Music Search++

CSCE 470

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Premise:

Spotify uses a music algorithm in order to group songs into music playlists. This allows a user to simply choose a song and Spotify will choose subsequent songs to play after the current one is finished. However, this algorithm is not very effective at choosing songs that are similar to the one being played. The algorithm looks at the genre and relies on other users groupings and playlists. Often times, the songs are not similar but are still in the same genre, which can lead to a very jarring transition from a quiet, slow song to a louder, quicker one. Examples of this can be *Come Sail Away* by The Styx transitioning to *The Grand Illusion* by the same band. These two songs are in the same genre, the same band, and even in the same album, however, the two songs are drastically different in style and volume dynamics.

Objective:

Our objective is to modify the current Spotify search engine to improve playlist lineups. We will still take into account the genre, artist and album of a song but do some extra analysis to get more information about a song file. We will be analyzing the tempo (beats per minute), and average volume of a song. This will allow us to achieve more uniformity when choosing songs. With this process, a user will be able to choose a song to listen to and have the algorithm go through the database and rank all the songs to see how similar they are to the current playing song. From there, the closest (highest ranked) song will be played next and so on and so forth. Each song will be added to a list to make sure the same song isn’t played multiple times (the same song will be the highest ranked match). This will theoretically continue until all songs in the database are played through.