CS 410 Final Project

Predicting Song Genre Based On Lyrics

1. **Team Members**

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2. **Topic**

The topic of our project is to develop an NLP model that will allow us to predict the genre of a given song based on its lyrics. Music can fall into a variety of genres, such as pop, hip-hop, R&B, country, EDM, and classical. Many music listeners prefer specific genres over others, and artists will often specialize in a certain genre in order to explore it deeply and deliver cohesive albums. A tool allowing users to query a specific song and evaluate its genre based on lyrical content would be useful for artists to validate that their lyrics match the paradigm for their desired genre and confirm that they have created music that will resonate with the target audience. We intend to gather song lyrics as well as their corresponding genre designations using Spotify's API - this will give us a training dataset that will allow us to associate specific genres with specific songs. We will then develop a user interface in which someone can input a text file containing song lyrics and receive a judgment of the genre that these lyrics are most strongly associated with. We will evaluate the success of our project by judging how well our model is able to predict the genre of a song compared with its designated genre on Spotify.

3. **Programming Language**

We intend to use Python to develop both the model and the UI for this project.

4. **Workload/Timeline**

Gathering song and genre data using Spotify API - 3 hrs/person

Building and training prediction model - 6 hrs/person

Developing UI and application for lyrical text input and corresponding judgment - 7 hrs/person

Creating presentation/demonstration - 4 hrs/person