ST-CS 3: Fundamentals of NLP Syllabus 2022

	Lectures	Sections
Week 1	Introduction	Getting ready to start! Install libraries (NLTK-scikit-learn – genism) and test it
Week 2	Basic Text Processing	- Regular Expressions - Text Normalization(Tokenization- Sentence Segmentation – lemmatization- stemming) 3. Processing Raw Text
Week 3	Vector space models Text Similarity Measures Autocorrect and Minimum Edit Distance	Autocorrect
Week 4	ML & NLP Sentiment Classification with Logistic Regression	6. Learning to Classify Text Sentiment analyzer using LR
Week 5	ML & NLP Sentiment Classification with Naïve Bayes	6. Learning to Classify Text - visualizing likelihoods of tweets and the confidence ellipses for annotated corpuses. - Sentiment analyzer using Naïve Bayes
Week 6	Autocomplete Language Models	AutoComplete
Week 7	Midterm	
Week 8	Hidden Markov Models Viterbi Algorithm	5. Categorizing and Tagging Words
Week 9	Part-of-Speech Tagging	Creating a Parts Of Speech tagger
Week 10	Syntax Parsing (PCFG – CKY)	Implement Syntax parser
Week 11	Topic Modeling & Classification	Implement Topic Modeling & Classification

Textbooks:

1- D. Jurafsky, J.H. Martin, Speech and Language Processing. 3rd edition, Prentice-Hall, 2018.

2- S. Bird, E. Klein, E. Loper. Natural Language Processing with Python.