$$P(A \mid B) = \frac{P(B \mid A)P(A)}{P(B)}$$

$$P(\text{heart attack} \mid \text{S, FH, HBP}) = \frac{P(\text{S, FH, HBP} \mid \text{heart attack})P(\text{heart attack})}{P(\text{S, FH, HBP})}$$

$$P(\overline{\text{heart attack}} \mid \text{S, FH, HBP}) = \frac{P(\text{S, FH, HBP} \mid \overline{\text{heart attack}})P(\overline{\text{heart attack}})}{P(\text{S, FH, HBP})}$$

The Bayes in Naive Bayes

for computational efficiency

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