

Keymix: Generate Harmonic Mixes

Overview

This full-stack web application is designed to be a playlist and mix generating application, utilizing the theory of harmonic mixing. The app is targeted for anyone who is trying to find new or interesting ways to listen to music, but also could be used as a DJ tool for creating mixes with correct harmonic progression, as well as finding tracks and ideas to integrate into their own mixes.

Users will be able to seed a search with track titles, artists and genre information, as well as a number of other modifiers. This information will be used to generate a playlist of recommendations that will be further processed by key and tempo information and sorted according to the correct harmonic progression. The playlists will be able to be viewed and played in the app as well as saved if a user chooses to link their Spotify account. You can look into harmonic mixing [here](#) and [here](#).

Data

The primary api used for this project for data (as well as app functionality) will be the **Spotify api**, mainly using the recommendations endpoint. The api contains track and audio analysis information that will be used to create the necessary algorithms for making some interesting mixes. Some factors taken into account are, energy levels, danceability, tempo, key, genre, etc.

Database Schema (rough draft)

- Users: id, username
- Playlists: id, name, song_id, user_id
- Song: id, title, artist, tempo, key, genre
- Seed: information passed to spotify or from spotify for queries
- Harmonic mixing: key information and other variables

User Flow

- Home page with login options
 - login with spotify or use without
- For logged in users:
 - Main page with queries options
 - Generated playlists and options to save

Functionality Highlights

- Able to use with or without an account, nearly same functionality
- Search using specific terms that will generating interesting recommendations
- Generated playlists will pass through various secondary queries and algorithms to come out mixed harmonically, there may be options to control how this works also.

- Logging in with Spotify and ability to save generated mixes.

Stretch Goals

- Ability to import mixes / playlists from spotify and sort them using the algorithms for harmonic mixes I will create.