Bayes Theorem

Definition

$$P(H|E) = \frac{P(H)P(E|H)}{P(E)}$$

$P(H)$: Probability a hypothesis is true before any evidence (Prior)

$P(E|H)$: Probability of seeing the evidence if the hypothesis is true (likelihood)

$P(E)$: Probability of seeing the evidence

$P(H|E)$: Probability a hypothesis is true given some evidence (goal / posterior)

Example

Prof

Usage