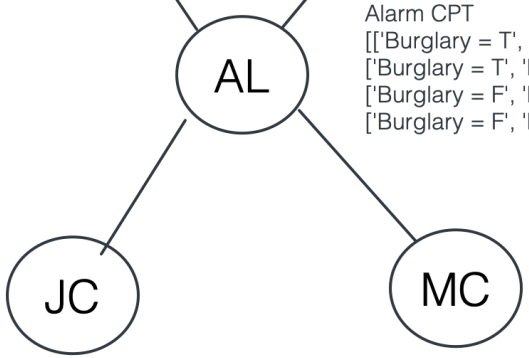

Alarm CPT
[['Burglary = T', 'Earthquake = T', '0.95'],
['Burglary = T', 'Earthquake = F', '0.94'],
['Burglary = F', 'Earthquake = T', '0.29'],
['Burglary = F', 'Earthquake = F', '0.001']]

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

Alarm | Earthquake = F, Burglary = F

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

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

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

JC and MC dependent because they share a parent

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)

Honesty T F
Quality 1 2 3 4 5
Kindness 1 2 3 4 5
Recommendation 1 2 3 4 5

Quality
Q=1:
Q=3:
Q=5:

Honesty T F
Quality 1 2 3 4 5
Kindness 1 2 3 4 5
Recommendation 1 2 3 4 5
Parents
Recommendation Honesty Quality Kindness
Tables
Honesty
0.8
Quality
0.1 0.2 0.4 0.2
Kindness
0.05 0.1 0.2 0.5
Recommendation