

Threshold-based Probability Estimation

Measurement	Threshold	Threshold_Value	Probability_Larger	Probability_Smaller
load-15m	mean	0.0832	0.4501	0.5499
load-15m	10%(max)	0.031	0.6883	0.3117
load-15m	90%(max)	0.279	0.0084	0.9916
memory_used_pct	mean	6.1822	0.359	0.641
memory_used_pct	10%(max)	0.967	1.0	0.0
memory_used_pct	90%(max)	8.7034	0.0031	0.9969
cpu-user	mean	0.0344	0.3159	0.6841
cpu-user	10%(max)	0.009	1.0	0.0
cpu-user	90%(max)	0.0806	0.0081	0.9919
cpu-system	mean	0.0259	0.3483	0.6517
cpu-system	10%(max)	0.0051	1.0	0.0
cpu-system	90%(max)	0.0459	0.0231	0.9769
sys-thermal	mean	0.5902	0.377	0.623
sys-thermal	10%(max)	0.345	0.3786	0.6214
sys-thermal	90%(max)	3.105	0.0015	0.9985
sys-interrupt-rate	mean	988.328	0.3947	0.6053
sys-interrupt-rate	10%(max)	127.275	1.0	0.0
sys-interrupt-rate	90%(max)	1145.475	0.0277	0.9723
disk-io-time	mean	0.005	0.5505	0.4495
disk-io-time	10%(max)	0.0013	0.8266	0.1734
disk-io-time	90%(max)	0.0119	0.0091	0.9909

## Crosstable Analysis Based on Mean Threshold

	x > Mean	x < Mean	Total
load-15m	30540	37313	67853
memory_used_pct	24359	43494	67853
cpu-user	21436	46417	67853
cpu-system	23633	44220	67853
sys-thermal	25581	42272	67853
sys-interrupt-rate	26784	41069	67853
disk-io-time	37355	30498	67853

Conditional Probability Analysis

Condition	Probability
P(load-15m > (mean)   memory_used_pct > (mean))	0.2948
P(load-15m < (mean)   memory_used_pct > (mean))	0.0642
P(load-15m > (mean)   cpu-user > (mean))	0.2421
P(load-15m < (mean)   cpu-user > (mean))	0.0738
P(load-15m > (mean)   cpu-system > (mean))	0.2294
P(load-15m < (mean)   cpu-system > (mean))	0.1189
P(load-15m > (mean)   sys-thermal > (mean))	0.1747
P(load-15m < (mean)   sys-thermal > (mean))	0.2023
P(load-15m < 10%(max)   sys-thermal < 10%(max))	0.1997
P(sys-thermal < 10%(max)   load-15m > 90%(max))	0.0051
P(load-15m > 90%(max)   sys-thermal < 10%(max))	0.0051
P(load-15m > (mean)   sys-interrupt-rate > (mean))	0.2558
P(load-15m < (mean)   sys-interrupt-rate > (mean))	0.1389
P(load-15m > (mean)   disk-io-time > (mean))	0.2951
P(load-15m < (mean)   disk-io-time > (mean))	0.2555
P(load-15m < 10%(max)   disk-io-time < 10%(max))	0.0852
P(memory_used_pct > (mean)   cpu-user > (mean))	0.2655
P(memory_used_pct < (mean)   cpu-user > (mean))	0.0504
P(memory_used_pct > (mean)   cpu-system > (mean))	0.2333
P(memory_used_pct < (mean)   cpu-system > (mean))	0.115
P(memory_used_pct > (mean)   sys-thermal > (mean))	0.1425
P(memory_used_pct < (mean)   sys-thermal > (mean))	0.2345
P(sys-thermal < 10%(max)   memory_used_pct > 90%(max))	0.0018
P(memory_used_pct > 90%(max)   sys-thermal < 10%(max))	0.0018
P(memory_used_pct > (mean)   sys-interrupt-rate > (mean))	0.2558
P(memory_used_pct < (mean)   sys-interrupt-rate > (mean))	0.1389
P(memory_used_pct > (mean)   disk-io-time > (mean))	0.2672
P(memory_used_pct < (mean)   disk-io-time > (mean))	0.2833
P(cpu-user > (mean)   cpu-system > (mean))	0.2231
P(cpu-user < (mean)   cpu-system > (mean))	0.1252
P(cpu-user > 90%(max)   cpu-system > 90%(max))	0.0033
P(cpu-user > (mean)   sys-thermal > (mean))	0.1248
P(cpu-user < (mean)   sys-thermal > (mean))	0.2523
P(sys-thermal < 10%(max)   cpu-user > 90%(max))	0.0043
P(cpu-user > 90%(max)   sys-thermal < 10%(max))	0.0043
P(cpu-user > (mean)   sys-interrupt-rate > (mean))	0.2443
P(cpu-user < (mean)   sys-interrupt-rate > (mean))	0.1505
P(cpu-user > 90%(max)   sys-interrupt-rate > 90%(max))	0.0023
P(cpu-user > (mean)   disk-io-time > (mean))	0.2372
P(cpu-user < (mean)   disk-io-time > (mean))	0.3133
P(cpu-system > (mean)   sys-thermal > (mean))	0.1356
P(cpu-system < (mean)   sys-thermal > (mean))	0.2414
P(sys-thermal < 10%(max)   cpu-system > 90%(max))	0.0136
P(cpu-system > 90%(max)   sys-thermal < 10%(max))	0.0136
P(cpu-system > (mean)   sys-interrupt-rate > (mean))	0.2561
P(cpu-system < (mean)   sys-interrupt-rate > (mean))	0.1386
P(cpu-system > 90%(max)   sys-interrupt-rate > 90%(max))	0.0111
P(cpu-system > (mean)   disk-io-time > (mean))	0.2492
P(cpu-system < (mean)   disk-io-time > (mean))	0.3014
P(sys-thermal > (mean)   sys-interrupt-rate > (mean))	0.1541
P(sys-thermal < (mean)   sys-interrupt-rate > (mean))	0.2406
P(sys-thermal < 10%(max)   sys-interrupt-rate > 90%(max))	0.0159
P(sys-interrupt-rate > 90%(max)   sys-thermal < 10%(max))	0.0159
P(sys-thermal > (mean)   disk-io-time > (mean))	0.2108
P(sys-thermal < (mean)   disk-io-time > (mean))	0.3398
P(sys-thermal < 10%(max)   disk-io-time < 10%(max))	0.1106
P(sys-thermal < 10%(max)   disk-io-time > 90%(max))	0.0057
P(disk-io-time > 90%(max)   sys-thermal < 10%(max))	0.0057
P(sys-interrupt-rate > (mean)   disk-io-time > (mean))	0.306
P(sys-interrupt-rate < (mean)   disk-io-time > (mean))	0.2445
P(sys-interrupt-rate > 90%(max)   disk-io-time > 90%(max))	0.001