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

**Name:** Francesca Beller

**Week:** 4

**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 - DONE

Data visualization - DONE

Initial model coding/training - DONE

Initial model evaluation - DONE

Additional training/tuning/testing

Final model evaluation

Project write-up/presentation preparation

**Proposed to Do from Last Week:** Last week’s focus was on creating code to bring in data from my Spotify account using Spotify’s API, as well as generating code for exploratory data analysis and data visualizations.

**This Week’s Progress:** I was able to write code for the first three initial models, including decision tree, K-nearest neighbors, and Adaboost/Gradient boosting.

**Issues and Discussion:** This week, there were no real issues to discuss.

**To Do:** I plan to perform additional tuning/training/testing on top of the initial models that were created.