

Skills Overview

The work in this portfolio demonstrates proficiency with Python and various machine learning and natural language processing libraries. SKLearn and Numpy are used for text classification using neural networks and regressions. Many NLTK features are used, such as stems in WordNet, tokenization and lemmatization, part of speech tagging, and use of n-grams. There are examples of NLP techniques such as n-gram probabilities, different types of sentence parsing, embeddings, and vector space modeling. The most complex project in this portfolio was the chat bot, which used a combination of a web crawler and scraper developed in a previous project alongside GPT, LangChain, and LlamaIndex in order to create a conversational bot with a functional memory and user models.

Many of these assignments were completed with another person, Charles Wallis, so effective communication was often necessary. These assignments required proper delegation, explanation through text or comments, and evaluation of work. Most assignments also included in-class presentations, which required effective public speaking or active listening, depending on the role of the individual. Most assignments required the analysis of online documentation and critical thinking as well.