

Scope of Work and Preliminary EDA Agenda

AC209a Project Group 21 - Project D (Spotify Playlist Generation)

Team Members: Matthew Finney, Kaivalya Rawal, Royce Yap, David Zheng

Team Meetings and Communication with TF

- The team has met as a group several times, most recently on October 23, 2019.
- The team has reached out to our assigned TF Alex Yu, and has received his review of a draft of this Milestone 2 document. The team is working to schedule time with Alex to meet in person in the lead up to the Milestone 3 deadline.
- The team will continue to meet in person on a regular schedule on Wednesday afternoons, and will schedule ad hoc meetings as necessary.

Project Goal (from Official Project Statement)

Automatic Playlist Generation - create a model for song discovery on the basis of the base playlist and user/context information that might be important to the quality of the playlist. Some of user/context information might include intent, emotion, location, playlist "purpose" (driving/road trip, studying, etc). Use the developed model(s) for automatic playlist generation.

Question

Based on a base playlist and user/context information, how can we generate song recommendations that are complementary to the base playlist.

Proposed Measures of Success¹

We propose selecting our model based on the following metrics:

Metric	Description	Objective
R-precision	Number of known relevant songs recommended by the model divided by the total number of known relevant songs in the test playlist data	Measure hit rate of relevant recommendations
Relative Rank of Recommendations (R³)	An index that measures the relative placement of relevant songs (e.g., from the test set) among the total list of songs recommended by the model.	Measure quality of recommendations

However, with these metrics, we don't know how much faith to put in the ground truth of the test set. For example, consider the scenario that our model recommends songs that the user would like better than the test set. As the project progresses, we will consider additional metrics to judge our recommended songs.

¹ Adapted from <https://recsys-challenge.spotify.com/rules>

Milestone 3 (Exploratory Data Analysis) Workplan

Task	Primary Responsible	Due Date
Identify Data Sources	David, Royce	October 23
Write EDA Strategy	Matthew, Kaivalya	October 25
Gather Data	David, Royce	October 25
Write description of data for Milestone 3 (based on individual EDA assignment)	Matthew, Kaivalya, Royce, David	October 30
Complete individual data cleaning and EDA assignments	Matthew, Kaivalya, Royce, David	November 11
Summarize individual EDA findings	Matthew, Kaivalya, Royce, David	November 11
Write refined question based on EDA findings	Kaivalya	November 15
Compile initial draft of Milestone 3 submission	Matthew	November 15
Create baseline model	Kaivalya, David, Royce	November 18
Compile final version of Milestone 3 and submit to Canvas	Matthew	November 20