

Lec 8 part 1+Notes 8:

1. What are the problems with using full joint distribution tables as our probabilistic models?
2. What is a joint probability distribution? (*Tests understanding of probabilistic definitions.*)
3. Explain Conditional Independence Semantics.
4. Using Bayes' Rule, how can $P(A|B)$ be computed from $P(B|A)$, $P(A)$, and $P(B)$? (*Tests knowledge of Bayes' Rule.*)
5. If $P(S|M)=0.8$, $P(M)=0.2$, and $P(S)=0.5$, what is $P(M|S)$? (*Tests numerical application of Bayes' Rule.*)
6. Describe the steps involved in inference by enumeration. (*Tests knowledge of probabilistic inference methods.*)
7. In a Bayes Net, how do you calculate $P(X|E)$ using variable elimination?
8. How is Bayes' Rule applied to infer ghost locations based on sensor readings?

Lec 5 Part 2 + Notes 5:

1. Given a game tree with alternating MAX and MIN nodes, explain how the value of the root node is computed.
2. Explain the conditions under which alpha-beta pruning eliminates branches in a game tree.
3. What is the role of evaluation functions in depth-limited search?
4. If a chess program can evaluate 1 million nodes per second and has a branching factor of 35, what is the maximum depth it can search in 100 seconds?