Assignment-1
2020101075

Smoothing:

→Kneser ney

- Pride and justice
  - Average Train Perplexity   4.085660639636064
  - Average Test Perplexity   3.7688029786782784

- Ulysses
  - Average Train Perplexity   4.942084441959237
  - Average Test Perplexity   4.8572350801572535

→Witten bell

- Pride and justice
  - Average Train Perplexity   2.99240810434113
  - Average Test Perplexity   2.8331218557274567

- Ulysses
  - Average Train Perplexity   3.939793187555329
  - Average Test Perplexity   3.8456520505131713

NLM:

- Average perplexity for 'Pride and justice'-

- Train perplexity   25.4143
- Test perplexity   25.8362

Neural Language models perform better than traditional statistical models. This is because NLMs (like LSTM) can actually store the prior context information in the hidden layers.