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CSE 494: AI for Cyber Security
Shakarian - Friday 1 pm
March 17th, 2019

CSE 494 OYO Homework 2

1. a. The probability that either A or B occurs is P(A) + P(B) = **0.8**.
   b. Given that A and B are mutually exclusive, P(A) and P(B) = 0, so the probability that A occurs but not B is 0.3 - (0) = **0.3**.
   c. Given that A and B are mutually exclusive, the probability that both A and B occur is **0.0**.

2. a. (28% + 7%) - (5%) = 30% of American men smoke either cigarettes or cigars.
   100% - 30% = **70% of American men smoke neither cigarettes nor cigars.**
   b. (7% - 5%) = **2% of American men smoke cigars but not cigarettes.**

3. Using Bayes Theorem, the probability that you actually descend from that tribe while the blood test gives a negative result is **0.0745**.