CS 515: Lecture 4 Tasks

Cam J. Loader

September 12, 2024

1. For the previous example, calculate the conditional probabilities:

$$P(female|nurse) = (110/300)/(180/300) = 0.6111$$

$$P(doctor|male) = (100/300)/(190/300) = 0.526$$

$$P(male|doctor) = (190/300)/(110/300) = 0.3667$$

2. Consider the experiment: tossing a coin thrice. Assume A is the event that at least two heads show up. Write down the Sample Space, Event, and the probability of the event A i.e. P(A).

$$S = TTT, THT, TTH, HHH, HTH, HHT, HHH,$$

$$E(A) = Flippingacointhreetimes, gettingatleast2heads$$

$$P(A) = 6/8 = 0.75$$