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CSCI 3202

Assignment 7

Extremely incomplete homework, but that doesn’t matter because late homework gets no credit anyway.

1. Prior sampling:
   1. P(c) = 17 successes / 25 samples = **0.68**
   2. P(c | r) = 9 successes / 13 samples = **0.692**
   3. P(s | w) = 11 successes / 12 samples = **0.917**
   4. P(s | c,w) = 11 successes / 12 samples = **0.917**
2. Exact probabilities:
   1. P(c) = 0.5
   2. P(c | r) = P(c,r) / P(r) = (0.5 \* 0.8) / (0.5 \* 0.8 + 0.5 \* 0.2) = 0.8
   3. P(s | w) = P(s,w) / P(w) = (0.3 \* (0.5\*0.99 + 0.55\*0.90)) /  
      (0.3\*0.5\*0.99 + 0.3\*0.5\*0.90 + 0.7\*0.5\*0.90 + 0.7\*0.5\*0.0)  
      = 0.496
   4. P(s | c,w) = P(s,c,w) / P(c,w) = (0.5\*0.1) / (I don’t even know, all of these answers seem wrong, is my code wrong?