

<S> JOHN READ MOBY DICK </S>

<S> MARY READ A DIFFERENT BOOK </S>

<S> SHE READ A BOOK BY CHER </S>

$V=11$ (total number of different word present in corpus)

Using something the probability of bigram is

$$P(w_i | w_{i-1}) = \frac{\text{count}(w_{i-1} w_i) + 1}{\text{count}(w_{i-1}) + V}$$

$$P(\text{READ} | \text{JOHN}) = \frac{\text{count}(\text{JOHN}, \text{READ})}{\text{count}(\text{JOHN})}$$

$$p(\text{JOHN READ A BOOK}) =$$

$$p(\text{CHER READ A BOOK}) =$$