Names: Bushra Rahman Class: CS 4395.001

Assignment: NLP Portfolio Summary

Technical and Soft Skills

This portfolio for natural language processing demonstrates the following technical skills:

- proficiency in <u>Python</u> (with focus on the NLTK library and other libraries for machine learning and data science, including sklearn, seaborn, pandas, and numpy)
- proficiency with <u>Jupyter Notebook</u>
- familiarity with common <u>machine learning algorithms</u> used for natural language processing, including...
 - Naive Bayes
 - o logistic regression
 - o neural networks
- familiarity with common <u>natural language processing techniques</u>, including...
 - o regular expressions
 - POS tagging
 - o n-gram language generation
 - o term frequency and tf-idf
 - o vector space modeling using cosine similarity

...and demonstrates the following soft skills:

- creativity with coding and problem solving
- project management, both independently and with a partner
- ability to identify constraints in a problem statement and conceive solutions for them
- ability to read and understand conference papers
- ability to read and write technical reports

Summary

This portfolio, with its robust catalog of projects, has secured my interest in NLP. My passion for language inspires me to stay connected to this field and continue applying the machine learning skills I have learned throughout this course. I would like to continue improving the projects in this portfolio as time passes, especially the chatbot, since it has substantial room for improvement. The potential of this field to engage people and assist their lives in some way is very gripping to me, and I am passionate about exploring that potential through NLP projects.