

NLP: Hidden Markov Models

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Example dataset:

```
<S>|<S> the|D dog|N runs|V .|. <E>|<E>
<S>|<S> the|D dog|N walks|V .|. <E>|<E>
<S>|<S> the|D man|N walks|V .|. <E>|<E>
<S>|<S> a|D man|N walks|V the|D dog|N .|. <E>|<E>
<S>|<S> the|D cat|N walks|V .|. <E>|<E>
<S>|<S> the|D dog|N chases|V the|D cat|N .|. <E>|<E>
```

1 Citations

Some content adapted from:

- http://courses.washington.edu/ling570/gina_fall11/slides/ling570_class8_smoothing.pdf

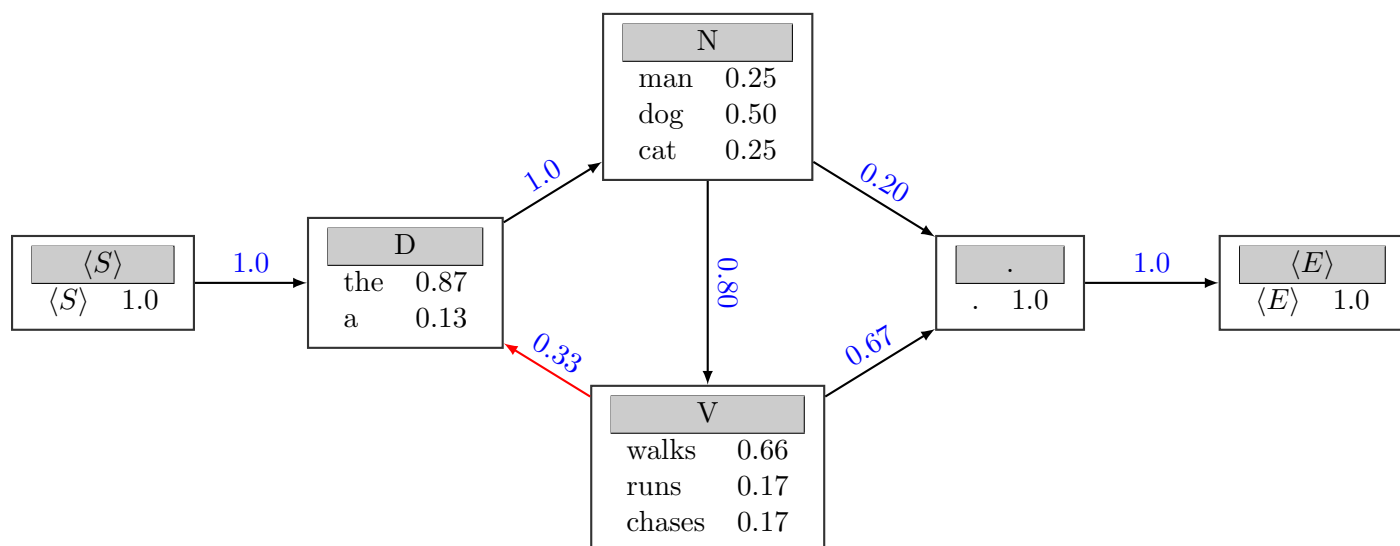


Figure 1: Finite state machine. Missing arrows are assumed to be zero probabilities. With smoothing, there would be an arrow in *both directions* between *every* pair of words.