

The Hidden Markov Model Solution

- Basic idea:
 - Make the choice of model for a word depend on the choice of model for the previous word
 - Thus we model both the choice of model (“state”) and the words (“observations”)

O: We apply the text mining algorithm to the **nutrition** data to find patterns ...

S1: $\theta_1 \rightarrow \theta_1 \rightarrow \theta_1 \theta_1 \quad \theta_1 \quad \theta_1 \quad \theta_1 \theta_1 \rightarrow \theta_1 \quad \theta_1 \theta_1 \theta_1 \quad \theta_1$

.....

O: We apply the text mining algorithm to the **nutrition** data to find patterns ...

S2: $\theta_1 \rightarrow \theta_1 \rightarrow \theta_1 \theta_1 \quad \theta_1 \quad \theta_1 \quad \theta_1 \theta_1 \rightarrow \theta_2 \quad \theta_1 \theta_1 \theta_1 \quad \theta_1$

$$P(O, S1) > p(O, S2)?$$