Analyzing music playlists

Jiayue, Lara, Youwei

Framework domain

Input from users: playlists from various music providers (Spotify, Apple Music, Amazon Music, etc) which we will process

Output to users: various visualizations with details of their music

- Inputted playlist split by "mood" of music (e.g. happy and sad)
- Artist who appears most in playlist
- Changes in type of music in the playlist over time

Generality and Specificity

Generality: The various data plugins will allow for playlists from different music providers to be processed

Specificity: The framework will only operate on music playlists and/or possibly other data from accounts hosted by various music providers

Possible data plugins

- Spotify
- Apple Music
- Amazon Music
- YouTube Music
- Pandora
- Generally: other music providers who have playlists or some similar grouping of music for their users

Possible display plugins

- Allow user to pick moods to split the playlist into
    - Output: multiple playlists each containing a subset of the songs in the original playlist
- Artists who appears most in playlist
    - Output: interactive bar chart
- Changes in type of music in the playlist over time
    - Output: interactive line chart or bar chat

Interfaces we will be utilizing

Spotify API: has a lot of functionality including a function to get playlist owned by a Spotify user

- https://developer.spotify.com/documentation/web-api
- https://developer.spotify.com/documentation/web-api/reference/get-playlist

Apple Music API: very similar level of functionality to Spotify

- https://developer.apple.com/documentation/applemusicapi/
- https://developer.apple.com/documentation/applemusicapi/playlists

There are also some applications online for music sentiment analysis which we may be able to utilize:

- https://openhumanitiesdata.metajnl.com/articles/10.5334/johd.33
- https://github.com/RahulGaonkar/Music-Sentiment-Analysis

Key methods

Our framework API will need to include some of the following functions:

- getPlaylist()
  - Way for the plugin to provide the playlist to be analyzed
- getInitialText()
  - Way for the plugin to provide details about its specific analysis
- buttonClicked()
  - Way for the plugin to provide details about its specific analysis