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Project Proposal

Our project is on the topic of music recommendations. Utilizing a variety of Data Mining Algorithms, we would like to recommend new music to music listeners from a variety of sources. Our models will be analyzing the relationships between the different songs and the user base from several sources of music data such as Spotify and other music streaming services. Our project can be described succinctly as a Music Recommendation Service.

For our data sources, we are interested in utilizing publicly available data from streaming sources such as Spotify and Apple Music. Additionally, we would like to integrate other publicly available data sources for user data and their musical preferences using a Web Crawler.

The work will split amongst the two of us as such:

Isaiah:

- Web Crawler for website 1
- Apple Music API for data
- Algorithm 1: CNN
- Algorithm 2: Collaborative Filtering

Jason:

- Web Crawler for website 2
- Spotify API for data
- Algorithm 1: Matrix Factorization
- Algorithm 2: Association Rule Learning

We would use the following Evaluation Metrics to determine the performance of our models:

- Prediction at K
- Recall at K
- MAE
- MSE
- F1-Score