314.

Zhao:2024:SRC

[2929] Chuanjun Zhao, Meiling Wu, Xinyi Yang, Wenyue Zhang, Shaoxia Zhang, Suge Wang, and Deyu Li. A systematic review of cross-lingual sentiment analysis: Tasks, strategies, and prospects. *ACM Computing Surveys*, 56(7):177:1–177:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3645106.

Zhang:2024:TSC

[2930] Jiliang Zhang, Congcong Chen, Jinhua Cui, and Keqin Li. Timing side-channel attacks and countermeasures in CPU microarchitectures. *ACM Computing Surveys*, 56(7):178:1–178:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3645109.

Heo:2024:BDS

[2931] Jun Wook Heo, Gowri Sankar Ramachandran, Ali Dorri, and Raja Jurdak. Blockchain data storage optimisations: a comprehensive survey. *ACM Computing Surveys*, 56(7):179:1–179:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3645104`.

Zhang:2024:SRD

[2932] Cheng Zhang, Bo Ou, Fei Peng, Yao Zhao, and Keqin Li. A survey on reversible data hiding for uncompressed images. *ACM Computing Surveys*, 56(7):180:1–180:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3645105`.

Bakhtiarnia:2024:EHR

[2933] Arian Bakhtiarnia, Qi Zhang, and Alexandros Iosifidis. Efficient high-resolution deep learning: a survey. *ACM Computing Surveys*, 56 (7):181:1–181:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3645107`.

Rodrigues:2024:SMS

[2934] Andrey Rodrigues, Maria Lúcia Villela, and Eduardo Feitosa. A systematic mapping study on social network privacy: Threats and solutions. *ACM Computing Surveys*, 56(7):182:1–182:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3645086`.

Niksirat:2024:WAT

[2935] Kavous Salehzadeh Niksirat, Lev Velykoivanenko, Noé Zufferey, Mauro Cherubini, Kévin Huguenin, and Mathias Humbert. Wearable activity trackers: a survey on utility, privacy, and security. *ACM Computing Surveys*, 56(7):183:1–183:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3645091`.

Methnani:2024:WCH

[2936] Leila Methnani, Manolis Chiou, Virginia Dignum, and Andreas Theodorou. Who's in charge here? A survey on trustworthy AI in variable autonomy robotic systems. *ACM Computing Surveys*, 56(7):184:1–184:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3645090`.

Wang:2024:UBI

[2937] Jiajia Wang, Jimmy Xiangji Huang, Xinhui Tu, Junmei Wang, Angela Jennifer Huang, Md Tahmid Rahman Laskar, and Amran Bhuiyan. Utilizing BERT for information retrieval: Survey, applications, resources, and challenges. *ACM Computing Surveys*, 56(7):185:1–185:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3648471.

Shahidinejad:2024:AIT

[2938] Ali Shahidinejad and Jemal Abawajy. An all-inclusive taxonomy and critical review of blockchain-assisted authentication and session key generation protocols for IoT. *ACM Computing Surveys*, 56(7):186:1–186:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3645087.

Zhou:2024:SEE

[2939] Lihua Zhou, Guowang Du, Kevin Lü, Lizheng Wang, and Jingwei Du. A survey and an empirical evaluation of multi-view clustering approaches. *ACM Computing Surveys*, 56(7):187:1–187:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3645108.

Gao:2024:GBX

[2940] Yuyang Gao, Siyi Gu, Junji Jiang, Sungsoo Ray Hong, Dazhou Yu, and Liang Zhao. Going beyond XAI: a systematic survey for explanation-guided learning. *ACM Computing Surveys*, 56(7):188:1–188:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3644073.

Liu:2024:GVA

[2941] Yang Liu, Dingkang Yang, Yan Wang, Jing Liu, Jun Liu, Azzedine Boukerche, Peng Sun, and Liang Song. Generalized video anomaly event detection: Systematic taxonomy and comparison of deep models. *ACM Computing Surveys*, 56(7):189:1–189:??, July 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3645101.

Yang:2024:IWS

[2942] Luyao Yang, Osama Amin, and Basem Shihada. Intelligent wearable systems: Opportunities and challenges in health and sports. *ACM Computing Surveys*, 56(7):190:1–190:??, July 2024. CODEN CMSVAN. ISSN

0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3648469.

Shao:2024:DGN

[2943] Yingxia Shao, Hongzheng Li, Xizhi Gu, Hongbo Yin, Yawen Li, Xupeng Miao, Wentao Zhang, Bin Cui, and Lei Chen. Distributed graph neural network training: a survey. *ACM Computing Surveys*, 56(8):191:1–191:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3648358.

Singh:2024:SNA

[2944] Shashank Sheshar Singh, Samya Muhuri, Shivansh Mishra, Divya Srivastava, Harish Kumar Shakya, and Neeraj Kumar. Social network analysis: a survey on process, tools, and application. *ACM Computing Surveys*, 56(8):192:1–192:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3648470.

Malhotra:2024:SLR

[2945] Ruchika Malhotra, Anjali Bansal, and Marouane Kessentini. A systematic literature review on maintenance of software containers. *ACM Computing Surveys*, 56(8):193:1–193:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3645092.

Kurzweg:2024:SHF

[2946] Marco Kurzweg, Yannick Weiss, Marc O. Ernst, Albrecht Schmidt, and Katrin Wolf. Survey on haptic feedback through sensory illusions in interactive systems. *ACM Computing Surveys*, 56(8):194:1–194:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3648353.

Jyothish:2024:SRP

[2947] K. J. Jyothish and Subhankar Mishra. A survey on robotic prosthetics: Neuroprosthetics, soft actuators, and control strategies. *ACM Computing Surveys*, 56(8):195:1–195:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3648355.

Alhidaifi:2024:SCR

[2948] Saleh Mohamed Alhidaifi, Muhammad Rizwan Asghar, and Imran Shafique Ansari. A survey on cyber resilience: Key strategies, research challenges, and future directions. *ACM Computing Surveys*, 56

(8):196:1–196:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3649218`.

Carrasco:2024:CTP

[2949] Karen Carrasco, Lenin Tomalá, Eileen Ramírez Meza, Doris Meza Bolaños, and Washington Ramírez Montalvan. Computational techniques in PET/CT image processing for breast cancer: a systematic mapping review. *ACM Computing Surveys*, 56(8):197:1–197:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3648359`.

Keizer:2024:SCR

[2950] Navin Keizer, Onur Ascigil, Michal Król, Dirk Kutscher, and George Pavlou. A survey on content retrieval on the decentralised Web. *ACM Computing Surveys*, 56(8):198:1–198:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3649132`.

Zhao:2024:SBA

[2951] Ying Zhao, Jia Tina Du, and Jinjun Chen. Scenario-based adaptations of differential privacy: a technical survey. *ACM Computing Surveys*, 56(8):199:1–199:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3651153`.

Barcelos:2024:CRN

[2952] Isabela Borlido Barcelos, Felipe De Castro Belém, Leonardo De Melo João, Zenilton K. G. Do Patrocínio, Alexandre Xavier Falcão, and Silvio Jamil Ferzoli Guimarães. A comprehensive review and new taxonomy on superpixel segmentation. *ACM Computing Surveys*, 56(8):200:1–200:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3652509`.

Jiang:2024:MNI

[2953] Weiwei Jiang, Jorge Goncalves, and Vassilis Kostakos. Mobile near-infrared sensing — a systematic review on devices, data, modeling, and applications. *ACM Computing Surveys*, 56(8):201:1–201:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3652596`.

Segovia-Ferreira:2024:SCR

[2954] Mariana Segovia-Ferreira, Jose Rubio-Hernan, Ana Cavalli, and Joaquin Garcia-Alfaro. A survey on cyber-resilience approaches for cyber-physical systems. *ACM Computing Surveys*, 56(8):202:1–202:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3652953`.

Zhang:2024:EMB

[2955] Bing Zhang, Xuyang Zhao, Jiangtian Nie, Jianhang Tang, Yuling Chen, Yang Zhang, and Dusit Niyato. Epidemic model-based network influential node ranking methods: a ranking rationality perspective. *ACM Computing Surveys*, 56(8):203:1–203:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3653296`.

Nowrozy:2024:PPE

[2956] Raza Nowrozy, Khandakar Ahmed, A. S. M. Kayes, Hua Wang, and Timothy R. McIntosh. Privacy preservation of electronic health records in the modern era: a systematic survey. *ACM Computing Surveys*, 56(8):204:1–204:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3653297`.

Elder:2024:SSV

[2957] Sarah Elder, Md Rayhanur Rahman, Gage Fringer, Kunal Kapoor, and Laurie Williams. A survey on software vulnerability exploitability assessment. *ACM Computing Surveys*, 56(8):205:1–205:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3648610`.

Oliveira:2024:RDP

[2958] Andre Rodrigues Oliveira, Klairton Lima Brito, Alexsandro Oliveira Alexandrino, Gabriel Siqueira, Ulisses Dias, and Zanoni Dias. Rearrangement distance problems: an updated survey. *ACM Computing Surveys*, 56(8):206:1–206:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3653295`.

Jain:2024:TSG

[2959] Shubhra Jain and Rahul Kumar Verma. A taxonomy and survey on grid-based routing protocols designed for wireless sensor networks. *ACM Computing Surveys*, 56(8):207:1–207:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3653315`.

Lanciano:2024:SDS

[2960] Tommaso Lanciano, Atsushi Miyauchi, Adriano Fazzone, and Francesco Bonchi. A survey on the densest subgraph problem and its variants. *ACM Computing Surveys*, 56(8):208:1–208:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3653298.

Masmoudi:2024:SDI

[2961] Maroua Masmoudi, Sana Ben Abdallah Ben Lamine, Mohamed Hedi Karray, Bernard Archimede, and Hajer Baazaoui Zghal. Semantic data integration and querying: a survey and challenges. *ACM Computing Surveys*, 56(8):209:1–209:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3653317.

Chafik:2024:CPM

[2962] Ahmed Amine Chafik, Jaafar Gaber, Souad Tayane, Mohamed Ennaji, Julien Bourgeois, and Tarek El Ghazawi. From conventional to programmable matter systems: a review of design, materials, and technologies. *ACM Computing Surveys*, 56(8):210:1–210:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3653671.

Lu:2024:RAA

[2963] Pengyuan Lu, Lin Zhang, Mengyu Liu, Kaustubh Sridhar, Oleg Sokolsky, Fanxin Kong, and Insup Lee. Recovery from adversarial attacks in cyber-physical systems: Shallow, deep, and exploratory works. *ACM Computing Surveys*, 56(8):211:1–211:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3653974.

Gray:2024:IAM

[2964] Jason Gray, Daniele Sgandurra, Lorenzo Cavallaro, and Jorge Blasco Alis. Identifying authorship in malicious binaries: Features, challenges & datasets. *ACM Computing Surveys*, 56(8):212:1–212:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3653973.

Saxena:2024:FAF

[2965] Akrati Saxena, George Fletcher, and Mykola Pechenizkiy. FairSNA: Algorithmic fairness in social network analysis. *ACM Computing Surveys*, 56(8):213:1–213:??, August 2024. CODEN CMSVAN. ISSN 0360-

0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3653711.

Angelogianni:2024:HMF

[2966] Anna Angelogianni, Ilias Politis, and Christos Xenakis. How many FIDO protocols are needed? Analysing the technology, security and compliance. *ACM Computing Surveys*, 56(8):214:1–214:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3654661.

Otoum:2024:MLM

[2967] Yazan Otoum, Navya Gottimukkala, Neeraj Kumar, and Amiya Nayak. Machine learning in Metaverse security: Current solutions and future challenges. *ACM Computing Surveys*, 56(8):215:1–215:??, August 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3654663.

Zhao:2024:DMD

[2968] Fei Zhao, Chengcui Zhang, and Baocheng Geng. Deep multimodal data fusion. *ACM Computing Surveys*, 56(9):216:1–216:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3649447.

Foumani:2024:DLT

[2969] Navid Mohammadi Foumani, Lynn Miller, Chang Wei Tan, Geoffrey I. Webb, Germain Forestier, and Mahsa Salehi. Deep learning for time series classification and extrinsic regression: a current survey. *ACM Computing Surveys*, 56(9):217:1–217:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3649448.

Hasan:2024:SSR

[2970] Monowar Hasan, Ashish Kashinath, Chien-Ying Chen, and Sibin Mohan. SoK: Security in real-time systems. *ACM Computing Surveys*, 56(9):218:1–218:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3649499.

Gajcin:2024:RCE

[2971] Jasmina Gajcin and Ivana Dusparic. Redefining counterfactual explanations for reinforcement learning: Overview, challenges and opportunities. *ACM Computing Surveys*, 56(9):219:1–219:??, September 2024. CODEN

CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3648472.

Du:2024:FSA

[2972] Kelvin Du, Frank Xing, Rui Mao, and Erik Cambria. Financial sentiment analysis: Techniques and applications. *ACM Computing Surveys*, 56(9):220:1–220:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3649451.

Li:2024:NIT

[2973] Na Li, Rui Zhou, Bharath Krishna, Ashirbad Pradhan, Hyowon Lee, Jiayuan He, and Ning Jiang. Non-invasive techniques for muscle fatigue monitoring: a comprehensive survey. *ACM Computing Surveys*, 56(9):221:1–221:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3648679.

Daniele:2024:FSS

[2974] Cristian Daniele, Seyed Behnam Andarzian, and Erik Poll. Fuzzers for stateful systems: Survey and research directions. *ACM Computing Surveys*, 56(9):222:1–222:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3648468.

Nguyen:2024:DLI

[2975] Kien Nguyen, Hugo Proença, and Fernando Alonso-Fernandez. Deep learning for iris recognition: a survey. *ACM Computing Surveys*, 56(9):223:1–223:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3651306.

Khadka:2024:RML

[2976] Anita Khadka, Saurav Sthapit, Gregory Epiphaniou, and Carsten Maple. Resilient machine learning: Advancement, barriers, and opportunities in the nuclear industry. *ACM Computing Surveys*, 56(9):224:1–224:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3648608.

Huo:2024:THO

[2977] Shuai Huo, Dong Liu, Haotian Zhang, Li Li, Siwei Ma, Feng Wu, and Wen Gao. Towards hybrid-optimization video coding. *ACM Computing Surveys*, 56(9):225:1–225:??, September 2024. CODEN CMSVAN. ISSN

0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3652148.

Ali:2024:CDD

[2978] Najah Abed Abu Ali, Mubashir Rehman, Shahid Mumtaz, Muhammad Bilal Khan, Mohammad Hayajneh, Farman Ullah, and Raza Ali Shah. Contactless diseases diagnoses using wireless communication sensing: Methods and challenges survey. *ACM Computing Surveys*, 56(9): 226:1–226:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3648352.

Singh:2024:SCE

[2979] Upendra Singh, Kumar Abhishek, and Hiteshwar Kumar Azad. A survey of cutting-edge multimodal sentiment analysis. *ACM Computing Surveys*, 56(9):227:1–227:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3652149.

Wang:2024:CDG

[2980] Shiyu Wang, Yuanqi Du, Xiaojie Guo, Bo Pan, Zhaohui Qin, and Liang Zhao. Controllable data generation by deep learning: a review. *ACM Computing Surveys*, 56(9):228:1–228:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3648609.

Truger:2024:WSQ

[2981] Felix Truger, Johanna Barzen, Marvin Bechtold, Martin Beisel, Frank Leymann, Alexander Mandl, and Vladimir Yussupov. Warm-starting and quantum computing: a systematic mapping study. *ACM Computing Surveys*, 56(9):229:1–229:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3652510.

Li:2024:PTL

[2982] Junyi Li, Tianyi Tang, Wayne Xin Zhao, Jian-Yun Nie, and Ji-Rong Wen. Pre-trained language models for text generation: a survey. *ACM Computing Surveys*, 56(9):230:1–230:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3649449.

Amaro:2024:DMK

[2983] Ricardo Amaro, Rúben Pereira, and Miguel Mira da Silva. DevOps metrics and KPIs: a multivocal literature review. *ACM Computing Sur-*

veys, 56(9):231:1–231:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3652508.

Luo:2024:LIE

[2984] Siwen Luo, Hamish Ivison, Soyeon Caren Han, and Josiah Poon. Local interpretations for explainable natural language processing: a survey. *ACM Computing Surveys*, 56(9):232:1–232:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3649450.

Sultana:2024:DDR

[2985] Saima Sultana, Muhammad Mansoor Alam, Mazliham Mohd Su'ud, Jawahir Che Mustapha, and Mukesh Prasad. A deep dive into robot vision — an integrative systematic literature review methodologies and research endeavor practices. *ACM Computing Surveys*, 56(9):233:1–233:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3648357.

Pioli:2024:IEP

[2986] Laércio Pioli, Douglas D. J. de Macedo, Daniel G. Costa, and Mario A. R. Dantas. Intelligent edge-powered data reduction: a systematic literature review. *ACM Computing Surveys*, 56(9):234:1–234:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3656338.

Li:2024:OAT

[2987] Weiqi Li. Optimizing with attractor: a tutorial. *ACM Computing Surveys*, 56(9):235:1–235:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3648354.

Jung:2024:TMB

[2988] Gyuwon Jung, Sangjun Park, Eun-Yeol Ma, Heeyoung Kim, and Uichin Lee. Tutorial on matching-based causal analysis of human behaviors using smartphone sensor data. *ACM Computing Surveys*, 56(9):236:1–236:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3648356.

Alhakamy:2024:ERX

[2989] A'aeshah Alhakamy. Extended reality (XR) toward building immersive solutions: The key to unlocking Industry 4.0. *ACM Computing Surveys*, 56(9):237:1–237:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3652595.

Cheng:2024:ITD

[2990] Pau-Chen Cheng, Wojciech Ozga, Enriquillo Valdez, Salman Ahmed, Zhongshu Gu, Hani Jamjoom, Hubertus Franke, and James Bottomley. Intel TDX demystified: a top-down approach. *ACM Computing Surveys*, 56(9):238:1–238:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3652597.

Biancofiore:2024:IQA

[2991] Giovanni Maria Biancofiore, Yashar Deldjoo, Tommaso Di Noia, Eugenio Di Sciascio, and Fedelucio Narducci. Interactive question answering systems: Literature review. *ACM Computing Surveys*, 56(9):239:1–239:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3657631.

Wang:2024:HFR

[2992] Lingyun Wang, Hanlin Zhou, Yinwei Bao, Xiaoran Yan, Guojiang Shen, and Xiangjie Kong. Horizontal federated recommender system: a survey. *ACM Computing Surveys*, 56(9):240:1–240:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3656165.

Priya:2024:CPN

[2993] Priyanshu Priya, Mauajama Firdaus, and Asif Ekbal. Computational politeness in natural language processing: a survey. *ACM Computing Surveys*, 56(9):241:1–241:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3654660.

Xu:2024:EBT

[2994] Minghui Xu, Yihao Guo, Chunchi Liu, Qin Hu, Dongxiao Yu, Zehui Xiong, Dusit (Tao) Niyato, and Xiuzhen Cheng. Exploring blockchain technology through a modular lens: a survey. *ACM Computing Surveys*, 56(9):242:1–242:??, September 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3657288.

Gaudreault:2024:SLR

[2995] Jean-Gabriel Gaudreault and Paula Branco. A systematic literature review of novelty detection in data streams: Challenges and opportunities.

ACM Computing Surveys, 56(10):243:1–243:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3657286.

Lai:2024:SAG

[2996] Huiyuan Lai and Malvina Nissim. A survey on automatic generation of figurative language: From rule-based systems to large language models. *ACM Computing Surveys*, 56(10):244:1–244:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3654795.

Wang:2024:ISC

[2997] Xiaojie Wang, Qi Guo, Zhaolong Ning, Lei Guo, Guoyin Wang, Xinbo Gao, and Yan Zhang. Integration of sensing, communication, and computing for metaverse: a survey. *ACM Computing Surveys*, 56(10):245:1–245:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3659946.

Novo:2024:NPN

[2998] Alvaro Novo, Francisco Lobon, Hector Garcia de Marina, Samuel Romero, and Francisco Barranco. Neuromorphic perception and navigation for mobile robots: a review. *ACM Computing Surveys*, 56(10):246:1–246:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3656469.

Shen:2024:AIW

[2999] Meng Shen, Zhehui Tan, Dusit Niyato, Yuzhi Liu, Jiawen Kang, Zehui Xiong, Liehuang Zhu, Wei Wang, and Xuemin (Sherman) Shen. Artificial intelligence for Web 3.0: a comprehensive survey. *ACM Computing Surveys*, 56(10):247:1–247:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3657284.

Sponner:2024:ANN

[3000] Max Sponner, Bernd Waschneck, and Akash Kumar. Adapting neural networks at runtime: Current trends in at-runtime optimizations for deep learning. *ACM Computing Surveys*, 56(10):248:1–248:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3657283.

Li:2024:SSD

[3001] Juncheng Li, Zehua Pei, Wenjie Li, Guangwei Gao, Longguang Wang, Yingqian Wang, and Tieyong Zeng. A systematic survey of deep learning-based single-image super-resolution. *ACM Computing Surveys*, 56(10):249:1–249:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3659100.

Hadan:2024:DIS

[3002] Hilda Hadan, Lydia Choong, Leah Zhang-Kennedy, and Lennart E. Nacke. Deceived by immersion: a systematic analysis of deceptive design in extended reality. *ACM Computing Surveys*, 56(10):250:1–250:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3659945.

Adil:2024:UAI

[3003] Muhammad Adil, Houbing Song, Mian Ahmad Jan, Muhammad Khurram Khan, Xiangjian He, Ahmed Farouk, and Zhanpeng Jin. UAV-assisted IoT applications, QoS requirements and challenges with future research directions. *ACM Computing Surveys*, 56(10):251:1–251:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3657287.

Mashayekhi:2024:CBS

[3004] Yoosof Mashayekhi, Nan Li, Bo Kang, Jefrey Lijffijt, and Tijl De Bie. A challenge-based survey of e-recruitment recommendation systems. *ACM Computing Surveys*, 56(10):252:1–252:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3659942.

Mvula:2024:SAS

[3005] Paul Kiyambu Mvula, Paula Branco, Guy-Vincent Jourdan, and Herna Lydia Viktor. A survey on the applications of semi-supervised learning to cyber-security. *ACM Computing Surveys*, 56(10):253:1–253:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3657647.

Maciel:2024:SIT

[3006] Rita Suzana Pitangueira Maciel, Pedro Henrique Dias Valle, Kécia Souza Santos, and Elisa Yumi Nakagawa. Systems interoperability types: a tertiary study. *ACM Computing Surveys*, 56(10):254:1–254:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3659098.

Sarafraz:2024:DAG

[3007] Gita Sarafraz, Armin Behnamnia, Mehran Hosseinzadeh, Ali Balapour, Amin Meghrazi, and Hamid R. Rabiee. Domain adaptation and generalization of functional medical data: a systematic survey of brain data. *ACM Computing Surveys*, 56(10):255:1–255:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3654664.

Souza:2024:MOC

[3008] Paulo Souza, Tiago Ferreto, and Rodrigo Calheiros. Maintenance operations on cloud, edge, and IoT environments: Taxonomy, survey, and research challenges. *ACM Computing Surveys*, 56(10):256:1–256:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3659097.

Halvorsen:2024:AGM

[3009] James Halvorsen, Clemente Izurieta, Haipeng Cai, and Assefaw Gebremedhin. Applying generative machine learning to intrusion detection: a systematic mapping study and review. *ACM Computing Surveys*, 56(10):257:1–257:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3659575.

Jiang:2024:BFL

[3010] Yanna Jiang, Baihe Ma, Xu Wang, Guangsheng Yu, Ping Yu, Zhe Wang, Wei Ni, and Ren Ping Liu. Blockchained federated learning for Internet of Things: a comprehensive survey. *ACM Computing Surveys*, 56(10):258:1–258:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3659099.

Tsoukas:2024:RET

[3011] Vasileios Tsoukas, Anargyros Gkogkidis, Eleni Boumpa, and Athanasios Kakarountas. A review on the emerging technology of TinyML. *ACM Computing Surveys*, 56(10):259:1–259:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3661820.

AlMarshoud:2024:SPD

[3012] Mishri AlMarshoud, Mehmet Sabir Kiraz, and Ali H. Al-Bayatti. Security, privacy, and decentralized trust management in VANETs: a review of current research and future directions. *ACM Computing Surveys*, 56(10):260:1–260:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3656166.

Huang:2024:DAR

[3013] Jiani Huang, Haihua Chen, Fengchang Yu, and Wei Lu. From detection to application: Recent advances in understanding scientific tables and figures. *ACM Computing Surveys*, 56(10):261:1–261:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3657285.

Wu:2024:TAF

[3014] Jiajun Wu, Fan Dong, Henry Leung, Zhuangdi Zhu, Jiayu Zhou, and Steve Drew. Topology-aware federated learning in edge computing: a comprehensive survey. *ACM Computing Surveys*, 56(10):262:1–262:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3659205.

Chehreghani:2024:RID

[3015] Mostafa Haghir Chehreghani. A review on the impact of data representation on model explainability. *ACM Computing Surveys*, 56(10):263:1–263:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3662178.

Liang:2024:FTM

[3016] Paul Pu Liang, Amir Zadeh, and Louis-Philippe Morency. Foundations & trends in multimodal machine learning: Principles, challenges, and open questions. *ACM Computing Surveys*, 56(10):264:1–264:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3656580.

Sharma:2024:SGN

[3017] Kartik Sharma, Yeon-Chang Lee, Sivagami Nambi, Aditya Salian, Shlok Shah, Sang-Wook Kim, and Srijan Kumar. A survey of graph neural networks for social recommender systems. *ACM Computing Surveys*, 56(10):265:1–265:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3661821.

Sandeepa:2024:SPP

[3018] Chamara Sandeepa, Bartlomiej Siniarski, Nicolas Kourtellis, Shen Wang, and Madhusanka Liyanage. A survey on privacy of personal and non-personal data in B5G/6G networks. *ACM Computing Surveys*, 56

(10):266:1–266:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3662179.

Liu:2024:LDL

[3019] Hou-I Liu, Marco Galindo, Hongxia Xie, Lai-Kuan Wong, Hong-Han Shuai, Yung-Hui Li, and Wen-Huang Cheng. Lightweight deep learning for resource-constrained environments: a survey. *ACM Computing Surveys*, 56(10):267:1–267:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3657282.

Liang:2024:SVA

[3020] Shangsong Liang, Zhou Pan, wei liu, Jian Yin, and Maarten de Rijke. A survey on variational autoencoders in recommender systems. *ACM Computing Surveys*, 56(10):268:1–268:??, October 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3663364.

Pasuksmit:2024:SLR

[3021] Jirat Pasuksmit, Patanamon Thongtanunam, and Shanika Karunasekera. A systematic literature review on reasons and approaches for accurate effort estimations in agile. *ACM Computing Surveys*, 56(11):269:1–269:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3663365.

Heuillet:2024:EAN

[3022] Alexandre Heuillet, Ahmad Nasser, Hichem Arioui, and Hedi Tabia. Efficient automation of neural network design: a survey on differentiable neural architecture search. *ACM Computing Surveys*, 56(11):270:1–270:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3665138.

Paproki:2024:SDD

[3023] Anthony Paproki, Olivier Salvado, and Clinton Fookes. Synthetic data for deep learning in computer vision & medical imaging: a means to reduce data bias. *ACM Computing Surveys*, 56(11):271:1–271:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3663759.

Nunez-Molina:2024:RSS

[3024] Carlos Núñez-Molina, Pablo Mesejo, and Juan Fernández-Olivares. A review of symbolic, subsymbolic and hybrid methods for sequential decision making. *ACM Computing Surveys*, 56(11):272:1–272:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3663366.

Liang:2024:SMM

[3025] Wanying Liang, Pasquale De Meo, Yong Tang, and Jia Zhu. A survey of multi-modal knowledge graphs: Technologies and trends. *ACM Computing Surveys*, 56(11):273:1–273:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3656579.

Selwon:2024:REF

[3026] Karolina Selwon and Julian Szymański. A review of explainable fashion compatibility modeling methods. *ACM Computing Surveys*, 56 (11):274:1–274:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3664614.

Venkatesha:2024:SRB

[3027] Shashikiran Venkatesha and Ranjani Parthasarathi. Survey on redundancy based-fault tolerance methods for processors and hardware accelerators — trends in quantum computing, heterogeneous systems and reliability. *ACM Computing Surveys*, 56(11):275:1–275:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3663672.

Tewell:2024:ROD

[3028] Jordan Tewell and Nimesha Ranasinghe. A review of olfactory display designs for virtual reality environments. *ACM Computing Surveys*, 56 (11):276:1–276:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3665243.

Mozaffari:2024:STD

[3029] Maryam Mozaffari, Anton Dignös, Johann Gamper, and Uta Störl. Self-tuning database systems: a systematic literature review of automatic database schema design and tuning. *ACM Computing Surveys*, 56(11):277:1–277:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3665323.

Bilot:2024:SMD

[3030] Tristan Bilot, Nour El Madhoun, Khaldoun Al Agha, and Anis Zouaoui. A survey on malware detection with graph representation learning.

ACM Computing Surveys, 56(11):278:1–278:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3664649.

Jia:2024:HIG

[3031] Zhen Jia, Zhang Zhang, Liang Wang, and Tieniu Tan. Human image generation: a comprehensive survey. *ACM Computing Surveys*, 56(11):279:1–279:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3665869.

Gupta:2024:FPS

[3032] Ankur Gupta, Sahil Sawhney, and Kashyap Kompella. The first principles: Setting the context for a safe and secure metaverse. *ACM Computing Surveys*, 56(11):280:1–280:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3665495.

Mo:2024:MLC

[3033] Fan Mo, Zahra Tarkhani, and Hamed Haddadi. Machine learning with confidential computing: a systematization of knowledge. *ACM Computing Surveys*, 56(11):281:1–281:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3670007.

Periti:2024:LSC

[3034] Francesco Periti and Stefano Montanelli. Lexical semantic change through large language models: a survey. *ACM Computing Surveys*, 56(11):282:1–282:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3672393.

Franceschelli:2024:CML

[3035] Giorgio Franceschelli and Mirco Musolesi. Creativity and machine learning: a survey. *ACM Computing Surveys*, 56(11):283:1–283:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3664595.

Biswas:2024:YFS

[3036] Nilotpal Biswas, Anamitra Mukherjee, and Samit Bhattacharya. "Are you feeling sick?" — a systematic literature review of cybersickness in virtual reality. *ACM Computing Surveys*, 56(11):284:1–284:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3670008.

COMPSURV-257000017

[3037] Luís Manuel Meruje Ferreira, Fabio Coelho, and José Pereira. Databases in edge and fog environments: a survey. *ACM Computing Surveys*, 56 (11):285:1–285:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3666001.

Zolfaghari:2024:SUD

[3038] Behrouz Zolfaghari, Mostafa Abbasmollaei, Fahimeh Hajizadeh, Naoto Yanai, and Khodakhast Bibak. Secure UAV (drone) and the great promise of AI. *ACM Computing Surveys*, 56(11):286:1–286:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3673225.

Dash:2024:ABA

[3039] Adyasha Dash and Kathleen Agres. AI-based affective music generation systems: a review of methods and challenges. *ACM Computing Surveys*, 56(11):287:1–287:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3672554.

Wang:2024:RPE

[3040] Yiming Wang, Bin Zhang, and Lamei Di. Research progress of EEG-based emotion recognition: a survey. *ACM Computing Surveys*, 56 (11):288:1–288:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3666002.

Woodgate:2024:MEP

[3041] Jessica Woodgate and Nirav Ajmeri. Macro ethics principles for responsible AI systems: Taxonomy and directions. *ACM Computing Surveys*, 56(11):289:1–289:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3672394.

Sharma:2024:ICE

[3042] Debendra Das Sharma, Robert Blankenship, and Daniel Berger. An introduction to the Compute Express Link (CXL) interconnect. *ACM Computing Surveys*, 56(11):290:1–290:??, November 2024. CODEN

CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3669900.

Ribeiro:2024:OCL

[3043] Fabio De Sousa Ribeiro, Kevin Duarte, Miles Everett, Georgios Leontidis, and Mubarak Shah. Object-centric learning with capsule networks: a survey. *ACM Computing Surveys*, 56(11):291:1–291:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3674500.

Hartwig:2024:LUC

[3044] Katrin Hartwig, Frederic Doell, and Christian Reuter. The landscape of user-centered misinformation interventions — a systematic literature review. *ACM Computing Surveys*, 56(11):292:1–292:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3674724.

Zhao:2024:CSR

[3045] Xiaoyan Zhao, Yang Deng, Min Yang, Lingzhi Wang, Rui Zhang, Hong Cheng, Wai Lam, Ying Shen, and Ruifeng Xu. A comprehensive survey on relation extraction: Recent advances and new frontiers. *ACM Computing Surveys*, 56(11):293:1–293:??, November 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3674501.

Gharoun:2024:MLA

[3046] Hassan Gharoun, Fereshteh Momenifar, Fang Chen, and Amir Gandomi. Meta-learning approaches for few-shot learning: a survey of recent advances. *ACM Computing Surveys*, 56(12):294:1–294:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3659943.

Chen:2024:MTL

[3047] Shijie Chen, Yu Zhang, and Qiang Yang. Multi-task learning in natural language processing: an overview. *ACM Computing Surveys*, 56 (12):295:1–295:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3663363.

Leng:2024:RAA

[3048] Jiaxu Leng, Yongming Ye, Mengjingcheng Mo, Chenqiang Gao, Ji Gan, Bin Xiao, and Xinbo Gao. Recent advances for aerial object detection: a survey. *ACM Computing Surveys*, 56(12):296:1–296:??, December 2024.

CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3664598.

Yu:2024:VT

[3049] Bruce X. B. Yu, Jianlong Chang, Haixin Wang, Lingbo Liu, Shijie Wang, Zhiyu Wang, Junfan Lin, Lingxi Xie, Haojie Li, Zhouchen Lin, Qi Tian, and Chang Wen Chen. Visual tuning. *ACM Computing Surveys*, 56 (12):297:1–297:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3657632.

Liang:2024:ITS

[3050] Wei Liang, Yaqin Liu, Ce Yang, Songyou Xie, Kuanching Li, and Willy Susilo. On identity, transaction, and smart contract privacy on permissioned and permissionless blockchain: a comprehensive survey. *ACM Computing Surveys*, 56(12):298:1–298:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3676164.

Abideen:2024:OFI

[3051] Zain Ul Abideen, Sumathi Gokulanathan, Muayad J. Aljafar, and Samuel Pagliarini. An overview of FPGA-inspired obfuscation techniques. *ACM Computing Surveys*, 56(12):299:1–299:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3677118.

Kruger:2024:MSS

[3052] Jacob Krüger, Yi Li, Kirill Lossev, Chenguang Zhu, Marsha Chechik, Thorsten Berger, and Julia Rubin. A meta-study of software-change intentions. *ACM Computing Surveys*, 56(12):300:1–300:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3661484.

Seaborn:2024:QAV

[3053] Katie Seaborn, Jaqueline Urakami, Peter Pennefather, and Norihisa Miyake. Qualitative approaches to voice UX. *ACM Computing Surveys*, 56(12):301:1–301:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3658666.

deSouzaBatista:2024:SRI

[3054] Agnaldo de Souza Batista and Aldri Luiz Dos Santos. A survey on resilience in information sharing on networks: Taxonomy and applied techniques. *ACM Computing Surveys*, 56(12):302:1–302:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3659944.

Nkrow:2024:NIM

[3055] Raphael Elikplim Nkrow, Bruno Silva, Dutliff Boshoff, Gerhard Hancke, Mikael Gidlund, and Adnan Abu-Mahfouz. NLOS identification and mitigation for time-based indoor localization systems: Survey and future research directions. *ACM Computing Surveys*, 56(12):303:1–303:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3663473.

Yu:2024:NLR

[3056] Fei Yu, Hongbo Zhang, Prayag Tiwari, and Benyou Wang. Natural language reasoning, a survey. *ACM Computing Surveys*, 56(12): 304:1–304:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3664194.

Kasem:2024:DLT

[3057] Mahmoud Salaheldin Kasem, Abdelrahman Abdallah, Alexander Berendeyev, Ebrahem Elkady, Mohamed Mahmoud, Mahmoud Abdalla, Mohamed Hamada, Sebastiano Vascon, Daniyar Nurseitov, and Islam Taj-Eddin. Deep learning for table detection and structure recognition: a survey. *ACM Computing Surveys*, 56(12):305:1–305:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3657281.

Ji:2024:URD

[3058] Shaoxiong Ji, Xiaobo Li, Wei Sun, Hang Dong, Ara Taalas, Yijia Zhang, Honghan Wu, Esa Pitkänen, and Pekka Marttinen. A unified review of deep learning for automated medical coding. *ACM Computing Surveys*, 56(12):306:1–306:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3664615.

Wang:2024:MSS

[3059] Huandong Wang, Huan Yan, Can Rong, Yuan Yuan, Fenyu Jiang, Zhenyu Han, Hongjie Sui, Depeng Jin, and Yong Li. Multi-scale simulation of complex systems: a perspective of integrating knowledge and data. *ACM Computing Surveys*, 56(12):307:1–307:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3654662.

Ravi:2024:MZE

[3060] Nirupama Ravi, C. Mani Krishna, and Israel Koren. Mix-zones as an effective privacy enhancing technique in mobile and vehicular ad-hoc networks. *ACM Computing Surveys*, 56(12):308:1–308:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3659576.

Wan:2024:DLC

[3061] Yao Wan, Zhangqian Bi, Yang He, Jianguo Zhang, Hongyu Zhang, Yulei Sui, Guandong Xu, Hai Jin, and Philip Yu. Deep learning for code intelligence: Survey, benchmark and toolkit. *ACM Computing Surveys*, 56(12):309:1–309:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3664597.

Melzi:2024:OPE

[3062] Pietro Melzi, Christian Rathgeb, Ruben Tolosana, Ruben Vera-Rodriguez, and Christoph Busch. An overview of privacy-enhancing technologies in biometric recognition. *ACM Computing Surveys*, 56 (12):310:1–310:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3664596.

Zhao:2024:SHI

[3063] Lianying Zhao, He Shuang, Shengjie Xu, Wei Huang, Rongzhen Cui, Pushkar Bettadpur, and David Lie. A survey of hardware improvements to secure program execution. *ACM Computing Surveys*, 56(12): 311:1–311:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3672392.

Verma:2024:CEA

[3064] Sahil Verma, Varich Boonsanong, Minh Hoang, Keegan Hines, John Dickerson, and Chirag Shah. Counterfactual explanations and algorithmic recourses for machine learning: a review. *ACM Computing Surveys*, 56(12):312:1–312:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3677119.

Silva:2024:CSB

[3065] Miguel G. Silva, Sara C. Madeira, and Rui Henriques. A comprehensive survey on biclustering-based collaborative filtering. *ACM Computing*

Surveys, 56(12):313:1–313:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3674723.

Saqib:2024:CAE

[3066] Mohd Saqib, Samaneh Mahdavifar, Benjamin C. M. Fung, and Philippe Charland. A comprehensive analysis of explainable AI for malware hunting. *ACM Computing Surveys*, 56(12):314:1–314:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3677374.

Rajapaksha:2024:DLB

[3067] Uchitha Rajapaksha, Ferdous Sohel, Hamid Laga, Dean Diepeveen, and Mohammed Bennamoun. Deep learning-based depth estimation methods from monocular image and videos: a comprehensive survey. *ACM Computing Surveys*, 56(12):315:1–315:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3677327.

Zhang:2024:SFH

[3068] Junxue Zhang, Xiaodian Cheng, Liu Yang, Jinbin Hu, Ximeng Liu, and Kai Chen. SoK: Fully homomorphic encryption accelerators. *ACM Computing Surveys*, 56(12):316:1–316:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3676955.

Xu:2024:VUD

[3069] Yuecong Xu, Haozhi Cao, Lihua Xie, Xiao li Li, Zhenghua Chen, and Jianfei Yang. Video unsupervised domain adaptation with deep learning: a comprehensive survey. *ACM Computing Surveys*, 56(12):317:1–317:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3679010.

Mandler:2024:RBF

[3070] Hannes Mandler and Bernhard Weigand. A review and benchmark of feature importance methods for neural networks. *ACM Computing Surveys*, 56(12):318:1–318:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3679012.

Chen:2024:WFL

[3071] Jingxue Chen, Hang Yan, Zhiyuan Liu, Min Zhang, Hu Xiong, and Shui Yu. When federated learning meets privacy-preserving computation.

ACM Computing Surveys, 56(12):319:1–319:??, December 2024. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3679013.

Mazaheri:2025:SSP

[3072] Hakimeh Mazaheri, Salman Goli, and Ali Nourollah. A survey of 3D space path-planning methods and algorithms. *ACM Computing Surveys*, 57(1):1:1–1:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3673896.

Liu:2025:SFU

[3073] Ziyao Liu, Yu Jiang, Jiyuan Shen, Minyi Peng, Kwok-Yan Lam, Xingliang Yuan, and Xiaoning Liu. A survey on federated unlearning: Challenges, methods, and future directions. *ACM Computing Surveys*, 57(1):2:1–2:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3679014.

Nguyen:2025:MRS

[3074] Thanh Toan Nguyen, Nguyen Quoc Viet hung, Thanh Tam Nguyen, Thanh Trung Huynh, Thanh Thi Nguyen, Matthias Weidlich, and Hongzhi Yin. Manipulating recommender systems: a survey of poisoning attacks and countermeasures. *ACM Computing Surveys*, 57(1):3:1–3:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3677328.

Rong:2025:ISO

[3075] Can Rong, Jingtao Ding, and Yong Li. An interdisciplinary survey on origin-destination flows modeling: Theory and techniques. *ACM Computing Surveys*, 57(1):4:1–4:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3682058.

Ashraf:2025:ETT

[3076] Imran Ashraf, Yousaf Bin Zikria, Sahil Garg, Soojung Hur, Yongwan Park, and Mohsen Guizani. Enabling technologies and techniques for floor identification. *ACM Computing Surveys*, 57(1):5:1–5:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3678878.

Amarasinghe:2025:DFS

[3077] Chamath Amarasinghe and Nimesha Ranasinghe. Digital food sensing and ingredient analysis techniques to facilitate human-food interface designs. *ACM Computing Surveys*, 57(1):6:1–6:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3685675.

Khraisat:2025:SFL

[3078] Ansam Khraisat, Ammar Alazab, Sarabjot Singh, Tony Jan, and Alfredo Jr. Gomez. Survey on federated learning for intrusion detection system: Concept, architectures, aggregation strategies, challenges, and future directions. *ACM Computing Surveys*, 57(1):7:1–7:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3687124.

Zhao:2025:CSE

[3079] Yao Zhao, Youyang Qu, Yong Xiang, Md Palash Uddin, Dezhong Peng, and Longxiang Gao. A comprehensive survey on edge data integrity verification: Fundamentals and future trends. *ACM Computing Surveys*, 57(1):8:1–8:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3680277.

T:2025:HIV

[3080] Gayathri T. and Mamatha HR. How to improve video analytics with action recognition: a survey. *ACM Computing Surveys*, 57(1):9:1–9:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3679011.

Cao:2025:CMR

[3081] Longbing Cao and Qing Liu. COVID-19 modeling: a review. *ACM Computing Surveys*, 57(1):10:1–10:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3686150.

Goedegebuure:2025:DMS

[3082] Abel Goedegebuure, Indika Kumara, Stefan Driessen, Willem-Jan Van Den Heuvel, Geert Monsieur, Damian Andrew Tamburri, and Dario Di Nucci. Data mesh: a systematic gray literature review. *ACM Computing Surveys*, 57(1):11:1–11:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3687301.

Al-Sada:2025:MAS

[3083] Bader Al-Sada, Alireza Sadighian, and Gabriele Oligeri. MITRE ATT&CK: State of the art and way forward. *ACM Computing Sur-*

veys, 57(1):12:1–12:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3687300`.

Razzaq:2025:SLR

[3084] Abdul Razzaq, Jim Buckley, Qin Lai, Tingting Yu, and Goetz Botterweck. A systematic literature review on the influence of enhanced developer experience on developers' productivity: Factors, practices, and recommendations. *ACM Computing Surveys*, 57(1):13:1–13:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3687299`.

Kasmarik:2025:CAH

[3085] Kathryn Kasmarik, Mahtab Khani, Shadi Abpeikar, Michael Barlow, Olivia Carter, and Muireann Irish. Competence awareness for humans and machines: a survey and future research directions from psychology. *ACM Computing Surveys*, 57(1):14:1–14:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3689626`.

Darban:2025:DLT

[3086] Zahra Zamanzadeh Darban, Geoffrey I. Webb, Shirui Pan, Charu Aggarwal, and Mahsa Salehi. Deep learning for time series anomaly detection: a survey. *ACM Computing Surveys*, 57(1):15:1–15:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3691338`.

Sharief:2025:MCI

[3087] Farhana Sharief, Humaira Ijaz, Mohammad Shojafar, and Muhammad Asif Naeem. Multi-class imbalanced data handling with concept drift in fog computing: a taxonomy, review, and future directions. *ACM Computing Surveys*, 57(1):16:1–16:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3689627`.

Banerjee:2025:PIC

[3088] Chayan Banerjee, Kien Nguyen, Clinton Fookes, and Karniadakis George. Physics-informed computer vision: a review and perspectives. *ACM Computing Surveys*, 57(1):17:1–17:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3689037`.

McIntosh:2025:RRR

[3089] Timothy McIntosh, Teo Susnjak, Tong Liu, Dan Xu, Paul Watters, Dongwei Liu, Yaqi Hao, Alex Ng, and Malka Halgamuge. Ransomware reloaded: Re-examining its trend, research and mitigation in the era of data exfiltration. *ACM Computing Surveys*, 57(1):18:1–18:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3691340.

Pecher:2025:SSL

[3090] Branislav Pecher, Ivan Srba, and Maria Bielikova. A survey on stability of learning with limited labelled data and its sensitivity to the effects of randomness. *ACM Computing Surveys*, 57(1):19:1–19:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3691339.

Badjie:2025:AAC

[3091] Bakary Badjie, José Cecílio, and Antonio Casimiro. Adversarial attacks and countermeasures on image classification-based deep learning models in autonomous driving systems: a systematic review. *ACM Computing Surveys*, 57(1):20:1–20:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3691625.

Fahmin:2025:EFR

[3092] Ahmed Fahmin, Muhammad Aamir Cheema, Mohammed Eunus Ali, Adel Nadjaran Toosi, Hua Lu, Huan Li, David Taniar, Hesham A. Rakha, and Bojie Shen. Eco-friendly route planning algorithms: Taxonomies, literature review and future directions. *ACM Computing Surveys*, 57(1):21:1–21:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3691624.

Pais:2025:RUP

[3093] Daniela Pais, Susana Brás, and Raquel Sebastião. A review on the use of physiological signals for assessing postoperative pain. *ACM Computing Surveys*, 57(1):22:1–22:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3685674.

Lin:2025:VSP

[3094] Ruyan Lin, Yulong Fu, Wei Yi, Jincheng Yang, Jin Cao, Zhiqiang Dong, Fei Xie, and Hui Li. Vulnerabilities and security patches detection in

OSS: a survey. *ACM Computing Surveys*, 57(1):23:1–23:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3694782.

Lanzieri:2025:RTA

[3095] Leandro Lanzieri, Gianluca Martino, Goerschwin Fey, Holger Schlarb, Thomas C. Schmidt, and Matthias Wählisch. A review of techniques for ageing detection and monitoring on embedded systems. *ACM Computing Surveys*, 57(1):24:1–24:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3695247.

Pooshideh:2025:PAD

[3096] Matineh Pooshideh, Amin Beheshti, Yuankai Qi, Helia Farhood, Mike Simpson, Nick Gatland, and Mehdi Soltany. Presentation attack detection: a systematic literature review. *ACM Computing Surveys*, 57(1):25:1–25:??, January 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3687264.

Liu:2025:MRS

[3097] Qidong Liu, Jiaxi Hu, Yutian Xiao, Xiangyu Zhao, Jingtong Gao, Wanyu Wang, Qing Li, and Jiliang Tang. Multimodal recommender systems: a survey. *ACM Computing Surveys*, 57(2):26:1–26:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3695461.

Meng:2025:SDG

[3098] Lingkai Meng, Yu Shao, Long Yuan, Longbin Lai, Peng Cheng, Xue Li, Wenyuan Yu, Wenjie Zhang, Xuemin Lin, and Jingren Zhou. A survey of distributed graph algorithms on massive graphs. *ACM Computing Surveys*, 57(2):27:1–27:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3694966.

Yang:2025:SAP

[3099] Zhenyu Yang, Ge Zhang, Jia Wu, Jian Yang, Quan Z. Sheng, Shan Xue, Chuan Zhou, Charu Aggarwal, Hao Peng, Wenbin Hu, Edwin Hancock, and Pietro Liò. State of the art and potentialities of graph-level learning. *ACM Computing Surveys*, 57(2):28:1–28:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3695863.

Wang:2025:SDL

[3100] Anqi Wang, Jiahua Dong, Lik-Hang Lee, Jiachuan Shen, and Pan Hui. A survey on deep learning for design and generation of virtual architecture. *ACM Computing Surveys*, 57(2):29:1–29:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3688569`.

Zhang:2025:TSN

[3101] Tianyu Zhang, Gang Wang, Chuanyu Xue, Jiachen Wang, Mark Nixon, and Song Han. Time-sensitive networking (TSN) for industrial automation: Current advances and future directions. *ACM Computing Surveys*, 57(2):30:1–30:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3695248`.

S:2025:POP

[3102] Sravan S. S., Susmita Mandal, PJA Alphonse, and P. L. Ramesh. A partial offline payment system for connecting the unconnected using Internet of Things: a survey. *ACM Computing Surveys*, 57(2):31:1–31:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3687132`.

Wei:2025:SQA

[3103] Zhiyuan Wei, Jing Sun, Zijian Zhang, Xianhao Zhang, Xiaoxuan Yang, and Liehuang Zhu. Survey on quality assurance of smart contracts. *ACM Computing Surveys*, 57(2):32:1–32:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3695864`.

Kombrink:2025:ISA

[3104] Meike Helena Kombrink, Zeno Jean Marius Hubert Geradts, and Marcel Worring. Image steganography approaches and their detection strategies: a survey. *ACM Computing Surveys*, 57(2):33:1–33:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3694965`.

Patel:2025:SRG

[3105] Manali Patel, Krupa Jariwala, and Chiranjoy Chattopadhyay. A systematic review on graph neural network-based methods for stock market forecasting. *ACM Computing Surveys*, 57(2):34:1–34:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3696411`.

Zhang:2025:SPF

[3106] Xiaohan Zhang, Cen Zhang, Xinghua Li, Zhengjie Du, Bing Mao, Yuekang Li, Yaowen Zheng, Yeting Li, Li Pan, Yang Liu, and Robert Deng. A survey of protocol fuzzing. *ACM Computing Surveys*, 57 (2):35:1–35:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3696788.

Huang:2025:EPA

[3107] Kai Huang, Zhengzi Xu, Su Yang, Hongyu Sun, Xuejun Li, Zheng Yan, and Yuqing Zhang. Evolving paradigms in automated program repair: Taxonomy, challenges, and opportunities. *ACM Computing Surveys*, 57(2):36:1–36:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3696450.

Cao:2025:SMB

[3108] Chengtai Cao, Fan Zhou, Yurou Dai, Jianping Wang, and Kunpeng Zhang. A survey of mix-based data augmentation: Taxonomy, methods, applications, and explainability. *ACM Computing Surveys*, 57(2):37:1–37:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3696206.

Kumar:2025:STP

[3109] Rahul Kumar, Manish Bhanu, João Mendes-Moreira, and Joydeep Chandra. Spatio-temporal predictive modeling techniques for different domains: a survey. *ACM Computing Surveys*, 57(2):38:1–38:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3696661.

Ge:2025:MLA

[3110] Xiuting Ge, Chunrong Fang, Xuanye Li, Weisong Sun, Daoyuan Wu, Juan Zhai, Shang-Wei Lin, Zhihong Zhao, Yang Liu, and Zhenyu Chen. Machine learning for actionable warning identification: a comprehensive survey. *ACM Computing Surveys*, 57(2):39:1–39:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3696352.

Li:2025:GSN

[3111] Zihao Li, Chao Yang, Yakun Chen, Xianzhi Wang, Hongxu Chen, Guandong Xu, Lina Yao, and Michael Sheng. Graph and sequential neural networks in session-based recommendation: a survey. *ACM Computing Surveys*, 57(2):40:1–40:??, February 2025. CODEN CMSVAN. ISSN

0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3696413.

Xing:2025:SVD

[3112] Zhen Xing, Qijun Feng, Haoran Chen, Qi Dai, Han Hu, Hang Xu, Zuxuan Wu, and Yu-Gang Jiang. A survey on video diffusion models. *ACM Computing Surveys*, 57(2):41:1–41:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3696415.

Jalalvand:2025:APS

[3113] Fatemeh Jalalvand, Mohan Baruwal Chhetri, Surya Nepal, and Cecile Paris. Alert prioritisation in security operations centres: a systematic survey on criteria and methods. *ACM Computing Surveys*, 57(2):42:1–42:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3695462.

Silva:2025:CRL

[3114] Francisco Silva, Hélder P. Oliveira, and Tania Pereira. Causal representation learning through higher-level information extraction. *ACM Computing Surveys*, 57(2):43:1–43:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3696412.

Sobrinho:2025:COM

[3115] Álvaro Sobrinho, Matheus Vilarim, Amanda Barbosa, Edmar Candeia Gurjão, Danilo F. S. Santos, Dalton Valadares, and Leandro Dias da Silva. Challenges and opportunities in mobile network security for vertical applications: a survey. *ACM Computing Surveys*, 57(2):44:1–44:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3696446.

Javed:2025:SRP

[3116] Yousra Javed and Ayesha Sajid. A systematic review of privacy policy literature. *ACM Computing Surveys*, 57(2):45:1–45:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3698393.

Chen:2025:AFL

[3117] Huiming Chen, Huandong Wang, Qingyue Long, Depeng Jin, and Yong Li. Advancements in federated learning: Models, methods, and privacy. *ACM Computing Surveys*, 57(2):46:1–46:??, February 2025. CODEN

CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3664650.

Liu:2025:STW

[3118] Aiwei Liu, Leyi Pan, Yijian Lu, Jingjing Li, Xuming Hu, Xi Zhang, Lijie Wen, Irwin King, Hui Xiong, and Philip Yu. A survey of text watermarking in the era of large language models. *ACM Computing Surveys*, 57(2):47:1–47:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3691626.

Battaglia:2025:CCS

[3119] Elena Battaglia, Federico Peiretti, and Ruggero Gaetano Pensa. Co-clustering: a survey of the main methods, recent trends, and open problems. *ACM Computing Surveys*, 57(2):48:1–48:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3698875.

Chen:2025:EAS

[3120] Tao Chen, Liang Lv, Di Wang, Jing Zhang, Yue Yang, Zeyang Zhao, Chen Wang, Xiaowei Guo, Hao Chen, Qingye Wang, Yufei Xu, Qiming Zhang, Bo Du, Liangpei Zhang, and Dacheng Tao. Empowering agri-food system with artificial intelligence: a survey of the progress, challenges and opportunities. *ACM Computing Surveys*, 57(2):49:1–49:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3698589.

Bennetot:2025:PTE

[3121] Adrien Bennetot, Ivan Donadello, Ayoub El Qadi El Haouari, Mauro Dragoni, Thomas Frossard, Benedikt Wagner, Anna Sarranti, Silvia Tulli, Maria Trocan, Raja Chatila, Andreas Holzinger, Artur Davila Garcez, and Natalia Díaz-Rodríguez. A practical tutorial on explainable AI techniques. *ACM Computing Surveys*, 57(2):50:1–50:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3670685.

Almeida:2025:ACF

[3122] Paulo Sérgio Almeida. Approaches to conflict-free replicated data types. *ACM Computing Surveys*, 57(2):51:1–51:??, February 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3695249.

Liu:2025:GBT

[3123] Bohan Liu, Gongyuan Li, He Zhang, Yuzhe Jin, Zikuan Wang, and Dong Shao. The gap between trustworthy AI research and trustworthy software research: a tertiary study. *ACM Computing Surveys*, 57(3):52:1–52:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3694964`.

Alsufyani:2025:KBC

[3124] Azhar Alsufyani, Omer Rana, and Charith Perera. Knowledge-based cyber physical security at smart home: a review. *ACM Computing Surveys*, 57(3):53:1–53:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3698768`.

Das:2025:CSS

[3125] Pranab Das and Dilwar Hussain Mazumder. A comprehensive survey of studies on predicting anatomical therapeutic chemical classes of drugs. *ACM Computing Surveys*, 57(3):54:1–54:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3699713`.

Harzevili:2025:SLR

[3126] Nima Shiri Harzevili, Alvine Boaye Belle, Junjie Wang, Song Wang, Zhen Ming (Jack) Jiang, and Nachiappan Nagappan. A systematic literature review on automated software vulnerability detection using machine learning. *ACM Computing Surveys*, 57(3):55:1–55:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3699711`.

Albaladejo-Gonzalez:2025:AIS

[3127] Mariano Albaladejo-González, José A. Ruipérez-Valiente, and Félix Gmez Mármol. Artificial intelligence to support the training and assessment of professionals: a systematic literature review. *ACM Computing Surveys*, 57(3):56:1–56:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3699712`.

Shen:2025:ETL

[3128] Li Shen, Yan Sun, Zhiyuan Yu, Liang Ding, Xinmei Tian, and Dacheng Tao. On efficient training of large-scale deep learning models. *ACM Computing Surveys*, 57(3):57:1–57:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3700439`.

Wang:2025:DDC

[3129] Tianyi Wang, Xin Liao, Kam Pui Chow, Xiaodong Lin, and Yinglong Wang. Deepfake detection: a comprehensive survey from the reliability perspective. *ACM Computing Surveys*, 57(3):58:1–58:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3699710.

Wang:2025:KEL

[3130] Song Wang, Yaochen Zhu, Haochen Liu, Zaiyi Zheng, Chen Chen, and Jundong Li. Knowledge editing for large language models: a survey. *ACM Computing Surveys*, 57(3):59:1–59:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3698590.

Rao:2025:SDA

[3131] Abishek Rao, Shivani Aithal, and Sanjay Singh. Single-document abstractive text summarization: a systematic literature review. *ACM Computing Surveys*, 57(3):60:1–60:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3700639.

Dadure:2025:MIR

[3132] Pankaj Dadure, Partha Pakray, and Sivaji Bandyopadhyay. Mathematical information retrieval: a review. *ACM Computing Surveys*, 57(3):61:1–61:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3699953.

Zhang:2025:SAP

[3133] Bo Zhang, Yansong Gao, Boyu Kuang, Changlong Yu, Anmin Fu, and Willy Susilo. A survey on advanced persistent threat detection: a unified framework, challenges, and countermeasures. *ACM Computing Surveys*, 57(3):62:1–62:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3700749.

Tariq:2025:DLA

[3134] Muhammad Tariq, Sohail Ahmad, Mian Ahmad Jan, and Houbing Song. Deep learning aided intelligent reflective surfaces for 6G: a survey. *ACM Computing Surveys*, 57(3):63:1–63:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3696414.

Gutierrez:2025:GAI

[3135] María Gutiérrez, M^a Ángeles Moraga, Félix García, and Coral Calero. Green IN artificial intelligence from a software perspective: State-of-the-art and green decalogue. *ACM Computing Surveys*, 57(3):64:1–64:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3698111`.

Golec:2025:CSL

[3136] Muhammed Golec, Guneet Kaur Walia, Mohit Kumar, Felix Cuadrado, Sukhpal Singh Gill, and Steve Uhlig. Cold start latency in serverless computing: a systematic review, taxonomy, and future directions. *ACM Computing Surveys*, 57(3):65:1–65:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3700875`.

Gomes:2025:SMS

[3137] Cláudio Gomes, João Paulo Fernandes, Gabriel Falcao, Soummya Kar, and Sridhar Tayur. A systematic mapping study on quantum and quantum-inspired algorithms in operations research. *ACM Computing Surveys*, 57(3):66:1–66:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3700874`.

Jiang:2025:SRI

[3138] Bin Jiang, Jiacheng Feng, Xuerong Cui, Jian Wang, Yongxin Liu, and Houbing Song. Security and reliability of Internet of underwater things: Architecture, challenges, and opportunities. *ACM Computing Surveys*, 57(3):67:1–67:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3700640`.

A:2025:SLR

[3139] Athira K. A., Divya Udayan J., and Umashankar Subramaniam. A systematic literature review on multi-robot task allocation. *ACM Computing Surveys*, 57(3):68:1–68:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3700591`.

Zhou:2025:CSD

[3140] Sheng Zhou, Hongjia Xu, Zhuonan Zheng, Jiawei Chen, Zhao Li, Jiajun Bu, Jia Wu, Xin Wang, Wenwu Zhu, and Martin Ester. A comprehensive survey on deep clustering: Taxonomy, challenges, and future directions. *ACM Computing Surveys*, 57(3):69:1–69:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3689036.

Shyalika:2025:CSR

[3141] Chathurangi Shyalika, Ruwan Wickramarachchi, and Amit P. Sheth. A comprehensive survey on rare event prediction. *ACM Computing Surveys*, 57(3):70:1–70:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3699955.

Wang:2025:LBA

[3142] Qian Wang, Hong-Ning Dai, Jinghua Yang, Cai Guo, Peter Childs, Maaike Kleinsmann, Yike Guo, and Pan Wang. Learning-based artificial intelligence artwork: Methodology taxonomy and quality evaluation. *ACM Computing Surveys*, 57(3):71:1–71:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3698105.

Kalyani:2025:RMA

[3143] Yogeswaranathan Kalyani and Rem Collier. The role of multi-agents in digital twin implementation: Short survey. *ACM Computing Surveys*, 57(3):72:1–72:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3697350.

Abdelhamid:2025:RBT

[3144] Moetez Abdelhamid, Layth Sliman, Raoudha Ben Djemaa, and Guido Perboli. A review on blockchain technology, current challenges, and AI-driven solutions. *ACM Computing Surveys*, 57(3):73:1–73:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3700641.

Wang:2025:SSU

[3145] Xiaojie Wang, Zhonghui Zhao, Ling Yi, Zhaolong Ning, Lei Guo, F. Richard Yu, and Song Guo. A survey on security of UAV swarm networks: Attacks and countermeasures. *ACM Computing Surveys*, 57(3):74:1–74:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3703625.

P:2025:EED

[3146] Haseena Rahmath P, Vishal Srivastava, Kuldeep Chaurasia, Roberto G. Pacheco, and Rodrigo S. Couto. Early-exit deep neural network — a comprehensive survey. *ACM Computing Surveys*, 57(3):75:1–75:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3698767`.

Abdali:2025:MMM

[3147] Sara Abdali, Sina Shaham, and Bhaskar Krishnamachari. Multi-modal misinformation detection: Approaches, challenges and opportunities. *ACM Computing Surveys*, 57(3):76:1–76:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3697349`.

Mostafa:2025:MDL

[3148] Mohamed Mostafa, Ahmad S Almogren, Muhammad Al-Qurishi, and Majed Alrubaian. Modality deep-learning frameworks for fake news detection on social networks: a systematic literature review. *ACM Computing Surveys*, 57(3):77:1–77:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3700748`.

Yan:2025:BAA

[3149] Baochen Yan, Jiahe Lan, and Zheng Yan. Backdoor attacks against voice recognition systems: a survey. *ACM Computing Surveys*, 57(3):78:1–78:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3701985`.

Dong:2025:SAA

[3150] Junhao Dong, Junxi Chen, Xiaohua Xie, Jianhuang Lai, and Hao Chen. Survey on adversarial attack and defense for medical image analysis: Methods and challenges. *ACM Computing Surveys*, 57(3):79:1–79:??, March 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3702638`.

Hannou:2025:SIP

[3151] Fatma-Zohra Hannou, Maxime Lefrançois, Pierre Jouvelot, Victor Charpenay, and Antoine Zimmermann. A survey on IoT programming platforms: a business-domain experts perspective. *ACM Computing Surveys*, 57(4):80:1–80:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3699954`.

Vinueza-Naranjo:2025:FCT

[3152] Paola G. Vinueza-Naranjo, Janneth Chicaiza, and Ruben Rumipamba-Zambrano. Fog computing technology research: a retrospective overview and bibliometric analysis. *ACM Computing Surveys*, 57(4):81:1–81:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3702313.

Wang:2025:SPG

[3153] Tao Wang, Yushu Zhang, Shuren Qi, Ruoyu Zhao, Zhihua Xia, and Jian Weng. Security and privacy on generative data in AIGC: a survey. *ACM Computing Surveys*, 57(4):82:1–82:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3703626.

Sicari:2025:OEA

[3154] Sabrina Sicari, Jesus F. Cevallos M., Alessandra Rizzardi, and Alberto Coen-Porisini. Open-ethical AI: Advancements in open-source human-centric neural language models. *ACM Computing Surveys*, 57(4):83:1–83:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3703454.

Alqahtani:2025:CEF

[3155] Hamed Alqahtani and Gulshan Kumar. Cybersecurity in electric and flying vehicles: Threats, challenges, AI solutions & future directions. *ACM Computing Surveys*, 57(4):84:1–84:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3697830.

Ullah:2025:SET

[3156] Shamsher Ullah, Jianqiang Li, Jie Chen, Ikram Ali, Salabat Khan, Abdul Ahad, Farhan Ullah, and Victor C. M. Leung. A survey on emerging trends and applications of 5G and 6G to healthcare environments. *ACM Computing Surveys*, 57(4):85:1–85:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3703154.

DeSutter:2025:EMS

[3157] Bjorn De Sutter, Sebastian Schrittwieser, Bart Coppens, and Patrick Kochberger. Evaluation methodologies in software protection research. *ACM Computing Surveys*, 57(4):86:1–86:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3702314.

Zhang:2025:BAD

[3158] Shaobo Zhang, Yimeng Pan, Qin Liu, Zheng Yan, Kim-Kwang Raymond Choo, and Guojun Wang. Backdoor attacks and defenses targeting multi-domain AI models: a comprehensive review. *ACM Computing Surveys*, 57(4):87:1–87:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3704725`.

Wardana:2025:TSC

[3159] Aulia Arif Wardana and Parman Sukarno. Taxonomy and survey of collaborative intrusion detection system using federated learning. *ACM Computing Surveys*, 57(4):88:1–88:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3701724`.

Bai:2025:MIA

[3160] Li Bai, Haibo Hu, Qingqing Ye, Haoyang Li, Leixia Wang, and Jianliang Xu. Membership inference attacks and defenses in federated learning: a survey. *ACM Computing Surveys*, 57(4):89:1–89:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3704633`.

Lautrup:2025:SRG

[3161] Anton Danholt Lautrup, Tobias Hyrup, Arthur Zimek, and Peter Schneider-Kamp. Systematic review of generative modelling tools and utility metrics for fully synthetic tabular data. *ACM Computing Surveys*, 57(4):90:1–90:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3704437`.

Liu:2025:ADR

[3162] Zhihong Liu, Xin Xu, Peng Qiao, and Dongsheng Li. Acceleration for deep reinforcement learning using parallel and distributed computing: a survey. *ACM Computing Surveys*, 57(4):91:1–91:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3703453`.

Allaart:2025:PSD

[3163] Corinne Allaart, Saba Amiri, Henri Bal, Adam Belloum, Leon Gommans, Aart van Halteren, and Sander Klous. Private and secure distributed deep learning: a survey. *ACM Computing Surveys*, 57(4):92:1–92:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3703452`.

Lambiase:2025:MCB

[3164] Stefano Lambiase, Gemma Catolino, Fabio Palomba, and Filomena Ferrucci. Motivations, challenges, best practices, and benefits for bots and conversational agents in software engineering: a multivocal literature review. *ACM Computing Surveys*, 57(4):93:1–93:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3704806`.

Ullah:2025:EAI

[3165] Naeem Ullah, Javed Ali Khan, Ivanoe De Falco, and Giovanna Sannino. Explainable artificial intelligence: Importance, use domains, stages, output shapes, and challenges. *ACM Computing Surveys*, 57(4):94:1–94:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3705724`.

Jin:2025:CDM

[3166] David Jin, Niclas Kannengießer, Sascha Rank, and Ali Sunyaev. Collaborative distributed machine learning. *ACM Computing Surveys*, 57(4):95:1–95:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3704807`.

Luo:2025:APF

[3167] Bingqiao Luo, Zhen Zhang, Qian Wang, Anli Ke, Shengliang Lu, and Bingsheng He. AI-powered fraud detection in decentralized finance: a project life cycle perspective. *ACM Computing Surveys*, 57(4):96:1–96:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3705296`.

Soussi:2025:DCL

[3168] Wissem Soussi, Gürkan Gür, and Burkhard Stiller. Democratizing container live migration for enhanced future networks — a survey. *ACM Computing Surveys*, 57(4):97:1–97:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3704436`.

Yu:2025:OSM

[3169] Difeng Yu, Tilman Dingler, Eduardo Velloso, and Jorge Goncalves. Object selection and manipulation in VR headsets: Research challenges, solutions, and success measurements. *ACM Computing Surveys*, 57(4):98:1–98:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3706417`.

Zheng:2025:SML

[3170] Yu Zheng, Qianyue Hao, Jingwei Wang, Changzheng Gao, Jinwei Chen, Depeng Jin, and Yong Li. A survey of machine learning for urban decision making: Applications in planning, transportation, and healthcare. *ACM Computing Surveys*, 57(4):99:1–99:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3695986`.

Gong:2025:CDT

[3171] Chang Gong, Chuzhe Zhang, Di Yao, Jingping Bi, Wenbin Li, and YongJun Xu. Causal discovery from temporal data: an overview and new perspectives. *ACM Computing Surveys*, 57(4):100:1–100:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3705297`.

Qin:2025:TLF

[3172] Yujia Qin, Shengding Hu, Yankai Lin, Weize Chen, Ning Ding, Ganqu Cui, Zheni Zeng, Xuanhe Zhou, Yufei Huang, Chaojun Xiao, Chi Han, Yi Ren Fung, Yusheng Su, Huadong Wang, Cheng Qian, Runchu Tian, Kunlun Zhu, Shihao Liang, Xingyu Shen, Bokai Xu, Zhen Zhang, Yining Ye, Bowen Li, Ziwei Tang, Jing Yi, Yuzhang Zhu, Zhenning Dai, Lan Yan, Xin Cong, Yaxi Lu, Weilin Zhao, Yuxiang Huang, Junxi Yan, Xu Han, Xian Sun, Dahai Li, Jason Phang, Cheng Yang, Tongshuang Wu, Heng Ji, Guoliang Li, Zhiyuan Liu, and Maosong Sun. Tool learning with foundation models. *ACM Computing Surveys*, 57(4):101:1–101:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3704435`.

Jayasundara:2025:SAC

[3173] Sakuna Harinda Jayasundara, Nalin Asanka Gamagedara Arachchilage, and Giovanni Russello. SoK: Access control policy generation from high-level natural language requirements. *ACM Computing Surveys*, 57(4):102:1–102:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3706057`.

Tang:2025:WSM

[3174] Dan Tang, Rui Dai, Yudong Yan, Keqin Li, Wei Liang, and Zheng Qin. When SDN meets low-rate threats: a survey of attacks and countermeasures in programmable networks. *ACM Computing Surveys*, 57(4):103:1–103:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3704434`.

Oztoprak:2025:SCM

[3175] Ahmet Oztoprak, Reza Hassanpour, Aysegul Ozkan, and Kasim Oztoprak. Security challenges, mitigation strategies, and future trends in wireless sensor networks: a review. *ACM Computing Surveys*, 57(4):104:1–104:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3706583`.

Yucer:2025:RBW

[3176] Seyma Yucer, Furkan Tektas, Noura Al Moubayed, and Toby Breckon. Racial bias within face recognition: a survey. *ACM Computing Surveys*, 57(4):105:1–105:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3705295`.

Miao:2025:WFS

[3177] Fucheng Miao, Youxiang Huang, Zhiyi Lu, Tomoaki Ohtsuki, Guan Gui, and Hikmet Sari. Wi-Fi sensing techniques for human activity recognition: Brief survey, potential challenges, and research directions. *ACM Computing Surveys*, 57(5):107:1–107:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3705893`.

Koch:2025:ABA

[3178] Luke Koch and Edmon Begoli. Adversarial binaries: AI-guided instrumentation methods for malware detection evasion. *ACM Computing Surveys*, 57(5):108:1–108:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3706573`.

Bulasara:2025:IBN

[3179] Phani Krishna Bulasara, Somya Sahoo, Nitin Gupta, Zhu Han, and Neeraj Kumar. The Internet of Bio-Nano Things with insulin–glucose, security and research challenges: a survey. *ACM Computing Surveys*, 57(5):109:1–109:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3703448`.

Xu:2025:REA

[3180] Mengwei Xu, Dongqi Cai, Wangsong Yin, Shangguang Wang, Xin Jin, and Xuanzhe Liu. Resource-efficient algorithms and systems of foundation models: a survey. *ACM Computing Surveys*, 57(5):110:1–110:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3706418`.

Chen:2025:WSS

[3181] Zhaozheng Chen and Qianru Sun. Weakly-supervised semantic segmentation with image-level labels: From traditional models to foundation models. *ACM Computing Surveys*, 57(5):111:1–111:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3707447.

Yang:2025:RAF

[3182] Yutao Yang, Jie Zhou, Xuanwen Ding, Tianyu Huai, Shunyu Liu, Qin Chen, Yuan Xie, and Liang He. Recent advances of foundation language models-based continual learning: a survey. *ACM Computing Surveys*, 57(5):112:1–112:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3705725.

Busch:2025:SLR

[3183] Norbert Rudolf Busch and Andrzej Zalewski. A systematic literature review of enterprise architecture evaluation methods. *ACM Computing Surveys*, 57(5):113:1–113:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3706582.

Zhang:2025:SPP

[3184] Xianzhi Zhang, Yipeng Zhou, Di Wu, Quan Z. Sheng, Shazia Riaz, Miao Hu, and Linchang Xiao. A survey on privacy-preserving caching at network edge: Classification, solutions, and challenges. *ACM Computing Surveys*, 57(5):114:1–114:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3706630.

Xin:2025:TAB

[3185] Ruyue Xin, Jingye Wang, Peng Chen, and Zhiming Zhao. Trustworthy AI-based performance diagnosis systems for cloud applications: a review. *ACM Computing Surveys*, 57(5):115:1–115:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3701740.

Alsheavi:2025:IAP

[3186] Amar N. Alsheavi, Ammar Hawbani, Wajdy Othman, Xingfu Wang, Gamil Qaid, Liang Zhao, Ahmed Al-Dubai, Liu Zhi, A.s. Ismail, Rutvij Jhaveri, Saeed Alsamhi, and Mohammed A. A. Al-Qaness. IoT authentication protocols: Challenges, and comparative analysis. *ACM Computing Surveys*, 57(5):116:1–116:??, May 2025. CODEN CMSVAN. ISSN

0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3703444`.

Lai:2025:CSP

[3187] Zhifan Lai, Zikai Chang, Mingrui Sha, Qihong Zhang, Ning Xie, Changsheng Chen, and Dusit (Tao) Niyato. A comprehensive survey on physical layer authentication techniques: Categorization and analysis of model-driven and data-driven approaches. *ACM Computing Surveys*, 57(5):117:1–117:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3708496`.

Fukaya:2025:IGG

[3188] Kaisei Fukaya, Damon Daylamani-Zad, and Harry Agius. Intelligent generation of graphical game assets: a conceptual framework and systematic review of the state of the art. *ACM Computing Surveys*, 57(5):118:1–118:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3708499`.

Ali:2025:PPR

[3189] Waqar Ali, Xiangmin Zhou, and Jie Shao. Privacy-preserved and responsible recommenders: From conventional defense to federated learning and blockchain. *ACM Computing Surveys*, 57(5):119:1–119:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3708982`.

Longa:2025:EEG

[3190] Antonio Longa, Steve Azzolin, Gabriele Santin, Giulia Cencetti, Pietro Lio, Bruno Lepri, and Andrea Passerini. Explaining the explainers in graph neural networks: a comparative study. *ACM Computing Surveys*, 57(5):120:1–120:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3696444`.

Bayram:2025:TTM

[3191] Firas Bayram and Bestoun S. Ahmed. Towards trustworthy machine learning in production: an overview of the robustness in MLOps approach. *ACM Computing Surveys*, 57(5):121:1–121:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3708497`.

Zhao:2025:VCP

[3192] Ruoyu Zhao, Yushu Zhang, Tao Wang, Wenying Wen, Yong Xiang, and Xiaochun Cao. Visual content privacy protection: a survey. *ACM Com-*

puting Surveys, 57(5):122:1–122:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3708501.

Fei:2025:SGO

[3193] Yanhong Fei, Yingjie Liu, Chentao Jia, Zhengyu Li, Xian Wei, and Mingsong Chen. A survey of geometric optimization for deep learning: From Euclidean space to Riemannian manifold. *ACM Computing Surveys*, 57(5):123:1–123:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3708498.

Standen:2025:AML

[3194] Maxwell Standen, Junae Kim, and Claudia Szabo. Adversarial machine learning attacks and defences in multi-agent reinforcement learning. *ACM Computing Surveys*, 57(5):124:1–124:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3708320.

Cao:2025:SAG

[3195] Yihan Cao, Siyu Li, Yixin Liu, Zhiling Yan, Yutong Dai, Philip Yu, and Lichao Sun. A survey of AI-generated content (AIGC). *ACM Computing Surveys*, 57(5):125:1–125:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3704262.

Bouraffa:2025:RIN

[3196] Tayssir Bouraffa and Kai-Lung Hui. Regulating information and network security: Review and challenges. *ACM Computing Surveys*, 57(5):126:1–126:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3711124.

dosSantos:2025:IMD

[3197] Claudio Filipi Goncalves dos Santos, Rodrigo Reis Arrais, Jhessica Victoria Santos da Silva, Matheus Henrique Marques da Silva, Wladimir Barroso Guedes de Araujo Neto, Leonardo Tadeu Lopes, Guilherme Augusto Bileki, Iago Oliveira Lima, Lucas Borges Rondon, Bruno Melo de Souza, Mayara Costa Regazio, Rodolfo Coelho Dalapicola, and Arthur Alves Tasca. ISP meets deep learning: a survey on deep learning methods for image signal processing. *ACM Computing Surveys*, 57(5):127:1–127:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3708516.

Jubur:2025:DAP

[3198] Mohammed Jubur, Prakash Shrestha, and Nitesh Saxena. An in-depth analysis of password managers and two-factor authentication tools. *ACM Computing Surveys*, 57(5):128:1–128:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3711117`.

Zha:2025:DCA

[3199] Daochen Zha, Zaid Pervaiz Bhat, Kwei-Herng Lai, Fan Yang, Zhimeng Jiang, Shaochen Zhong, and Xia Hu. Data-centric artificial intelligence: a survey. *ACM Computing Surveys*, 57(5):129:1–129:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3711118`.

Sharma:2025:CAM

[3200] Tejpal Sharma and Dhavleesh Rattan. Characterization of Android malwares and their families. *ACM Computing Surveys*, 57(5):130:1–130:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3708500`.

Li:2025:CGN

[3201] Xuyan Li, Jie Wang, and Zheng Yan. Can graph neural networks be adequately explained? A survey. *ACM Computing Surveys*, 57(5):131:1–131:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3711122`.

Tu:2025:DML

[3202] Jingke Tu, Lei Yang, and Jiannong Cao. Distributed machine learning in edge computing: Challenges, solutions and future directions. *ACM Computing Surveys*, 57(5):132:1–132:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3708495`.

Zhang:2025:LBP

[3203] Yongjun Zhang, Pengcheng Shi, and Jiayuan Li. LiDAR-based place recognition for autonomous driving: a survey. *ACM Computing Surveys*, 57(4):106:1–106:??, April 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3707446`.

deOliveira:2025:SHP

[3204] Sanderson L. Gonzaga de Oliveira. A survey of heuristics for profile and wavefront reductions. *ACM Computing Surveys*, 57(5):133:1–133:??, May 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3711120.

Calegari:2025:ISI

[3205] Roberta Calegari, Fosca Giannotti, Michela Milano, and Francesca Pratesi. Introduction to special issue on trustworthy artificial intelligence (Part II). *ACM Computing Surveys*, 57(6):134:1–134:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3711127.

Hou:2025:IHT

[3206] Ming Hou, Simon Banbury, Brad Cain, Scott Fang, Hannah Willoughby, Liam Foley, Edward Tunstel, and Imre J. Rudas. IMPACTS homeostasis trust management system: Optimizing trust in human–AI teams. *ACM Computing Surveys*, 57(6):135:1–135:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3649446.

Bernard:2025:SRF

[3207] Nolwenn Bernard and Krisztian Balog. A systematic review of fairness, accountability, transparency, and ethics in information retrieval. *ACM Computing Surveys*, 57(6):136:1–136:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3637211.

Barrainkua:2025:PFG

[3208] Ainhize Barrainkua, Paula Gordaliza, Jose A. Lozano, and Novi Quadrianto. Preserving the fairness guarantees of classifiers in changing environments: a survey. *ACM Computing Surveys*, 57(6):137:1–137:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3637438.

Parraga:2025:FDL

[3209] Otavio Parraga, Martin D. More, Christian M. Oliveira, Nathan S. Gavenski, Lucas S. Kupssinskü, Adilson Medronha, Luis V. Moura, Gabriel S. Simões, and Rodrigo C. Barros. Fairness in deep learning: a survey on vision and language research. *ACM Computing Surveys*, 57(6):138:1–138:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3637549.

Bartl:2025:GBN

[3210] Marion Bartl, Abhishek Mandal, Susan Leavy, and Suzanne Little. Gender bias in natural language processing and computer vision: a comparative survey. *ACM Computing Surveys*, 57(6):139:1–139:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3700438.

Li:2025:TTB

[3211] Jingyang Li and Guoqiang Li. Triangular trade-off between robustness, accuracy, and fairness in deep neural networks: a survey. *ACM Computing Surveys*, 57(6):140:1–140:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3645088.

Tocchetti:2025:RHC

[3212] Andrea Tocchetti, Lorenzo Corti, Agathe Balayn, Mireia Yurrita, Philip Lippmann, Marco Brambilla, and Jie Yang. A.I. robustness: a human-centered perspective on technological challenges and opportunities. *ACM Computing Surveys*, 57(6):141:1–141:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3665926.

Zuhlke:2025:ARN

[3213] Monty-Maximilian Zühlke and Daniel Kudenko. Adversarial robustness of neural networks from the perspective of Lipschitz calculus: a survey. *ACM Computing Surveys*, 57(6):142:1–142:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3648351.

Wei:2025:TDA

[3214] Wenqi Wei and Ling Liu. Trustworthy distributed AI systems: Robustness, privacy, and governance. *ACM Computing Surveys*, 57(6):143:1–143:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3645102.

chander:2025:TTA

[3215] Bhanu chander, Chinju John, Lekha Warrier, and Kumaravelan Gopalakrishnan. Toward trustworthy artificial intelligence (TAI) in the context of explainability and robustness. *ACM Computing Surveys*, 57(6):144:1–144:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3675392.

Moreira:2025:BIC

[3216] Catarina Moreira, Yu-Liang Chou, Chihcheng Hsieh, Chun Ouyang, João Pereira, and Joaquim Jorge. Benchmarking instance-centric counterfactual algorithms for XAI: From white box to black box. *ACM Computing Surveys*, 57(6):145:1–145:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3672553.

Rawal:2025:CTA

[3217] Atul Rawal, Adrienne Raglin, Danda B. Rawat, Brian M. Sadler, and James McCoy. Causality for trustworthy artificial intelligence: Status, challenges and perspectives. *ACM Computing Surveys*, 57(6):146:1–146:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3665494.

Laishram:2025:TPP

[3218] Lamyanba Laishram, Muhammad Shaheryar, Jong Taek Lee, and Soon Ki Jung. Toward a privacy-preserving face recognition system: a survey of leakages and solutions. *ACM Computing Surveys*, 57(6):147:1–147:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3673224.

Hossain:2025:EAM

[3219] Md Imran Hossain, Ghada Zamzmi, Peter R. Mouton, Md Sirajus Salekin, Yu Sun, and Dmitry Goldgof. Explainable AI for medical data: Current methods, limitations, and future directions. *ACM Computing Surveys*, 57(6):148:1–148:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3637487.

Joshi:2025:NLP

[3220] Aditya Joshi, Raj Dabre, Diptesh Kanojia, Zhuang Li, Haolan Zhan, Gholamreza Haffari, and Doris Dippold. Natural language processing for dialects of a language: a survey. *ACM Computing Surveys*, 57(6):149:1–149:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3712060.

Tang:2025:TTA

[3221] Xiaoli Tang and Han Yu. Towards trustworthy AI-empowered real-time bidding for online advertisement auctioning. *ACM Computing Surveys*, 57(6):150:1–150:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3701741.

Aouedi:2025:DLN

[3222] Ons Aouedi, Van An Le, Kandaraj Piamrat, and Yusheng Ji. Deep learning on network traffic prediction: Recent advances, analysis, and future directions. *ACM Computing Surveys*, 57(6):151:1–151:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3703447.

Das:2025:SPC

[3223] Badhan Chandra Das, M. Hadi Amini, and Yanzhao Wu. Security and privacy challenges of large language models: a survey. *ACM Computing Surveys*, 57(6):152:1–152:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3712001.

Nayak:2025:CRG

[3224] Kamakshya Nayak and Debi Prosad Dogra. A comprehensive review on group re-identification in surveillance videos. *ACM Computing Surveys*, 57(6):153:1–153:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3711126.

Qasim:2025:DVC

[3225] Iqra Qasim, Alexander Horsch, and Dilip Prasad. Dense video captioning: a survey of techniques, datasets and evaluation protocols. *ACM Computing Surveys*, 57(6):154:1–154:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3712059.

Lai:2025:DGM

[3226] Leshan Lai, Yuansheng Liu, Bosheng Song, Keqin Li, and Xiangxiang Zeng. Deep generative models for therapeutic peptide discovery: a comprehensive review. *ACM Computing Surveys*, 57(6):155:1–155:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3714455.

Chen:2025:TCA

[3227] Huayu Chen, Junxiang Li, Huanhuan He, Jing Zhu, Shuting Sun, Xiaowei Li, and Bin Hu. Toward the construction of affective brain-computer interface: a systematic review. *ACM Computing Surveys*, 57(6):156:1–156:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3712259.

Li:2025:GAE

[3228] Tong Li, Qingyue Long, Haoye Chai, Shiyuan Zhang, Fenyu Jiang, Haoqiang Liu, Wenzhen Huang, Depeng Jin, and Yong Li. Generative AI empowered network digital twins: Architecture, technologies, and applications. *ACM Computing Surveys*, 57(6):157:1–157:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3711682.

Demelius:2025:RAD

[3229] Lea Demelius, Roman Kern, and Andreas Trügler. Recent advances of differential privacy in centralized deep learning: a systematic survey. *ACM Computing Surveys*, 57(6):158:1–158:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3712000.

Pradhan:2025:GDS

[3230] Shameer K. Pradhan, Mieke Jans, and Niels Martin. Getting the data in shape for your process mining analysis: an in-depth analysis of the pre-analysis stage. *ACM Computing Surveys*, 57(6):159:1–159:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3712587.

Ullah:2025:LPS

[3231] Ikram Ullah, Munam Ali Shah, Abid Khan, and Mohsen Guizani. Location privacy schemes in vehicular networks: Taxonomy, comparative analysis, design challenges, and future opportunities. *ACM Computing Surveys*, 57(6):160:1–160:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3711681.

Kim:2025:SNA

[3232] Song-Kyoo Kim and Hou Cheng Vong. Secured network architectures based on blockchain technologies: a systematic review. *ACM Computing Surveys*, 57(7):162:1–162:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3715000.

Li:2025:CAG

[3233] Mengyao Li, Zhibang Yang, Xu Zhou, Yixiang Fang, Kenli Li, and Keqin Li. Clustering on attributed graphs: From single-view to multi-view. *ACM Computing Surveys*, 57(7):163:1–163:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3714407.

Bailoni:2025:RTD

[3234] Tania Bailoni and Mauro Dragoni. A review on trustworthiness of digital assistants for personal healthcare. *ACM Computing Surveys*, 57(7):164:1–164:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3714999`.

Li:2025:SSD

[3235] Menglu Li, Yasaman Ahmadiadli, and Xiao-Ping Zhang. A survey on speech deepfake detection. *ACM Computing Surveys*, 57(7):165:1–165:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3714458`.

Malkinski:2025:DLM

[3236] Mikołaj Małkiński and Jacek Mańdziuk. Deep learning methods for abstract visual reasoning: a survey on Raven's progressive matrices. *ACM Computing Surveys*, 57(7):166:1–166:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3715093`.

Yuan:2025:SML

[3237] Yuan Yuan, Zhaojian Li, and Bin Zhao. A survey of multimodal learning: Methods, applications, and future. *ACM Computing Surveys*, 57(7):167:1–167:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3713070`.

Blot:2025:CSB

[3238] Aymeric Blot and Justyna Petke. A comprehensive survey of benchmarks for improvement of software's non-functional properties. *ACM Computing Surveys*, 57(7):168:1–168:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3711119`.

Ngueajio:2025:DFN

[3239] Mikel K. Ngueajio, Saurav Aryal, Marcellin Atemkeng, Gloria Washington, and Danda Rawat. Decoding fake news and hate speech: a survey of explainable AI techniques. *ACM Computing Surveys*, 57(7):169:1–169:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3711123`.

Jarkas:2025:CSS

[3240] Omar Jarkas, Ryan Ko, Naipeng Dong, and Redowan Mahmud. A container security survey: Exploits, attacks, and defenses. *ACM Computing Surveys*, 57(7):170:1–170:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3715001.

Mane:2025:SOA

[3241] Swapnil Sanjaykumar Mane, Suman Kundu, and Rajesh Sharma. A survey on online aggression: Content detection and behavioral analysis on social media. *ACM Computing Surveys*, 57(7):171:1–171:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3711125.

Duan:2025:ASE

[3242] Zhuoying Duan, Zikai Chang, Ning Xie, Weize Sun, and Dusit (Tao) Niyato. Adaptive strategies in enhancing physical layer security: a comprehensive survey. *ACM Computing Surveys*, 57(7):172:1–172:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3715319.

Liu:2025:PCB

[3243] Yi Liu, Changsheng Zhang, Xingjun Dong, and Jiaxu Ning. Point cloud-based deep learning in industrial production: a survey. *ACM Computing Surveys*, 57(7):173:1–173:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3715851.

Esmaili:2025:PMP

[3244] Molud Esmaili and Ken Christensen. Performance modeling of public permissionless blockchains: a survey. *ACM Computing Surveys*, 57(7):174:1–174:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3715094.

Le:2025:NLP

[3245] Dinh-Viet-Toan Le, Louis Bigo, Dorien Herremans, and Mikaela Keller. Natural language processing methods for symbolic music generation and information retrieval: a survey. *ACM Computing Surveys*, 57(7):175:1–175:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3714457.

deChaves:2025:UCP

[3246] Shirlei Aparecida de Chaves and Fabiane Benitti. User-centred privacy and data protection: an overview of current research trends and challenges for the human-computer interaction field. *ACM Computing Surveys*, 57(7):176:1–176:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3715903`.

Leon:2025:ACSa

[3247] Vasileios Leon, Muhammad Abdullah Hanif, Giorgos Armeniakos, Xun Jiao, Muhammad Shafique, Kiamal Pekmestzi, and Dimitrios Soudris. Approximate computing survey, Part II: Application-specific & architectural approximation techniques and applications. *ACM Computing Surveys*, 57(7):177:1–177:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3711683`.

Mahmood:2025:RSI

[3248] Anindo Mahmood and Murat Yuksel. Resource sharing on the Internet: a comprehensive survey on ISP peering. *ACM Computing Surveys*, 57(7):178:1–178:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3715906`.

Xie:2025:ASF

[3249] Jiahao Xie and Guangmo Tong. Advances in set function learning: a survey of techniques and applications. *ACM Computing Surveys*, 57(7):179:1–179:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3715905`.

Groll:2025:SDI

[3250] Sebastian Groll, Ludwig Fuchs, and Günther Pernul. Separation of duty in information security. *ACM Computing Surveys*, 57(7):180:1–180:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3715959`.

Benhabbour:2025:EEE

[3251] Ilies Benhabbour and Marc Dacier. ENDEMIC: End-to-end network disruptions — examining middleboxes, issues, and countermeasures — a survey. *ACM Computing Surveys*, 57(7):181:1–181:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL `https://dl.acm.org/doi/10.1145/3716372`.

Deng:2025:AAU

[3252] Zehang Deng, Yongjian Guo, Changzhou Han, Wanlun Ma, Junwu Xiong, Sheng Wen, and Yang Xiang. AI agents under threat: a survey of key security challenges and future pathways. *ACM Computing Surveys*, 57(7):182:1–182:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3716628.

Chounchenani:2025:DLB

[3253] Maedeh Daryanavard Chounchenani, Asadollah Shahbahrami, Reza Hassanpour, and Georgi Gaydadjiev. Deep learning based image aesthetic quality assessment — a review. *ACM Computing Surveys*, 57(7):183:1–183:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3716820.

He:2025:SER

[3254] Qiang He, Songyangjun Zhang, Yuliang Cai, Wei Yuan, Lianbo Ma, and Keping Yu. A survey on exploring real and virtual social network rumors: State-of-the-art and research challenges. *ACM Computing Surveys*, 57(7):184:1–184:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3716498.

Leon:2025:ACSb

[3255] Vasileios Leon, Muhammad Abdullah Hanif, Giorgos Armeniakos, Xun Jiao, Muhammad Shafique, Kiamal Pekmestzi, and Dimitrios Soudris. Approximate computing survey, Part I: Terminology and software & hardware approximation techniques. *ACM Computing Surveys*, 57 (7):185:1–185:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3716845.

Liu:2025:EIS

[3256] Huaping Liu, Di Guo, and Angelo Cangelosi. Embodied intelligence: a synergy of morphology, action, perception and learning. *ACM Computing Surveys*, 57(7):186:1–186:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3717059.

Zhang:2025:DLL

[3257] Xiaoyu Zhang, Weipeng Jiang, Chao Shen, Qi Li, Qian Wang, Chenhao Lin, and Xiaohong Guan. Deep learning library testing: Definition, methods and challenges. *ACM Computing Surveys*, 57(7):187:1–187:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3716497.

Zhang:2025:SLL

[3258] Qiang Zhang, Keyan Ding, Tianwen Lv, Xinda Wang, Qingyu Yin, Yiwen Zhang, Jing Yu, Yuhao Wang, Xiaotong Li, Zhuoyi Xiang, Xiang Zhuang, Zeyuan Wang, Ming Qin, Mengyao Zhang, Jinlu Zhang, Jiyu Cui, Renjun Xu, Hongyang Chen, Xiaohui Fan, Huabin Xing, and Huajun Chen. Scientific large language models: a survey on biological & chemical domains. *ACM Computing Surveys*, 57(6):161:1–161:??, June 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3715318.

Chakraborty:2025:HDF

[3259] Neeloy Chakraborty, Melkior Ornik, and Katherine Driggs-Campbell. Hallucination detection in foundation models for decision-making: a flexible definition and review of the state of the art. *ACM Computing Surveys*, 57(7):188:1–188:??, July 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic). URL https://dl.acm.org/doi/10.1145/3716846.

Tian:2025:KDG

[3260] Yijun Tian, Shichao Pei, Xiangliang Zhang, Chuxu Zhang, and Nitesh V. Chawla. Knowledge distillation on graphs: a survey. *ACM Computing Surveys*, 57(8):189:1–189:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kuang:2025:NLU

[3261] Jiayi Kuang, Ying Shen, Jingyou Xie, Haohao Luo, Zhe Xu, Ronghao Li, Yinghui Li, Xianfeng Cheng, Xika Lin, and Yu Han. Natural language understanding and inference with MLLM in visual question answering: a survey. *ACM Computing Surveys*, 57(8):190:1–190:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Landau-Feibish:2025:CDS

[3262] Shir Landau-Feibish, Zaoxing Liu, and Jennifer Rexford. Compact data structures for network telemetry. *ACM Computing Surveys*, 57(8):191:1–191:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bhusal:2025:APB

[3263] Dipkamal Bhusal and Nidhi Rastogi. Adversarial patterns: Building robust Android malware classifiers. *ACM Computing Surveys*, 57(8): 192:1–192:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zheng:2025:TLL

[3264] Junhao Zheng, Shengjie Qiu, Chengming Shi, and Qianli Ma. Towards lifelong learning of large language models: a survey. *ACM Computing Surveys*, 57(8):193:1–193:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Thakur:2025:GFL

[3265] Dipanwita Thakur, Antonella Guzzo, Giancarlo Fortino, and Francesco Piccialli. Green federated learning: a new era of green aware AI. *ACM Computing Surveys*, 57(8):194:1–194:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Nguyen:2025:BET

[3266] Thanh Linh Nguyen, Lam Nguyen, Thong Hoang, Dilum Bandara, Qin Wang, Qinghua Lu, Xiwei Xu, Liming Zhu, and Shiping Chen. Blockchain-empowered trustworthy data sharing: Fundamentals, applications, and challenges. *ACM Computing Surveys*, 57(8):195:1–195:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shahnawaz:2025:CSB

[3267] Mohammad Shahnawaz and Manish Kumar. A comprehensive survey on big data analytics: Characteristics, tools and techniques. *ACM Computing Surveys*, 57(8):196:1–196:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Jan:2025:MSB

[3268] Mian Ahmad Jan, Muhammad Adil, Bouziane Brik, Saad Harous, and Sohail Abbas. Making sense of big data in intelligent transportation systems: Current trends, challenges and future directions. *ACM Computing Surveys*, 57(8):197:1–197:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Liu:2025:PDC

[3269] Guozhi Liu, Weiwei Lin, Haotong Zhang, Jianpeng Lin, Shaoliang Peng, and Keqin Li. Public datasets for cloud computing: a comprehensive survey. *ACM Computing Surveys*, 57(8):198:1–198:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Santos:2025:TRC

[3270] Paulo Roberto da Paz Ferraz Santos, Paulo Angelo Alves Resende, João José Costa Gondim, and André Costa Drummond. Towards robust cyber attack taxonomies: a survey with requirements, structures, and assessment. *ACM Computing Surveys*, 57(8):199:1–199:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Liu:2025:PCR

[3271] Tianen Liu, Shuai Wang, Zheng Dong, Borui Li, and Tian He. From perception to computation: Revisiting delay optimization for connected autonomous vehicles. *ACM Computing Surveys*, 57(8):200:1–200:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Rizvi:2025:TCU

[3272] Syed Mustafa Haider Rizvi, Ramsha Imran, and Arif Mahmood. Text classification using graph convolutional networks: a comprehensive survey. *ACM Computing Surveys*, 57(8):201:1–201:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Diamantini:2025:SMP

[3273] Claudia Diamantini, Tarique Khan, Domenico Potena, and Emanuele Storti. Semantic models of performance indicators: a systematic survey. *ACM Computing Surveys*, 57(8):202:1–202:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Lee:2025:SHM

[3274] Geon Lee, Fanchen Bu, Tina Eliassi-Rad, and Kijung Shin. A survey on hypergraph mining: Patterns, tools, and generators. *ACM Computing Surveys*, 57(8):203:1–203:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Benarous:2025:RPC

[3275] Leila Benarous, Sherali Zeadally, Saadi Boudjit, and Abdelhamid Mellouk. A review of pseudonym change strategies for location privacy preservation schemes in vehicular networks. *ACM Computing Surveys*, 57(8):204:1–204:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Dhekane:2025:TLS

[3276] Sourish Gunesh Dhekane and Thomas Ploetz. Transfer learning in sensor-based human activity recognition: a survey. *ACM Computing Surveys*, 57(8):205:1–205:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhang:2025:ILI

[3277] Zhuosheng Zhang, Yao Yao, Aston Zhang, Xiangru Tang, Xinbei Ma, Zhiwei He, Yiming Wang, Mark Gerstein, Rui Wang, Gongshen Liu, and Hai Zhao. Igniting language intelligence: The Hitchhiker's guide from chain-of-thought reasoning to language agents. *ACM Computing Surveys*, 57(8):206:1–206:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ma:2025:CIL

[3278] Yihong Ma, Yijun Tian, Nuno Moniz, and Nitesh V. Chawla. Class-imbalanced learning on graphs: a survey. *ACM Computing Surveys*, 57(8):207:1–207:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Renzullo:2025:APR

[3279] Joseph Renzullo, Pemma Reiter, Westley Weimer, and Stephanie Forrest. Automated program repair: Emerging trends pose and expose problems for benchmarks. *ACM Computing Surveys*, 57(8):208:1–208:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zheng:2025:REL

[3280] Yue Zheng, Yuhao Chen, Bin Qian, Xiufang Shi, Yuanchao Shu, and Jiming Chen. A review on edge large language models: Design, execution, and applications. *ACM Computing Surveys*, 57(8):209:1–209:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Karunanayake:2025:DDA

[3281] Naveen Karunanayake, Ravin Gunawardena, Suranga Seneviratne, and Sanjay Chawla. Out-of-distribution data: an acquaintance of adversarial examples — a survey. *ACM Computing Surveys*, 57(8):210:1–210:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Syed:2025:AIS

[3282] Naeem Syed, Adnan Anwar, Zubair Baig, and Sherali Zeadally. Artificial Intelligence as a Service (AIaaS) for cloud, fog and the edge: State-of-the-art practices. *ACM Computing Surveys*, 57(8):211:1–211:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Liu:2025:MLI

[3283] Mutong Liu, Yang Liu, and Jiming Liu. Machine learning for infectious disease risk prediction: a survey. *ACM Computing Surveys*, 57(8):212:1–212:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

An:2025:CRI

[3284] Qi An, Frank Jiang, Azadeh Neiat, William Yeoh, Kumar Venayagamoorthy, and Arkady Zaslavsky. A comprehensive review on IoT marketplace matchmaking: Approaches, opportunities and challenges. *ACM Computing Surveys*, 57(8):213:1–213:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Oliveira:2025:FEA

[3285] Guilherme Oliveira, Quoc Ngo, Leandro Passos, Danilo Jodas, Joao Papa, and Dinesh Kumar. Facial expression analysis in Parkinsons's disease using machine learning: a review. *ACM Computing Surveys*, 57(8): 214:1–214:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Xu:2025:DLC

[3286] Huali Xu, Shuaifeng Zhi, Shuzhou Sun, Vishal Patel, and Li Liu. Deep learning for cross-domain few-shot visual recognition: a survey. *ACM Computing Surveys*, 57(8):215:1–215:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Truong:2025:ADG

[3287] Vu Tuan Truong, Luan Ba Dang, and Long Bao Le. Attacks and defenses for generative diffusion models: a comprehensive survey. *ACM Computing Surveys*, 57(8):216:1–216:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Casey:2025:SSC

[3288] Beatrice Casey, Joanna C. S. Santos, and George Perry. A survey of source code representations for machine learning-based cybersecurity tasks. *ACM Computing Surveys*, 57(8):217:1–217:??, August 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kemmerzell:2025:TBU

[3289] Nils Kemmerzell, Annika Schreiner, Haroon Khalid, Michael Schalk, and Letizia Bordoli. Towards a better understanding of evaluating trustworthiness in AI systems. *ACM Computing Surveys*, 57(9):218:1–218:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hiniduma:2025:DRA

[3290] Kaveen Hiniduma, Suren Byna, and Jean Luca Bez. Data readiness for AI: a 360-degree survey. *ACM Computing Surveys*, 57(9):219:1–219:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zavitsanos:2025:MLI

[3291] Elias Zavitsanos, Eirini Spyropoulou, George Giannakopoulos, and Georgios Paliouras. Machine learning for identifying risk in financial statements: a survey. *ACM Computing Surveys*, 57(9):220:1–220:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Huang:2025:EFS

[3292] Jiahua Huang, Weiwei Lin, Wentai Wu, Yang Wang, Haocheng Zhong, Xinhua Wang, and Keqin Li. On efficiency, fairness and security in AI accelerator resource sharing: a survey. *ACM Computing Surveys*, 57 (9):221:1–221:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Haskard:2025:SRN

[3293] Adam Haskard and Damith Herath. Secure robotics: Navigating challenges at the nexus of safety, trust, and cybersecurity in cyber-physical systems. *ACM Computing Surveys*, 57(9):222:1–222:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ye:2025:VFL

[3294] Mang Ye, Wei Shen, Bo Du, Eduard Snezhko, Vassili Kovalev, and Pong C. Yuen. Vertical federated learning for effectiveness, security, applicability: a survey. *ACM Computing Surveys*, 57(9):223:1–223:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Tariq:2025:AFS

[3295] Shahroz Tariq, Mohan Baruwal Chhetri, Surya Nepal, and Cecile Paris. Alert fatigue in security operations centres: Research challenges and opportunities. *ACM Computing Surveys*, 57(9):224:1–224:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sun:2025:SMB

[3296] Yimiao Sun, Yuan He, Yang Zou, Jiaming Gu, Xiaolei Yang, Jia Zhang, and Ziheng Mao. A survey of mmWave backscatter: Applications, platforms, and technologies. *ACM Computing Surveys*, 57(9):225:1–225:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Vredenborg:2025:PPT

[3297] Marloes Vredenborg, Anouk van Kasteren, and Judith Masthoff. Personalization in public transport passenger information systems: a systematic review and framework. *ACM Computing Surveys*, 57(9):226:1–226:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Alosaimi:2025:TEF

[3298] Mohammed Alosaimi, Omer Rana, and Charith Perera. Testbeds and evaluation frameworks for anomaly detection within built environments: a systematic review. *ACM Computing Surveys*, 57(9):227:1–227:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wang:2025:EEI

[3299] Xubin Wang, Zhiqing Tang, Jianxiong Guo, Tianhui Meng, Chenhao Wang, Tian Wang, and Weijia Jia. Empowering edge intelligence: a comprehensive survey on on-device AI models. *ACM Computing Surveys*, 57(9):228:1–228:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Curlin:2025:SHB

[3300] Phaedra Sophia Curlin, Jeff Heiges, Calvin Chan, and Tamara Silbergleit Lehman. A survey of hardware-based AES SBoxes: Area, performance, and security. *ACM Computing Surveys*, 57(9):229:1–229:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhao:2025:FSB

[3301] Joshua Zhao, Saurabh Bagchi, Salman Avestimehr, Kevin Chan, Somali Chaterji, Dimitris Dimitriadis, Jiacheng Li, Ninghui Li, Arash Nourian, and Holger Roth. The federation strikes back: a survey of federated learning privacy attacks, defenses, applications, and policy landscape. *ACM Computing Surveys*, 57(9):230:1–230:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Liu:2025:VTD

[3302] Chenxi Liu, Zhu Xiao, Wangchen Long, Tong Li, Hongbo Jiang, and Keqin Li. Vehicle trajectory data processing, analytics, and applications: a survey. *ACM Computing Surveys*, 57(9):231:1–231:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Doddapaneni:2025:PPM

[3303] Sumanth Doddapaneni, Gowtham Ramesh, Mitesh Khapra, Anoop Kunchukuttan, and Pratyush Kumar. A primer on pretrained multilingual language models. *ACM Computing Surveys*, 57(9):232:1–232:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wendzel:2025:GTS

[3304] Steffen Wendzel, Luca Caviglione, Wojciech Mazurczyk, Aleksandra Mileva, Jana Dittmann, Christian Krätzer, Kevin Lamshöft, Claus Vielhauer, Laura Hartmann, Jörg Keller, Tom Neubert, and Sebastian Zillien. A generic taxonomy for steganography methods. *ACM Computing Surveys*, 57(9):233:1–233:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Nahavandi:2025:CRA

[3305] Saeid Nahavandi, Roohallah Alizadehsani, Darius Nahavandi, Shady Mohamed, Navid Mohajer, Mohammad Rokonuzzaman, and Ibrahim Hossain. A comprehensive review on autonomous navigation. *ACM Computing Surveys*, 57(9):234:1–234:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Szabo:2025:OCD

[3306] Claudia Szabo, Robin Baker, Glen Pearce, Eyoel Teffera, and Anthony Perry. Overview and challenges of distributed decision making in resource contested and dynamic environments. *ACM Computing Surveys*, 57(9): 235:1–235:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hasan:2025:SLU

[3307] Md Mehedi Hasan, Moloud Abdar, Abbas Khosravi, Uwe Aickelin, Pietro Lio, Ibrahim Hossain, Ashikur Rahman, and Saeid Nahavandi. Survey on leveraging uncertainty estimation towards trustworthy deep neural networks: The case of reject option and post-training processing. *ACM Computing Surveys*, 57(9):236:1–236:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ducasse:2025:WJS

[3308] Quentin Ducasse, Pascal Cotret, and Loïc Lagadec. War on JITs: Software-based attacks and hybrid defenses for JIT compilers — a comprehensive survey. *ACM Computing Surveys*, 57(9):237:1–237:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Jin:2025:AVT

[3309] Yuan Jin, Antonio Pepe, Jianning Li, Christina Gsaxner, Yuxuan Chen, Behrus Puladi, Fen hua Zhao, Kelsey Pomykala, Jens Kleesiek, Alejandro F Frangi, and Jan Egger. Aortic vessel tree segmentation for cardiovascular diseases treatment: Status quo. *ACM Computing Surveys*, 57 (9):238:1–238:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Onik:2025:SLR

[3310] Abdur Rahman Onik, Joseph Brown, Clinton Walker, and Ibrahim Baggili. A systematic literature review of secure instant messaging applications from a digital forensics perspective. *ACM Computing Surveys*, 57 (9):239:1–239:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Freitas:2025:SSA

[3311] Diana Freitas, Paul deGrandis, and Tiago Boldt Sousa. A survey on the state of the art of causally consistent cloud systems. *ACM Computing Surveys*, 57(9):240:1–240:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Qian:2025:TBM

[3312] Bingchen Qian, Yuexiang Xie, Yaliang Li, Bolin Ding, and Jingren Zhou. Tree-based models for vertical federated learning: a survey. *ACM Computing Surveys*, 57(9):241:1–241:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Klabunde:2025:SNN

[3313] Max Klabunde, Tobias Schumacher, Markus Strohmaier, and Florian Lemmerich. Similarity of neural network models: a survey of functional and representational measures. *ACM Computing Surveys*, 57(9):242:1–242:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Foo:2025:AGC

[3314] Lin Geng Foo, Hossein Rahmani, and Jun Liu. AI-generated content (AIGC) for various data modalities: a survey. *ACM Computing Surveys*, 57(9):243:1–243:??, September 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Jin:2025:TAC

[3315] Lingxin Jin, Xiangyu Wen, Wei Jiang, Jinyu Zhan, and Xingzhi Zhou. Trojan attacks and countermeasures on deep neural networks from life-cycle perspective: a review. *ACM Computing Surveys*, 57(10):244:1–244:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Uddin:2025:SLR

[3316] Md Palash Uddin, Yong Xiang, Mahmudul Hasan, Jun Bai, Yao Zhao, and Longxiang Gao. A systematic literature review of robust federated learning: Issues, solutions, and future research directions. *ACM Computing Surveys*, 57(10):245:1–245:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Konstantopoulou:2025:RAF

[3317] Evangelia Konstantopoulou, George Athanasiou, and Nicolas Sklavos. Review and analysis of FPGA and ASIC implementations of NIST lightweight cryptography finalists. *ACM Computing Surveys*, 57(10):246:1–246:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Yadav:2025:HRL

[3318] Sandarbh Yadav, Vadlamani Ravi, and Shivaram Kalyanakrishnan. Hybrids of reinforcement learning and evolutionary computation in finance: a survey. *ACM Computing Surveys*, 57(10):247:1–247:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Assres:2025:SAC

[3319] Gebremariam Assres, Guru Bhandari, Andrii Shalaginov, Tor-Morten Gronli, and Gheorghita Ghinea. State-of-the-art and challenges of engineering ML-enabled software systems in the deep learning era. *ACM Computing Surveys*, 57(10):248:1–248:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kim:2025:VQA

[3320] Byeong Su Kim, Jieun Kim, Deokwoo Lee, and Beakcheol Jang. Visual question answering: a survey of methods, datasets, evaluation, and challenges. *ACM Computing Surveys*, 57(10):249:1–249:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhang:2025:UEE

[3321] Qingbo Zhang, Xiangmin Zhou, Xiuzhen Zhang, Xiaochun Yang, Bin Wang, and Xun Yi. Unified empirical evaluation and comparison of session-based recommendation algorithms. *ACM Computing Surveys*, 57 (10):250:1–250:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Riesco:2025:PSS

[3322] Adrián Riesco, Kazuhiro Ogata, Masaki Nakamura, Daniel Gaina, Duong Dinh Tran, and Kokichi Futatsugi. Proof scores: a survey. *ACM Computing Surveys*, 57(10):251:1–251:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Aljohani:2025:SAF

[3323] Abdulaziz Aljohani, Omer Rana, and Charith Perera. Self-adaptive federated learning in Internet of Things systems: a review. *ACM Computing Surveys*, 57(10):252:1–252:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kim:2025:ECT

[3324] Gun Il Kim, Sunga Hwang, and Beakcheol Jang. Efficient compressing and tuning methods for large language models: a systematic literature review. *ACM Computing Surveys*, 57(10):253:1–253:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Pradeep:2025:SSS

[3325] Anagha Pradeep and Radhika Mamidi. Sandar'sana: a survey on Sanskrit computational linguistics and digital infrastructure for Sanskrit.

ACM Computing Surveys, 57(10):254:1–254:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Edemacu:2025:PPP

[3326] Kennedy Edemacu and Xintao Wu. Privacy preserving prompt engineering: a survey. *ACM Computing Surveys*, 57(10):255:1–255:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Lewis:2025:MLA

[3327] Noah Lewis, Jean Luca Bez, and Suren Byna. I/O in machine learning applications on HPC systems: a 360-degree survey. *ACM Computing Surveys*, 57(10):256:1–256:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Dervisevic:2025:QKD

[3328] Emir Dervisevic, Amina Tankovic, Ehsan Fazel, Ramana Kompella, Peppino Fazio, Miroslav Voznak, and Miralem Mehic. Quantum key distribution networks — key management: a survey. *ACM Computing Surveys*, 57(10):257:1–257:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Oruche:2025:SRA

[3329] Roland Oruche, Sai Keerthana Goruganthu, Rithika Akula, Xiyao Cheng, Ashraful Md Goni, Bruce W. Shibo, Kerk Kee, Marcos Zampieri, and Prasad Calyam. A survey on the recent advancements in human-centered dialog systems. *ACM Computing Surveys*, 57(10):258:1–258:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhang:2025:SPC

[3330] Shoulong Zhang, Haomin Li, Kaiwen Sun, Hejia Chen, Yan Wang, and Shuai Li. Security and privacy challenges of AIGC in metaverse: a comprehensive survey. *ACM Computing Surveys*, 57(10):259:1–259:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Vats:2025:GCD

[3331] Vibhas K. Vats and David Crandall. Geometric constraints in deep learning frameworks: a survey. *ACM Computing Surveys*, 57(10):260:1–260:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Faraj:2025:SAD

[3332] Omair Faraj, David Megias, and Joaquin Garcia-alfaro. Security approaches for data provenance in the Internet of Things: a systematic literature review. *ACM Computing Surveys*, 57(10):261:1–261:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

DiMarino:2025:AHM

[3333] Antonio Di Marino, Vincenzo Bevilacqua, Angelo Ciaramella, Ivanoe De Falco, and Giovanna Sannino. Ante-hoc methods for interpretable deep models: a survey. *ACM Computing Surveys*, 57(10):262:1–262:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhao:2025:SAD

[3334] Jingyuan Zhao, Yuyan Wu, Rui Deng, Susu Xu, Jinpeng Gao, and Andrew Burke. A survey of autonomous driving from a deep learning perspective. *ACM Computing Surveys*, 57(10):263:1–263:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Chen:2025:CPS

[3335] Xiuyuan Chen, Junzuo Lai, Chao Lin, Xinyi Huang, and Debiao He. Cryptographic primitives in script-based and scriptless payment channel networks: a survey. *ACM Computing Surveys*, 57(10):264:1–264:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Arsenault:2025:SEA

[3336] Pierre-Daniel Arsenault, Shengrui Wang, and Jean-Marc Patenaude. A survey of explainable artificial intelligence (XAI) in financial time series forecasting. *ACM Computing Surveys*, 57(10):265:1–265:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Asghari:2025:UOS

[3337] Omid Asghari, Naghmeh Ivaki, and Henrique Madeira. UAV operations safety assessment: a systematic literature review. *ACM Computing Surveys*, 57(10):266:1–266:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Danushi:2025:CES

[3338] Ornela Danushi, Stefano Forti, and Jacopo Soldani. Carbon-efficient software design and development: a systematic literature review. *ACM Computing Surveys*, 57(10):267:1–267:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wang:2025:DBV

[3339] Bingyuan Wang, Qifeng Chen, and Zeyu Wang. Diffusion-based visual art creation: a survey and new perspectives. *ACM Computing Surveys*, 57(10):268:1–268:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Fawole:2025:RAV

[3340] Oluwajuwon Fawole and Danda Rawat. Recent advances in vision transformer robustness against adversarial attacks in traffic sign detection and recognition: a survey. *ACM Computing Surveys*, 57(10):269:1–269:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Liu:2025:NSV

[3341] Jing Liu, Yang Liu, Jieyu Lin, Jielin Li, Liang Cao, Peng Sun, Bo Hu, Liang Song, Azzedine Boukerche, and Victor C. M. Leung. Networking systems for video anomaly detection: a tutorial and survey. *ACM Computing Surveys*, 57(10):270:1–270:??, October 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Taleb:2025:SSP

[3342] Imane Taleb, Jean-Loup Guillaume, and Benjamin Duthil. A survey on services placement algorithms in integrated cloud-fog /edge computing. *ACM Computing Surveys*, 57(11):271:1–271:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hanisch:2025:ATB

[3343] Simon Hanisch, Patricia Arias-Cabarcos, Javier Parra-Arnau, and Thorsten Strufe. Anonymization techniques for behavioral biometric data: a survey. *ACM Computing Surveys*, 57(11):272:1–272:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wang:2025:SRX

[3344] Xian Wang, Luyao Shen, and Lik-Hang Lee. A systematic review of XR-enabled remote human–robot interaction systems. *ACM Computing*

Surveys, 57(11):273:1–273:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhou:2025:DAG

[3345] Jiajun Zhou, Chenxuan Xie, Shengbo Gong, Zhenyu Wen, Xiangyu Zhao, Qi Xuan, and Xiaoniu Yang. Data augmentation on graphs: a technical survey. *ACM Computing Surveys*, 57(11):274:1–274:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bai:2025:CSM

[3346] Jun Bai, Di Wu, Tristan Shelley, Peter Schubel, David Twine, John Russell, Xuesen Zeng, and Ji Zhang. A comprehensive survey on machine learning driven material defect detection. *ACM Computing Surveys*, 57 (11):275:1–275:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Saini:2025:SRT

[3347] Komal Saini and Sandeep Sharma. Smart road traffic monitoring: Unveiling the synergy of IoT and AI for enhanced urban mobility. *ACM Computing Surveys*, 57(11):276:1–276:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhang:2025:SST

[3348] Haopeng Zhang, Philip S. Yu, and Jiawei Zhang. A systematic survey of text summarization: From statistical methods to large language models. *ACM Computing Surveys*, 57(11):277:1–277:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sun:2025:SRF

[3349] Jiankai Sun, Chuanyang Zheng, Enze Xie, Zhengying Liu, Ruihang Chu, Jianing Qiu, Jiaqi Xu, Mingyu Ding, Hongyang Li, Mengzhe Geng, Yue Wu, Wenhai Wang, Junsong Chen, Zhangyue Yin, Xiaozhe Ren, Jie Fu, Junxian He, Yuan Wu, Qi Liu, Xihui Liu, Yu Li, Hao Dong, Yu Cheng, Ming Zhang, Pheng Ann Heng, Jifeng Dai, Ping Luo, Jingdong Wang, Ji-Rong Wen, Xipeng Qiu, Yike Guo, Hui Xiong, Qun Liu, and Zhenguo Li. A survey of reasoning with foundation models: Concepts, methodologies, and outlook. *ACM Computing Surveys*, 57(11):278:1–278:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bai:2025:PRL

[3350] Youheng Bai, Zitao Liu, Teng Guo, Mingliang Hou, and Kui Xiao. Prerequisite relation learning: a survey and outlook. *ACM Computing Sur-*

veys, 57(11):279:1–279:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zilberman:2025:IRP

[3351] Aviram Zilberman, Amit Dvir, and Ariel Stulman. IPv6 routing protocol for low-power and lossy networks security vulnerabilities and mitigation techniques: a survey. *ACM Computing Surveys*, 57(11):280:1–280:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Banicescu:2025:SAC

[3352] Ioana Banicescu, Trisha Chakraborty, Seth Gilbert, and Maxwell Young. A survey on adversarial contention resolution. *ACM Computing Surveys*, 57(11):281:1–281:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kim:2025:SSC

[3353] Jihoon Kim, Hyerean Jang, and Youngjoo Shin. A survey of side-channel attacks on branch prediction units. *ACM Computing Surveys*, 57(11):282:1–282:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shadman:2025:KDC

[3354] Rashik Shadman, Ahmed Anu Wahab, Michael Manno, Matthew Lukaszewski, Daqing Hou, and Faraz Hussain. Keystroke dynamics: Concepts, techniques, and applications. *ACM Computing Surveys*, 57 (11):283:1–283:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sherkat:2025:TDA

[3355] Shermin Sherkat, Thomas Wortmann, and Andreas Wortmann. Two decades of automated AI planning methods in construction and fabrication: a systematic review. *ACM Computing Surveys*, 57(11):284:1–284:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Jahanifar:2025:DGC

[3356] Mostafa Jahanifar, Manahil Raza, Kesi Xu, Trinh Thi Le Vuong, Robert Jewsbury, Adam Shephard, Neda Zamanitajeddin, Jin Tae Kwak, Shan E Ahmed Raza, Fayyaz Minhas, and Nasir Rajpoot. Domain generalization in computational pathology: Survey and guidelines. *ACM Computing Surveys*, 57(11):285:1–285:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Silvano:2025:SDL

[3357] Cristina Silvano, Daniele Ielmini, Fabrizio Ferrandi, Leandro Fiorin, Serena Curzel, Luca Benini, Francesco Conti, Angelo Garofalo, Cristian Zambelli, Enrico Calore, Sebastiano Schifano, Maurizio Palesi, Giuseppe Ascia, Davide Patti, Nicola Petra, Davide De Caro, Luciano Lavagno, Teodoro Urso, Valeria Cardellini, Gian Carlo Cardarilli, Robert Birke, and Stefania Perri. A survey on deep learning hardware accelerators for heterogeneous HPC platforms. *ACM Computing Surveys*, 57(11):286:1–286:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Di:2025:SEB

[3358] Sheng Di, Jinyang Liu, Kai Zhao, Xin Liang, Robert Underwood, Zhaorui Zhang, Milan Shah, Yafan Huang, Jiajun Huang, Xiaodong Yu, Congrong Ren, Hanqi Guo, Grant Wilkins, Dingwen Tao, Jiannan Tian, Sian Jin, Zizhe Jian, Daoce Wang, Md Hasanur Rahman, Boyuan Zhang, Shihui Song, Jon Calhoun, Guanpeng Li, Kazutomo Yoshii, Khalid Alharthi, and Franck Cappello. A survey on error-bounded lossy compression for scientific datasets. *ACM Computing Surveys*, 57(11):287:1–287:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Sangaroonsilp:2025:SPP

[3359] Pattaraporn Sangaroonsilp and Hoa Khanh Dam. A study on the prevalence of privacy in software engineering. *ACM Computing Surveys*, 57 (11):288:1–288:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shao:2025:ECS

[3360] Shuai Shao, Ye Tian, Yajie Zhang, Shangshang Yang, Panpan Zhang, Cheng He, Xingyi Zhang, and Yaochu Jin. Evolutionary computation for sparse multi-objective optimization: a survey. *ACM Computing Surveys*, 57(11):289:1–289:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Dong:2025:RAS

[3361] Junlan Dong and Jinghui Zhong. Recent advances in symbolic regression. *ACM Computing Surveys*, 57(11):290:1–290:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Benarba:2025:BFL

[3362] Nawel Benarba and Sara Bouchenak. Bias in federated learning: a comprehensive survey. *ACM Computing Surveys*, 57(11):291:1–291:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wu:2025:IVC

[3363] Anpeng Wu, Kun Kuang, Ruoxuan Xiong, and Fei Wu. Instrumental variables in causal inference and machine learning: a survey. *ACM Computing Surveys*, 57(11):292:1–292:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Ang:2025:UCV

[3364] Kok Wee Ang, Eyasu Getahun Chekole, and Jianying Zhou. Unveiling the covert vulnerabilities in multi-factor authentication protocols: a systematic review and security analysis. *ACM Computing Surveys*, 57 (11):293:1–293:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Baiense:2025:DHM

[3365] João Baiense, Eftim Zdravevski, Paulo Coelho, Ivan Miguel Pires, and Fernando J. Velez. Driving healthcare monitoring with IoT and wearable devices: a systematic review. *ACM Computing Surveys*, 57(11):294:1–294:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Pippas:2025:ERL

[3366] Nikolaos Pippas, Elliot A. Ludvig, and Cagatay Turkay. The evolution of reinforcement learning in quantitative finance: a survey. *ACM Computing Surveys*, 57(11):295:1–295:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Niu:2025:WDL

[3367] Feifei Niu, Chuanyi Li, Kui Liu, Xin Xia, and David Lo. When deep learning meets information retrieval-based bug localization: a survey. *ACM Computing Surveys*, 57(11):296:1–296:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Xing:2025:USS

[3368] Lu Xing, Venkata Sai Pavan Kumar Vadrevu, and Walid G. Aref. The ubiquitous skiplist: a survey of what cannot be skipped about the skiplist and its applications in data systems. *ACM Computing Surveys*, 57(11):

297:1–297:??, November 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Xu:2025:SDO

[3369] Han Xu, Minghua Xu, Xianjun Deng, and Bang Wang. Sentiment diffusion in online social networks: a survey from the computational perspective. *ACM Computing Surveys*, 57(12):298:1–298:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Vilaca:2025:SRA

[3370] Luís Vilaça, Yi Yu, and Paula Viana. A survey of recent advances and challenges in deep audio-visual correlation learning. *ACM Computing Surveys*, 57(12):299:1–299:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Cai:2025:SPA

[3371] Haipeng Cai. A survey of program analysis for distributed software systems. *ACM Computing Surveys*, 57(12):300:1–300:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Benzin:2025:SEP

[3372] Janik-Vasily Benzin and Stefanie Rinderle-Ma. A survey on event prediction methods from a systems perspective: Bringing together disparate research areas. *ACM Computing Surveys*, 57(12):301:1–301:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zhong:2025:KAG

[3373] Zhiqiang Zhong, Anastasia Barkova, and Davide Mottin. Knowledge-augmented graph machine learning for drug discovery: a survey. *ACM Computing Surveys*, 57(12):302:1–302:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Mousavi:2025:DMS

[3374] Zahra Mousavi, Chadni Islam, Muhammad Ali Babar, Alsharif Abuadbba, and Kristen Moore. Detecting misuse of security APIs: a systematic review. *ACM Computing Surveys*, 57(12):303:1–303:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Slany:2025:SWI

[3375] Vlastimil Slany, Eva Krcalova, Jiri Balej, Martin Zach, Tereza Kucova, Michal Prauzek, and Radek Martinek. Smart water-IoT: Harnessing IoT and AI for efficient water management. *ACM Computing Surveys*, 57 (12):304:1–304:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Vetriveeran:2025:RPF

[3376] Divya Vetriveeran and Leena Sri R. Resource provisioning in fog computing — a survey. *ACM Computing Surveys*, 57(12):305:1–305:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Subramanian:2025:CBS

[3377] Chandrasekar Subramanian and Balaraman Ravindran. Causality in bandits: a survey. *ACM Computing Surveys*, 57(12):306:1–306:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Read:2025:SLD

[3378] Jesse Read and Indre Zliobaite. Supervised learning from data streams: an overview and update. *ACM Computing Surveys*, 57(12):307:1–307:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shakil:2025:TSR

[3379] Asma Shakil, Christof Lutteroth, and Gerald Weber. A taxonomy and systematic review of gaze interactions for 2D displays: Promising techniques and opportunities. *ACM Computing Surveys*, 57(12):308:1–308:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Hernandez-Ramos:2025:IDB

[3380] Jose Luis Hernandez-Ramos, Georgios Karopoulos, Efstratios Chatzoglou, Vasileios Kouliaridis, Enrique Marmol, Aurora Gonzalez-Vidal, and Georgios Kambourakis. Intrusion detection based on federated learning: a systematic review. *ACM Computing Surveys*, 57(12):309:1–309:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bolzan:2025:IEM

[3381] Willian Bolzan and Kleinner Farias. Investigating EEG microstate analysis in cognitive software engineering tasks: a systematic mapping study and taxonomy. *ACM Computing Surveys*, 57(12):310:1–310:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Farag:2025:MPH

[3382] Hamdy O. Farag, Mohamed Medhat Gaber, Mohammed Ibrahim Awad, and Nancy E. Elhady. Myoelectric prosthetic hands: a review of muscle synergy, machine learning and edge computing. *ACM Computing Surveys*, 57(12):311:1–311:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Southier:2025:SLR

[3383] Luiz Fernando Puttow Southier, Gustavo Alexandre Tuchlinowicz Nunes, João Henrique Pereira Machado, Matheus Buratti, Pedro Henrique de Viveiros Trentin, Wesley Augusto Catuzzo de Bona, Barbara de Oliveira Koop, Elioenai Markson Ferreira Diniz, João Victor Costa Mazzochin, João Leonardo Harres Dall Agnol, Lucas Caldeira de Oliveira, Marcelo Filipak, Luiz Antonio Zanlorensi, Marcos Belançon, Jefferson Oliva, Marcelo Teixeira, and Dalcimar Casanova. A systematic literature review on neonatal fingerprint recognition. *ACM Computing Surveys*, 57(12):312:1–312:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Wang:2025:SCN

[3384] Xiaojie Wang, Hanxue Li, Ling Yi, Zhaolong Ning, Xiaoming Tao, Song Guo, and Yan Zhang. A survey on off-chain networks: Frameworks, technologies, solutions and challenges. *ACM Computing Surveys*, 57 (12):313:1–313:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Saeedi:2025:SSO

[3385] Mahdis Saeedi, Hawre Hosseini, Christine Wong, and Hossein Fani. A survey of subgraph optimization for expert team formation. *ACM Computing Surveys*, 57(12):314:1–314:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Yan:2025:GAI

[3386] Huan Yan and Yong Li. Generative AI for intelligent transportation systems: Road transportation perspective. *ACM Computing Surveys*, 57 (12):315:1–315:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Zheng:2025:BRD

[3387] Zhaolong Zheng, Lin Yao, Haibo Hu, and Guowei Wu. Benchmarking relaxed differential privacy in private learning: a comparative survey.

ACM Computing Surveys, 57(12):316:1–316:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Weng:2025:SSL

[3388] Weining Weng, Yang Gu, Shuai Guo, Yuan Ma, Zhaohua Yang, Yuchen Liu, and Yiqiang Chen. Self-supervised learning for electroencephalogram: a systematic survey. *ACM Computing Surveys*, 57(12):317:1–317:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Shivashankar:2025:MSM

[3389] Karthik Shivashankar, Ghadi Al Hajj, and Antonio Martini. Maintainability and scalability in machine learning: Challenges and solutions. *ACM Computing Surveys*, 57(12):318:1–318:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kumar:2025:CRC

[3390] Satyam Kumar, Yelleti Vivek, Vadlamani Ravi, and Indranil Bose. A comprehensive review of causal inference in banking, finance, and insurance. *ACM Computing Surveys*, 57(12):319:1–319:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Canha:2025:FGB

[3391] Dulce Canha, Sylvain Kubler, Kary Främling, and Guy Fagherazzi. A functionally-grounded benchmark framework for XAI methods: Insights and foundations from a systematic literature review. *ACM Computing Surveys*, 57(12):320:1–320:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Cini:2025:GDL

[3392] Andrea Cini, Ivan Marisca, Daniele Zambon, and Cesare Alippi. Graph deep learning for time series forecasting. *ACM Computing Surveys*, 57 (12):321:1–321:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Peroni:2025:EEP

[3393] Leonardo Peroni and Sergey Gorinsky. An end-to-end pipeline perspective on video streaming in best-effort networks: a survey and tutorial. *ACM Computing Surveys*, 57(12):322:1–322:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Kadha:2025:UDF

[3394] VijayaKumar Kadha, Sambit Bakshi, and Santos Kumar Das. Unravelling digital forgeries: a systematic survey on image manipulation detection and localization. *ACM Computing Surveys*, 57(12):323:1–323:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Bouzid:2025:AEC

[3395] Rezika Bouzid and Raphaël Khoury. Assessing the effectiveness of ChatGPT in secure code development: a systematic literature review. *ACM Computing Surveys*, 57(12):324:1–324:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Fu:2025:IRC

[3396] Nan Fu, Guang Cheng, Yue Teng, Guangye Dai, Shui Yu, and Zihan Chen. Intelligent root cause localization in MicroService systems: a survey and new perspectives. *ACM Computing Surveys*, 57(12):325:1–325:??, December 2025. CODEN CMSVAN. ISSN 0360-0300 (print), 1557-7341 (electronic).

Aspray:1987:PJN

[3397] William Aspray and Arthur Burks, editors. *Papers of John von Neumann on computing and computer theory*. MIT Press, Cambridge, MA, USA, 1987. ISBN 0-262-22030-X. xviii + 624 pp. LCCN QA76.5 .P31451 1987. See [34].

Knuth:1992:LP

[3398] Donald E. Knuth. *Literate Programming*. CSLI Lecture Notes Number 27. Stanford University Center for the Study of Language and Information, Stanford, CA, USA, 1992. ISBN 0-937073-80-6 (paperback), 0-937073-81-4 (hardcover). xvi + 368 pp. LCCN QA76.6 .K644 1992. US$24.95 (paperback), US$59.95 (hardcover). Distributed by the University of Chicago Press.