Bayes Rule

$$\text{prior probability} \cdot \text{test evidence} \rightarrow \text{posterior (joint)}$$

- To calculate the posterior we divide joint by normalizer

sensitivity !

P(C) $\rightarrow$ prior $\qquad \rightarrow$ prior * sensitivity + prior * ~~sensitivity~~

P(Pos | C) $\rightarrow$ sensitivity $\qquad$ (= not real total)

P(Neg | ¬C) $\rightarrow$ specitivity $\qquad \rightarrow$ divide by not real total

$\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad$ Total

- Bayes Rule uses relative area

to calculate probability

- Very important in self-driving cars & robotics