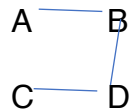P(B, E, A, J, M)   full distribution

32 lines in the full distribution

1 - How to break this down to make it (the inference) tractable => independence
2 – How to build these networks?

A   B

C   D

P(B, E, A, J, M) = P(B I E, A, J, M)P(E I A, J, M)P(AI J, M)P(J I M)P(M)

True independence
P(A, B) = P(A) P(B)

Conditional independence
P(A I B, C) = P(A I B)

Markov Blanket
P(X I parents, children, parents of children, Y) = P(X I parents, children, parents of children)

P(B, j, m, e, a) = P(B) P(e) P(A I B, e) P(j I A) P(m I A)
                .001*.002* ? * ? * ?

P(B I j, m)