Natural Language Processing

1. Word representations: basic approaches (BoW, TF-iDF).
2. Word embeddings (word2vec: linearity, skip-gram, negative sampling, key ideas)
3. Ways to work with text data (RNN, CNN, classical approaches)
4. Attention mechanism, Self-attention mechanism
5. Contextualized embeddings main idea.
6. Transformer: encoder and decoder structure main details.
7. BERT structure, main ideas (masking, pre-training on many problems)
8. Machine translation metrics, quality functions