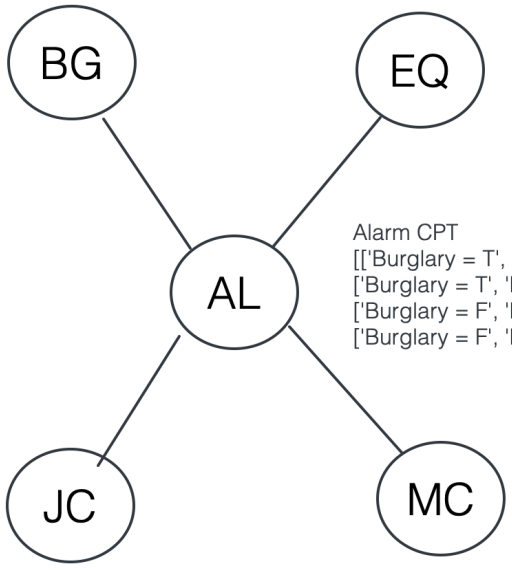
Burglary CPT
[['Burglary = T', '0.001']]



Earthquake CPT
[['Earthquake = T', '0.002']]

Alarm CPT
[['Burglary = T', 'Earthquake = T', '0.95'],
['Burglary = T', 'Earthquake = F', '0.94'],
['Burglary = F', 'Earthquake = T', '0.29'],
['Burglary = F', 'Earthquake = F', '0.001']]

BG and EQ independent because they don't share a parent

JC and MC dependent because they share a parent

P(Burglary |

P(burglary | A, !E) = P(A| B, !E)*P(B)*P(!E) + P(A| !B, !E) * P(!B) * P(!E) = 0.94 * 0.001 * 0.998 + 0.001 * 0.999 * 0.998 = 0.002

P(burglary | A, !E)

Alarm = T T
T F
F T
F F

P(A| !B, !E) = 0.001 * (0.998) (0.999)
= 0.001

0.998 = 1-0.002 (P(E))
0.999 = 1-0.001 (P(B))
look at CPT top left

P(!A | !B, !E) = 0.999 * (0.998)(0.999)

Alarm | Earthquake = F, Burglary = F

P(T) = 0.001, P(F) = 0.999

For independent

P(A| B, C) = P(A| B=T, C=T) * P(B=T) * P(C=T)

For dependent

P(A| JC, MC) = P(JC| A) * P(A) + P(MC|A) * P(A)
P(A) = 0.95 * P(B)*P(E) + 0.94*P(B)*P(!E) + 0.29 * P(!B) * P(E) + 0.001 * P(!B) * P(!E)