Threshold-based Probability Estimation

Measurement	Threshold	Threshold_Value	Probability_Larger	Probability_Smaller
load-15m	mean	0.1005	0.3733	0.6267
load-15m	10%(max)	0.026	0.9257	0.0743
load-15m	90%(max)	0.234	0.024	0.976
memory_used_pct	mean	13.1057	0.4214	0.5786
memory_used_pct	10%(max)	2.0533	1.0	0.0
memory_used_pct	90%(max)	18.4801	0.0013	0.9987
cpu-user	mean	0.0379	0.483	0.517
cpu-user	10%(max)	0.0084	1.0	0.0
cpu-user	90%(max)	0.0752	0.0035	0.9965
cpu-system	mean	0.0287	0.4294	0.5706
cpu-system	10%(max)	0.0059	1.0	0.0
cpu-system	90%(max)	0.0527	0.0118	0.9882
sys-thermal	mean	0.9574	0.5522	0.4478
sys-thermal	10%(max)	0.355	0.5534	0.4466
sys-thermal	90%(max)	3.195	0.0148	0.9852
sys-interrupt-rate	mean	665.4201	0.4041	0.5959
sys-interrupt-rate	10%(max)	103.005	1.0	0.0
sys-interrupt-rate	90%(max)	927.045	0.0178	0.9822
disk-io-time	mean	0.0047	0.5716	0.4284
disk-io-time	10%(max)	0.0011	0.9035	0.0965
disk-io-time	90%(max)	0.0099	0.013	0.987

Crosstable Analysis Based on Mean Threshold

	x > Mean	x < Mean	Total
load-15m	25647	43051	68698
memory_used_pct	28950	39748	68698
cpu-user	33180	35518	68698
cpu-system	29496	39202	68698
sys-thermal	37938	30760	68698
sys-interrupt-rate	27763	40935	68698
disk-io-time	39270	29428	68698

Conditional Probability Analysis

Condition	Probability
P(load-15m > (mean) memory_used_pct > (mean))	0.2289
P(load-15m < (mean) memory_used_pct > (mean))	0.1926
P(load-15m > (mean) cpu-user > (mean))	0.2035
P(load-15m < (mean) cpu-user > (mean))	0.2795
P(load-15m > (mean) cpu-system > (mean))	0.1824
P(load-15m < (mean) cpu-system > (mean))	0.247
P(load-15m > (mean) sys-thermal > (mean))	0.2072
P(load-15m < (mean) sys-thermal > (mean))	0.345
P(load-15m < 10%(max) sys-thermal < 10%(max))	0.034
P(sys-thermal < 10%(max) load-15m > 90%(max))	0.0104
P(load-15m > 90%(max) sys-thermal < 10%(max))	0.0104
P(load-15m > (mean) sys-interrupt-rate > (mean))	0.1899
P(load-15m < (mean) sys-interrupt-rate > (mean))	0.2142
P(load-15m > (mean) disk-io-time > (mean))	0.2332
P(load-15m < (mean) disk-io-time > (mean))	0.3384
P(load-15m < 10%(max) disk-io-time < 10%(max))	0.0115
P(disk-io-time < 10%(max) load-15m > 90%(max))	0.001
P(load-15m > 90%(max) disk-io-time < 10%(max))	0.001
P(memory_used_pct > (mean) cpu-user > (mean))	0.2566
P(memory_used_pct < (mean) cpu-user > (mean))	0.2264
P(memory_used_pct > (mean) cpu-system > (mean))	0.2268
P(memory_used_pct < (mean) cpu-system > (mean))	0.2025
P(memory_used_pct > (mean) sys-thermal > (mean))	0.2356
P(memory_used_pct < (mean) sys-thermal > (mean))	0.3167
P(memory_used_pct > (mean) sys-interrupt-rate > (mean))	0.2621
P(memory_used_pct < (mean) sys-interrupt-rate > (mean))	0.1421
P(memory_used_pct > (mean) disk-io-time > (mean))	0.2858
P(memory_used_pct < (mean) disk-io-time > (mean))	0.2858
P(cpu-user > (mean) cpu-system > (mean))	0.3664
P(cpu-user < (mean) cpu-system > (mean))	0.0629
P(cpu-user > (mean) sys-thermal > (mean))	0.2652
P(cpu-user < (mean) sys-thermal > (mean))	0.287
P(sys-thermal < 10%(max) cpu-user > 90%(max))	0.0015
P(cpu-user > 90%(max) sys-thermal < 10%(max))	0.0015
P(cpu-user > (mean) sys-interrupt-rate > (mean))	0.2821
P(cpu-user < (mean) sys-interrupt-rate > (mean))	0.122
P(cpu-user > (mean) disk-io-time > (mean))	0.3077
P(cpu-user < (mean) disk-io-time > (mean))	0.2639
P(cpu-system > (mean) sys-thermal > (mean))	0.0040
	0.2348
P(cpu-system < (mean) sys-thermal > (mean))	0.2348
P(cpu-system < (mean) sys-thermal > (mean)) P(sys-thermal < 10%(max) cpu-system > 90%(max))	
	0.3174
P(sys-thermal < 10%(max) cpu-system > 90%(max))	0.3174 0.0056
P(sys-thermal < 10%(max) cpu-system > 90%(max)) P(cpu-system > 90%(max) sys-thermal < 10%(max))	0.3174 0.0056 0.0056
P(sys-thermal < 10%(max) cpu-system > 90%(max)) P(cpu-system > 90%(max) sys-thermal < 10%(max)) P(cpu-system > (mean) sys-interrupt-rate > (mean))	0.3174 0.0056 0.0056 0.2661
P(sys-thermal < 10%(max) cpu-system > 90%(max)) P(cpu-system > 90%(max) sys-thermal < 10%(max)) P(cpu-system > (mean) sys-interrupt-rate > (mean)) P(cpu-system < (mean) sys-interrupt-rate > (mean))	0.3174 0.0056 0.0056 0.2661 0.138
P(sys-thermal < 10%(max) cpu-system > 90%(max)) P(cpu-system > 90%(max) sys-thermal < 10%(max)) P(cpu-system > (mean) sys-interrupt-rate > (mean)) P(cpu-system < (mean) sys-interrupt-rate > (mean)) P(cpu-system > 90%(max) sys-interrupt-rate > 90%(max))	0.3174 0.0056 0.0056 0.2661 0.138 0.0023
P(sys-thermal < 10%(max) cpu-system > 90%(max)) P(cpu-system > 90%(max) sys-thermal < 10%(max)) P(cpu-system > (mean) sys-interrupt-rate > (mean)) P(cpu-system < (mean) sys-interrupt-rate > (mean)) P(cpu-system > 90%(max) sys-interrupt-rate > 90%(max)) P(cpu-system > (mean) disk-io-time > (mean))	0.3174 0.0056 0.0056 0.2661 0.138 0.0023 0.2736
P(sys-thermal < 10%(max) cpu-system > 90%(max)) P(cpu-system > 90%(max) sys-thermal < 10%(max)) P(cpu-system > (mean) sys-interrupt-rate > (mean)) P(cpu-system < (mean) sys-interrupt-rate > (mean)) P(cpu-system > 90%(max) sys-interrupt-rate > 90%(max)) P(cpu-system > (mean) disk-io-time > (mean)) P(cpu-system < (mean) disk-io-time > (mean))	0.3174 0.0056 0.0056 0.2661 0.138 0.0023 0.2736 0.298
P(sys-thermal < 10%(max) cpu-system > 90%(max)) P(cpu-system > 90%(max) sys-thermal < 10%(max)) P(cpu-system > (mean) sys-interrupt-rate > (mean)) P(cpu-system < (mean) sys-interrupt-rate > (mean)) P(cpu-system > 90%(max) sys-interrupt-rate > 90%(max)) P(cpu-system > (mean) disk-io-time > (mean)) P(cpu-system < (mean) disk-io-time > (mean)) P(sys-thermal > (mean) sys-interrupt-rate > (mean))	0.3174 0.0056 0.0056 0.2661 0.138 0.0023 0.2736 0.298 0.2255
P(sys-thermal < 10%(max) cpu-system > 90%(max)) P(cpu-system > 90%(max) sys-thermal < 10%(max)) P(cpu-system > (mean) sys-interrupt-rate > (mean)) P(cpu-system < (mean) sys-interrupt-rate > (mean)) P(cpu-system > 90%(max) sys-interrupt-rate > 90%(max)) P(cpu-system > (mean) disk-io-time > (mean)) P(cpu-system < (mean) disk-io-time > (mean)) P(sys-thermal > (mean) sys-interrupt-rate > (mean)) P(sys-thermal < (mean) sys-interrupt-rate > (mean))	0.3174 0.0056 0.0056 0.2661 0.138 0.0023 0.2736 0.298 0.298 0.1786
P(sys-thermal < 10%(max) cpu-system > 90%(max)) P(cpu-system > 90%(max) sys-thermal < 10%(max)) P(cpu-system > (mean) sys-interrupt-rate > (mean)) P(cpu-system < (mean) sys-interrupt-rate > (mean)) P(cpu-system > 90%(max) sys-interrupt-rate > 90%(max)) P(cpu-system > (mean) disk-io-time > (mean)) P(cpu-system < (mean) disk-io-time > (mean)) P(sys-thermal > (mean) sys-interrupt-rate > (mean)) P(sys-thermal < (mean) sys-interrupt-rate > (mean)) P(sys-thermal < 10%(max) sys-interrupt-rate > 90%(max))	0.3174 0.0056 0.0056 0.2661 0.138 0.0023 0.2736 0.298 0.2255 0.1786 0.0072
P(sys-thermal < 10%(max) cpu-system > 90%(max)) P(cpu-system > 90%(max) sys-thermal < 10%(max)) P(cpu-system > (mean) sys-interrupt-rate > (mean)) P(cpu-system < (mean) sys-interrupt-rate > (mean)) P(cpu-system > 90%(max) sys-interrupt-rate > 90%(max)) P(cpu-system > (mean) disk-io-time > (mean)) P(cpu-system < (mean) disk-io-time > (mean)) P(sys-thermal > (mean) sys-interrupt-rate > (mean)) P(sys-thermal < (mean) sys-interrupt-rate > (mean)) P(sys-thermal < 10%(max) sys-interrupt-rate > 90%(max)) P(sys-interrupt-rate > 90%(max) sys-thermal < 10%(max))	0.3174 0.0056 0.0056 0.2661 0.138 0.0023 0.2736 0.298 0.2255 0.1786 0.0072
P(sys-thermal < 10%(max) cpu-system > 90%(max)) P(cpu-system > 90%(max) sys-thermal < 10%(max)) P(cpu-system > (mean) sys-interrupt-rate > (mean)) P(cpu-system < (mean) sys-interrupt-rate > (mean)) P(cpu-system > 90%(max) sys-interrupt-rate > 90%(max)) P(cpu-system > (mean) disk-io-time > (mean)) P(cpu-system < (mean) disk-io-time > (mean)) P(sys-thermal > (mean) sys-interrupt-rate > (mean)) P(sys-thermal < (mean) sys-interrupt-rate > (mean)) P(sys-thermal < 10%(max) sys-interrupt-rate > 90%(max)) P(sys-interrupt-rate > 90%(max) sys-thermal < 10%(max)) P(sys-thermal > (mean) disk-io-time > (mean))	0.3174 0.0056 0.0056 0.2661 0.138 0.0023 0.2736 0.298 0.2255 0.1786 0.0072 0.0072
P(sys-thermal < 10%(max) cpu-system > 90%(max)) P(cpu-system > 90%(max) sys-thermal < 10%(max)) P(cpu-system > (mean) sys-interrupt-rate > (mean)) P(cpu-system > 90%(max) sys-interrupt-rate > 90%(max)) P(cpu-system > 90%(max) disk-io-time > (mean)) P(cpu-system > (mean) disk-io-time > (mean)) P(cpu-system < (mean) sys-interrupt-rate > (mean)) P(sys-thermal > (mean) sys-interrupt-rate > (mean)) P(sys-thermal < (mean) sys-interrupt-rate > 90%(max)) P(sys-thermal < 10%(max) sys-interrupt-rate > 90%(max)) P(sys-thermal > (mean) disk-io-time > (mean)) P(sys-thermal > (mean) disk-io-time > (mean)) P(sys-thermal < (mean) disk-io-time > (mean))	0.3174 0.0056 0.0056 0.2661 0.138 0.0023 0.2736 0.298 0.2255 0.1786 0.0072 0.0072 0.3171 0.2545
P(sys-thermal < 10%(max) cpu-system > 90%(max)) P(cpu-system > 90%(max) sys-thermal < 10%(max)) P(cpu-system > (mean) sys-interrupt-rate > (mean)) P(cpu-system < (mean) sys-interrupt-rate > 90%(max)) P(cpu-system > 90%(max) sys-interrupt-rate > 90%(max)) P(cpu-system > (mean) disk-io-time > (mean)) P(cpu-system < (mean) disk-io-time > (mean)) P(sys-thermal > (mean) sys-interrupt-rate > (mean)) P(sys-thermal < (mean) sys-interrupt-rate > (mean)) P(sys-thermal < 10%(max) sys-interrupt-rate > 90%(max)) P(sys-interrupt-rate > 90%(max) sys-thermal < 10%(max)) P(sys-thermal > (mean) disk-io-time > (mean)) P(sys-thermal < (mean) disk-io-time > (mean)) P(sys-thermal < 10%(max) disk-io-time > (mean))	0.3174 0.0056 0.0056 0.2661 0.138 0.0023 0.2736 0.298 0.2255 0.1786 0.0072 0.0072 0.0072 0.3171 0.2545 0.0441
P(sys-thermal < 10%(max) cpu-system > 90%(max)) P(cpu-system > 90%(max) sys-thermal < 10%(max)) P(cpu-system > (mean) sys-interrupt-rate > (mean)) P(cpu-system > 90%(max) sys-interrupt-rate > 90%(max)) P(cpu-system > 90%(max) sys-interrupt-rate > 90%(max)) P(cpu-system > (mean) disk-io-time > (mean)) P(cpu-system < (mean) disk-io-time > (mean)) P(sys-thermal > (mean) sys-interrupt-rate > (mean)) P(sys-thermal < 10%(max) sys-interrupt-rate > 90%(max)) P(sys-interrupt-rate > 90%(max) sys-thermal < 10%(max)) P(sys-thermal > (mean) disk-io-time > (mean)) P(sys-thermal < (mean) disk-io-time > (mean)) P(sys-thermal < 10%(max) disk-io-time > (mean)) P(sys-thermal < 10%(max) disk-io-time > 90%(max))	0.3174 0.0056 0.0056 0.2661 0.138 0.0023 0.2736 0.298 0.2255 0.1786 0.0072 0.0072 0.3171 0.2545 0.0441
P(sys-thermal < 10%(max) cpu-system > 90%(max)) P(cpu-system > 90%(max) sys-thermal < 10%(max)) P(cpu-system > (mean) sys-interrupt-rate > (mean)) P(cpu-system < (mean) sys-interrupt-rate > (mean)) P(cpu-system > 90%(max) sys-interrupt-rate > 90%(max)) P(cpu-system > (mean) disk-io-time > (mean)) P(cpu-system < (mean) disk-io-time > (mean)) P(sys-thermal > (mean) sys-interrupt-rate > (mean)) P(sys-thermal < (mean) sys-interrupt-rate > (mean)) P(sys-thermal < 10%(max) sys-interrupt-rate > 90%(max)) P(sys-interrupt-rate > 90%(max)) P(sys-thermal > (mean) disk-io-time > (mean)) P(sys-thermal < (mean) disk-io-time > (mean)) P(sys-thermal < 10%(max) disk-io-time < 10%(max)) P(sys-thermal < 10%(max) disk-io-time > 90%(max)) P(sys-thermal < 10%(max) disk-io-time > 90%(max)) P(disk-io-time < 10%(max) sys-thermal > 90%(max))	0.3174 0.0056 0.0056 0.0056 0.2661 0.138 0.0023 0.2736 0.298 0.2255 0.1786 0.0072 0.0072 0.0072 0.3171 0.2545 0.0441 0.0057 0.0012
P(sys-thermal < 10%(max) cpu-system > 90%(max)) P(cpu-system > 90%(max) sys-thermal < 10%(max)) P(cpu-system > (mean) sys-interrupt-rate > (mean)) P(cpu-system < (mean) sys-interrupt-rate > (mean)) P(cpu-system > 90%(max) sys-interrupt-rate > 90%(max)) P(cpu-system > (mean) disk-io-time > (mean)) P(cpu-system < (mean) disk-io-time > (mean)) P(sys-thermal > (mean) sys-interrupt-rate > (mean)) P(sys-thermal < (mean) sys-interrupt-rate > (mean)) P(sys-thermal < 10%(max) sys-interrupt-rate > 90%(max)) P(sys-interrupt-rate > 90%(max) sys-thermal < 10%(max)) P(sys-thermal > (mean) disk-io-time > (mean)) P(sys-thermal < 10%(max) disk-io-time > (mean)) P(sys-thermal < 10%(max) disk-io-time > 90%(max)) P(sys-thermal < 10%(max) disk-io-time > 90%(max)) P(disk-io-time < 10%(max) sys-thermal > 90%(max)) P(sys-thermal > 90%(max) disk-io-time < 10%(max))	0.3174 0.0056 0.0056 0.0056 0.2661 0.138 0.0023 0.2736 0.298 0.298 0.2255 0.1786 0.0072 0.0072 0.3171 0.2545 0.0441 0.0057 0.0012