

Naive Bayes

$$\begin{aligned} P(w_1 \dots w_n) &= P(w_1) P(w_2 | w_1) \dots P(w_n | w_{n-2}, w_{n-1}) \\ &= P(w_1) P(w_2) \dots P(w_n) \quad \leftarrow \text{Naive} \end{aligned}$$

$$P(A|B) = \frac{P(B|A)P(A)}{P(B)} \quad \leftarrow \text{Bayes}$$

$$P(T|w_1) = \frac{P(w_1|T)P(T)}{P(w_1)} \cdot \frac{P(w_2|T)P(T)}{P(w_2)}$$

* Need training set and test set