DL Project Proposal: Shakespeare to English

MORRIS KRAICER

RILEY SCOTT

WILLIAM WATSON

Johns Hopkins University mkraice1@jhu.edu Johns Hopkins University rscott39@jhu.edu

Johns Hopkins University billwatson@jhu.edu

Abstract

Add abstract to be fancy

1 Introduction

[1] [4] [3] [2] [6] [5] Abstract

Inspiration

Data web scrap label via aligner

Preprocessing Tokenize!!!!! NUM PROPER NOUNS PUNCTUATION USE SPACY FOR POS TAGS

Models Baseline Seq2Seq Baseline No attention, no Bidirectional encoder RNN-; RNN GRU-; GRU bidirectional GRU -; Bidirectional GRU With Attentions Teacher Forcing

Use Aligner to measure quality of data, and learnability. Not learnable -¿ still train, but when report, do backwards, suggest data is difficult Learnable -¿ do aligner do well, then models

Final Tricks: Num -¿ Num PN -¿ PN Punct -¿ Punct

Expectation: Hopefully provides good translations Hopefully can do a pseudo style transfer on English Funny translations? 50 Shades of Grey

- 2 Data Procurement
- 3 Preprocessing
- 4 Archectectures
- 4.1 Baseline RNN Sequence to Sequence
- 4.2 GRU Sequence to Sequence
- 4.3 Bidirectional Model
- 4.4 Attention Mechanisms
- 4.5 Teacher Forcing
- 5 Roles and Responsibilities
- 6 Expectations

References

- [1] D. Bahdanau, K. Cho, and Y. Bengio. Neural machine translation by jointly learning to align and translate. arXiv preprint arXiv:1409.0473, 2014.
- [2] K. Cho, B. Van Merriënboer, C. Gulcehre, D. Bahdanau, F. Bougares, H. Schwenk, and Y. Bengio. Learning phrase representations using rnn encoderdecoder for statistical machine translation. arXiv preprint arXiv:1406.1078, 2014.
- [3] L. Liu, M. Utiyama, A. Finch, and E. Sumita. Neural machine translation with supervised attention. arXiv preprint arXiv:1609.04186, 2016.
- [4] M.-T. Luong, H. Pham, and C. D. Manning. Effective approaches to attention-based neural machine translation. arXiv preprint arXiv:1508.04025, 2015.

- [5] K. Papineni, S. Roukos, T. Ward, and W.-J. Zhu. Bleu: a method for automatic evaluation of machine translation. In *Proceedings of the 40th annual* meeting on association for computational linguistics, pages 311–318. Association for Computational Linguistics, 2002.
- [6] I. Sutskever, O. Vinyals, and Q. V. Le. Sequence to sequence learning with neural networks. In Advances in neural information processing systems, pages 3104–3112, 2014.