

[1] "Reported means are for principal 1 which is the first algorithm listed in the pair for each column

" [1] "In each cell, first line is mean, second line is variance, third line is % of the time that market share > 0.1 or market share < 0.9"

Results for 1000 Needle In Haystack Medium

	ThompsonSampling, DynamicEpsilonGreedy	ThompsonSampling, DynamicGreedy	DynamicGreedy, DynamicEpsilonGreedy
HardMax	0.5382 +/- 0.0829 0.2193 (0.1735, 0.286) Extreme Shares: 0.848	0.5004 +/- 0.08005 0.2045 (0.1618, 0.2667) Extreme Shares: 0.768	0.4658 +/- 0.08306 0.2202 (0.1742, 0.2871) Extreme Shares: 0.864
HardMaxWithRandom	0.4854 +/- 0.06265 0.1252 (0.09908, 0.1633) Extreme Shares: 0.408	0.5192 +/- 0.06025 0.1158 (0.09166, 0.1511) Extreme Shares: 0.392	0.451 +/- 0.06515 0.1354 (0.1072, 0.1766) Extreme Shares: 0.512
SoftMax	0.4931 +/- 0.01528 0.007454 (0.005898, 0.009723) Extreme Shares: 0	0.5081 +/- 0.01487 0.007056 (0.005583, 0.009203) Extreme Shares: 0	0.4969 +/- 0.0154 0.007571 (0.005991, 0.009875) Extreme Shares: 0

Results for 3000 Needle In Haystack Medium

	ThompsonSampling, DynamicEpsilonGreedy	ThompsonSampling, DynamicGreedy	DynamicGreedy, DynamicEpsilonGreedy
HardMax	0.5248 +/- 0.08155 0.2122 (0.1679, 0.2768) Extreme Shares: 0.816	0.51 +/- 0.08121 0.2104 (0.1665, 0.2745) Extreme Shares: 0.792	0.4785 +/- 0.08277 0.2186 (0.173, 0.2851) Extreme Shares: 0.816
HardMaxWithRandom	0.5375 +/- 0.05326 0.09051 (0.07162, 0.1181) Extreme Shares: 0.24	0.5315 +/- 0.05097 0.08289 (0.06558, 0.1081) Extreme Shares: 0.192	0.4446 +/- 0.04767 0.07252 (0.05738, 0.09459) Extreme Shares: 0.168
SoftMax	0.5034 +/- 0.009352 0.002791 (0.002208, 0.00364) Extreme Shares: 0	0.5234 +/- 0.01191 0.004523 (0.003579, 0.0059) Extreme Shares: 0	0.491 +/- 0.01271 0.005154 (0.004078, 0.006722) Extreme Shares: 0

Results for 5000 Needle In Haystack Medium

	ThompsonSampling, DynamicEpsilonGreedy	ThompsonSampling, DynamicGreedy	DynamicGreedy, DynamicEpsilonGreedy
HardMax	0.5286 +/- 0.0813 0.2109 (0.1669, 0.2751) Extreme Shares: 0.824	0.5094 +/- 0.08125 0.2106 (0.1667, 0.2747) Extreme Shares: 0.816	0.4856 +/- 0.08192 0.2141 (0.1694, 0.2793) Extreme Shares: 0.832
HardMaxWithRandom	0.5687 +/- 0.04801 0.07355 (0.05819, 0.09593) Extreme Shares: 0.16	0.5548 +/- 0.04668 0.06952 (0.05501, 0.09068) Extreme Shares: 0.144	0.4288 +/- 0.04295 0.05887 (0.04658, 0.07678) Extreme Shares: 0.104
SoftMax	0.5075 +/- 0.008611 0.002366 (0.001872, 0.003086) Extreme Shares: 0	0.5307 +/- 0.011 0.003863 (0.003056, 0.005038) Extreme Shares: 0	0.4829 +/- 0.01235 0.004869 (0.003852, 0.00635) Extreme Shares: 0

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Results for 1000 Needle In Haystack High

	ThompsonSampling, DynamicEpsilonGreedy	ThompsonSampling, DynamicGreedy	DynamicGreedy, DynamicEpsilonGreedy
HardMax	0.52 +/- 0.08728 0.243 (0.1923, 0.317) Extreme Shares: 0.96	0.5754 +/- 0.08571 0.2344 (0.1855, 0.3057) Extreme Shares: 0.944	0.4637 +/- 0.08632 0.2377 (0.1881, 0.3101) Extreme Shares: 0.952
HardMaxWithRandom	0.5682 +/- 0.07578 0.1832 (0.145, 0.239) Extreme Shares: 0.776	0.6297 +/- 0.06789 0.1471 (0.1164, 0.1918) Extreme Shares: 0.632	0.4782 +/- 0.07687 0.1885 (0.1492, 0.2459) Extreme Shares: 0.792
SoftMax	0.5117 +/- 0.02476 0.01955 (0.01547, 0.02551) Extreme Shares: 0	0.5266 +/- 0.03151 0.03167 (0.02506, 0.04131) Extreme Shares: 0	0.4921 +/- 0.03276 0.03425 (0.0271, 0.04467) Extreme Shares: 0

Results for 3000 Needle In Haystack High

	ThompsonSampling, DynamicEpsilonGreedy	ThompsonSampling, DynamicGreedy	DynamicGreedy, DynamicEpsilonGreedy
HardMax	0.5251 +/- 0.08817 0.2481 (0.1963, 0.3236) Extreme Shares: 1	0.5897 +/- 0.08478 0.2293 (0.1814, 0.2991) Extreme Shares: 0.952	0.4563 +/- 0.08649 0.2387 (0.1889, 0.3113) Extreme Shares: 0.968
HardMaxWithRandom	0.5923 +/- 0.06395 0.1305 (0.1033, 0.1702) Extreme Shares: 0.52	0.6761 +/- 0.05935 0.1124 (0.08893, 0.1466) Extreme Shares: 0.504	0.4827 +/- 0.06623 0.1399 (0.1107, 0.1825) Extreme Shares: 0.536
SoftMax	0.5246 +/- 0.01676 0.008965 (0.007094, 0.01169) Extreme Shares: 0	0.5695 +/- 0.02623 0.02195 (0.01737, 0.02863) Extreme Shares: 0	0.4614 +/- 0.02836 0.02566 (0.0203, 0.03347) Extreme Shares: 0

Results for 5000 Needle In Haystack High

	ThompsonSampling, DynamicEpsilonGreedy	ThompsonSampling, DynamicGreedy	DynamicGreedy, DynamicEpsilonGreedy
HardMax	0.525 +/- 0.08821 0.2483 (0.1964, 0.3238) Extreme Shares: 0.992	0.5983 +/- 0.08459 0.2283 (0.1807, 0.2978) Extreme Shares: 0.944	0.4563 +/- 0.08656 0.2391 (0.1892, 0.3118) Extreme Shares: 0.96
HardMaxWithRandom	0.6017 +/- 0.05462 0.09519 (0.07532, 0.1242) Extreme Shares: 0.36	0.6876 +/- 0.05362 0.09175 (0.0726, 0.1197) Extreme Shares: 0.496	0.4677 +/- 0.05911 0.1115 (0.08821, 0.1454) Extreme Shares: 0.392
SoftMax	0.5235 +/- 0.01271 0.005154 (0.004078, 0.006722) Extreme Shares: 0	0.5786 +/- 0.02575 0.02116 (0.01675, 0.0276) Extreme Shares: 0	0.4541 +/- 0.02631 0.02209 (0.01747, 0.02881) Extreme Shares: 0

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Results for 1000 Heavy Tail

	ThompsonSampling, DynamicEpsilonGreedy	ThompsonSampling, DynamicGreedy	DynamicGreedy, DynamicEpsilonGreedy
HardMax	0.4622 +/- 0.08713 0.2422 (0.1917, 0.3159) Extreme Shares: 0.968	0.4108 +/- 0.08655 0.239 (0.1891, 0.3118) Extreme Shares: 0.992	0.5396 +/- 0.08459 0.2283 (0.1807, 0.2978) Extreme Shares: 0.912
HardMaxWithRandom	0.5232 +/- 0.08018 0.2051 (0.1623, 0.2675) Extreme Shares: 0.896	0.4543 +/- 0.07707 0.1895 (0.15, 0.2472) Extreme Shares: 0.8	0.5477 +/- 0.07001 0.1564 (0.1237, 0.204) Extreme Shares: 0.632
SoftMax	0.5214 +/- 0.0228 0.01659 (0.01312, 0.02163) Extreme Shares: 0	0.513 +/- 0.02549 0.02073 (0.0164, 0.02704) Extreme Shares: 0	0.4936 +/- 0.02533 0.02047 (0.0162, 0.0267) Extreme Shares: 0

Results for 3000 Heavy Tail

	ThompsonSampling, DynamicEpsilonGreedy	ThompsonSampling, DynamicGreedy	DynamicGreedy, DynamicEpsilonGreedy
HardMax	0.4633 +/- 0.08786 0.2463 (0.1949, 0.3213) Extreme Shares: 0.976	0.4106 +/- 0.08682 0.2405 (0.1903, 0.3137) Extreme Shares: 0.984	0.5533 +/- 0.08422 0.2263 (0.1791, 0.2952) Extreme Shares: 0.88
HardMaxWithRandom	0.5514 +/- 0.06718 0.144 (0.114, 0.1878) Extreme Shares: 0.536	0.4786 +/- 0.06896 0.1517 (0.1201, 0.1979) Extreme Shares: 0.584	0.5634 +/- 0.06095 0.1185 (0.0938, 0.1546) Extreme Shares: 0.408
SoftMax	0.5324 +/- 0.01201 0.004601 (0.003641, 0.006001) Extreme Shares: 0	0.5363 +/- 0.02128 0.01446 (0.01144, 0.01885) Extreme Shares: 0	0.4843 +/- 0.02276 0.01653 (0.01308, 0.02156) Extreme Shares: 0

Results for 5000 Heavy Tail

	ThompsonSampling, DynamicEpsilonGreedy	ThompsonSampling, DynamicGreedy	DynamicGreedy, DynamicEpsilonGreedy
HardMax	0.4635 +/- 0.08813 0.2478 (0.1961, 0.3232) Extreme Shares: 0.992	0.416 +/- 0.08658 0.2392 (0.1893, 0.312) Extreme Shares: 0.984	0.5644 +/- 0.08447 0.2277 (0.1801, 0.2969) Extreme Shares: 0.904
HardMaxWithRandom	0.5966 +/- 0.0507 0.08201 (0.06489, 0.107) Extreme Shares: 0.264	0.5097 +/- 0.0576 0.1059 (0.08377, 0.1381) Extreme Shares: 0.352	0.5713 +/- 0.05706 0.1039 (0.08221, 0.1355) Extreme Shares: 0.336
SoftMax	0.5289 +/- 0.008896 0.002525 (0.001998, 0.003293) Extreme Shares: 0	0.5433 +/- 0.02037 0.01324 (0.01047, 0.01727) Extreme Shares: 0	0.4821 +/- 0.02259 0.01629 (0.01289, 0.02124) Extreme Shares: 0

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Results for 1000 Uniform

	ThompsonSampling, DynamicEpsilonGreedy	ThompsonSampling, DynamicGreedy	DynamicGreedy, DynamicEpsilonGreedy
HardMax	0.5186 +/- 0.08626 0.2374 (0.1879, 0.3097) Extreme Shares: 0.944	0.5107 +/- 0.08552 0.2334 (0.1847, 0.3044) Extreme Shares: 0.912	0.4737 +/- 0.08523 0.2318 (0.1834, 0.3023) Extreme Shares: 0.92
HardMaxWithRandom	0.5103 +/- 0.07456 0.1774 (0.1403, 0.2313) Extreme Shares: 0.712	0.4605 +/- 0.07171 0.1641 (0.1298, 0.214) Extreme Shares: 0.656	0.4743 +/- 0.06833 0.149 (0.1179, 0.1943) Extreme Shares: 0.608
SoftMax	0.5167 +/- 0.02015 0.01296 (0.01025, 0.0169) Extreme Shares: 0	0.5022 +/- 0.02372 0.01795 (0.01421, 0.02342) Extreme Shares: 0	0.4802 +/- 0.0252 0.02026 (0.01603, 0.02643) Extreme Shares: 0

Results for 3000 Uniform

	ThompsonSampling, DynamicEpsilonGreedy	ThompsonSampling, DynamicGreedy	DynamicGreedy, DynamicEpsilonGreedy
HardMax	0.531 +/- 0.08672 0.24 (0.1899, 0.313) Extreme Shares: 0.96	0.5212 +/- 0.08657 0.2391 (0.1892, 0.3119) Extreme Shares: 0.96	0.4655 +/- 0.08319 0.2208 (0.1747, 0.288) Extreme Shares: 0.88
HardMaxWithRandom	0.5201 +/- 0.06424 0.1317 (0.1042, 0.1718) Extreme Shares: 0.488	0.4525 +/- 0.06181 0.1219 (0.09647, 0.159) Extreme Shares: 0.408	0.4414 +/- 0.05917 0.1117 (0.08838, 0.1457) Extreme Shares: 0.376
SoftMax	0.52 +/- 0.01261 0.005075 (0.004015, 0.006619) Extreme Shares: 0	0.5292 +/- 0.01893 0.01143 (0.009047, 0.01491) Extreme Shares: 0	0.472 +/- 0.02211 0.0156 (0.01234, 0.02035) Extreme Shares: 0

Results for 5000 Uniform

	ThompsonSampling, DynamicEpsilonGreedy	ThompsonSampling, DynamicGreedy	DynamicGreedy, DynamicEpsilonGreedy
HardMax	0.5361 +/- 0.08661 0.2393 (0.1894, 0.3122) Extreme Shares: 0.944	0.526 +/- 0.08672 0.24 (0.1899, 0.313) Extreme Shares: 0.96	0.4665 +/- 0.08399 0.2251 (0.1781, 0.2936) Extreme Shares: 0.88
HardMaxWithRandom	0.5324 +/- 0.0575 0.1055 (0.08347, 0.1376) Extreme Shares: 0.336	0.4955 +/- 0.05429 0.09406 (0.07442, 0.1227) Extreme Shares: 0.264	0.4305 +/- 0.05458 0.09506 (0.07522, 0.124) Extreme Shares: 0.312
SoftMax	0.5157 +/- 0.01008 0.003242 (0.002565, 0.004229) Extreme Shares: 0	0.5386 +/- 0.01774 0.01004 (0.007941, 0.01309) Extreme Shares: 0	0.4625 +/- 0.0211 0.0142 (0.01124, 0.01852) Extreme Shares: 0

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