Kunal Mehta
50352960
kunalkam

Quiz 6

1. The Markov Assumption in Bayesian Networks is that if we use d-separation as the definition of graphical separation, the directed acyclic graph leads to the general formulation of the decomposition of the joint distribution, meaning that the joint distribution is decomposed into the local distributions for the X_i given their parents Π_i

   If X_i has 2 or more parents, it depends on their joint distribution, because each pair of parents forms a convergent connection centred on X_i and we cannot establish their independence. This decomposition is preferable to that obtained via the chain rule because of its convenient factorization.

   The local Markov property is that each node X_i is conditionally independent of its non-descendants given its parents. This essentially conveys that parents are not completely independent from their children in the Bayesian Network.

   I have essentially written what's said in the lecture and what's given in the slides, but I am not really able to come up with my own version, so to speak, of this, despite understanding it at first go, that is not too similar to the slide content. And then I don't want to do things like simply making the sentence passive, substituting words etc.
2. True/False Questions
   a. False
   b. False
   c. True
   d. True
   e. False