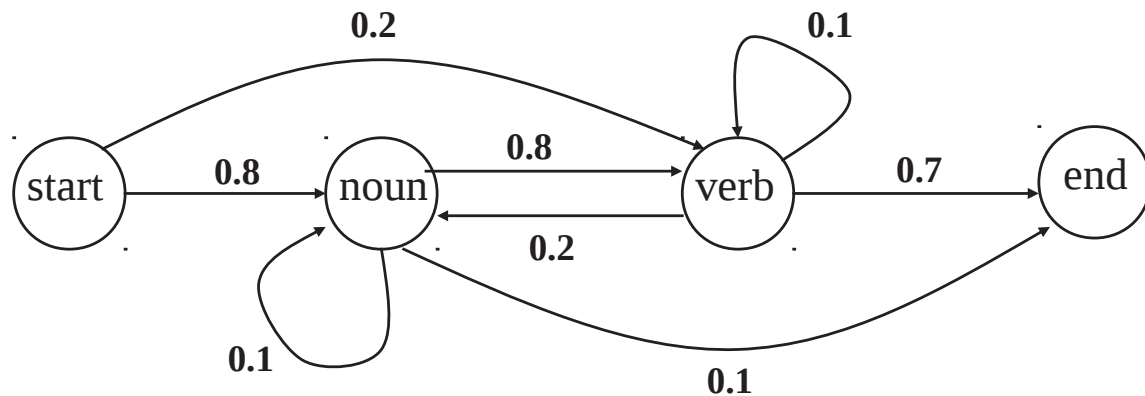


A Simple POS HMM



Word Emission Probabilities $P(\text{word} \mid \text{state})$

- A two-word language: “fish” and “sleep”
- Suppose in our training corpus,
 - “fish” appears 8 times as a noun and 5 times as a verb
 - “sleep” appears twice as a noun and 5 times as a verb
- Emission probabilities:
 - Noun
 - $P(\text{fish} \mid \text{noun})$: 0.8
 - $P(\text{sleep} \mid \text{noun})$: 0.2
 - Verb
 - $P(\text{fish} \mid \text{verb})$: 0.5
 - $P(\text{sleep} \mid \text{verb})$: 0.5