**Course:** Data Science Practicum – MSDS 696

**Name:** Francesca Beller

**Week:** 2

**Project Title:** Spotify Recommendation Algorithm using Python

**Project Summary:** The purpose of this project will be to create a supervised machine learning model that will be able to take in data retrieved from the Spotify API on songs I like and dislike, then make predictions with test song sets on whether I will like them or not. There will be multiple types of models that will be trained and tested (i.e. K-nearest neighbors, decision tree/random forest, gradient boosting, etc.), with the highest performing model being the final. The project will also include exploratory data analysis and data visualizations for song traits to compare/contrast “like” versus “dislike” songs.

**Milestones:**

Project Proposal - DONE

Compiling “like” and “dislike” playlists – DONE

Creating code to pull data into Python - DONE

Exploratory data analysis

Data visualization

Initial model coding/training

Initial model evaluation

Additional training/tuning/testing

Final model evaluation

Project write-up/presentation preparation

**Proposed to Do from Last Week:** Last week’s focus was on obtaining approval for the project and researching the problem.

**This Week’s Progress:** I was able to compile both “like” and “dislike” playlists in my personal Spotify account, as well as create an app in the Spotify Developer API. I was also able to write code to bring these songs into Python, extract their track traits, and create separate data frames for each playlist to prepare for exploratory data analysis and data visualization.

**Issues and Discussion:** So far, there have been no issues other than the (expectedly long) amount of time it took to compile 1,000+ song playlists for both “like” and “dislike”.

**To Do:** I plan to begin exploratory data analysis and generate visualizations of different track traits for each playlist in order to compare and contrast them to find patterns of difference between the types of tracks I like and the types of tracks I do not like.