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| **List of Topics** |
| Introduction to NLP |
| Data Curation |
| Language Modeling |
| Text Classification and Naïve Bayes |
| Word2Vec: The Skip-Gram Model and word senses |
| Word Window Classification: designing a neural net for the NER problem |
| Language Models and RNN |
| Vanishing Gradient and the LSTM |
| Machine Translation, Seq2Seq and Attention |
| Subword Models: Phonology and Morphology, character level models, FastText embeddings |
| Pre-trained word vectors, ELMO |
| Hands-on session with PyTorch and Tensorflow |
| Transformers: self-Attention, multi- headed attention, positional  encoding, embedding, residuals, limitations |
| BERT: architecture, bert base vs bert large, masked language modeling, next sentence prediction, bert variants |

**Tentative List of Topics**