Introduction
(SNLP tutorial)

Vilém Zouhar

April 30, 2021

Overview

- Perplexity
- Maximum Likelihood Estimation
- Smoothing

Perplexity

Formulas

$$2^{\frac{1}{n}\sum_1^n \log p(w_i|w_{i-1})}$$

$$2^{-\sum_{w,h} f(w,h)\log_2 P(w|h)}$$

TODO

Maximum Likelihood Estimation

TODO

- A way to estimate language model (distribution) parameters
- Trying to maximize probability of the training data

LM Smoothing

TODO

- Q: What happens if an unknown token is encountered and LM assigns it 0 probability?

Homework

- Perplexity calculation by hand
- Plotting n-grams
- MLE language model and smoothing
- Custom alternative to perplexity

Resources

1. TODO