Quiz 6

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1 Bayesian Network

We first define that S is the event that Kyle has symptoms. Then the graphical model contains 2 consequence nodes from S, which are event $A :=$ having COVID and $\hat{A} :=$ COVID-free. Thus, the probability that Kyle having COVID, given that he is having the symptom is

$$P(A|S) = \frac{P(A,S)}{P(S)}$$

Since he is already having the symptom on Monday, thus $P(S) = 1$, yielding

$$P(A|S) = P(A,S) = 1 - P(\hat{A},S)$$

2 References

Advance Robotics Fall 2012, University of California at Berkeley.