SI 206 Final Project Plan

- Make a copy of this document.
- ***Every*** team member must submit a link to this document in Canvas/
- Make sure you give **everyone with the link** commenter access!!

A. What is your group's name?

skyhand

B. Who are the people in the group (first name, last name, umich email)?

Hannah Toppel hannahto@umich.edu
Skylar Emerson eskylar@umich.edu

C. What APIs/websites will you be gathering data from? ***The base URLs for the APIs/websites must be different for them to count as different APIs***.

Genius API
Web API | Spotify for Developers

D. What data will you collect from each API/website and store in a database? Be specific.

Genius API:

- Full lyrics of songs.
- Song annotations so the explanations of specific lines/verses.
- Song metadata: title, artist, album, release date for each song

Spotify API:

- Track metadata: track name, album, artist.
- Audio features: Tempo, key, loudness, energy.
- Artist data: Genres, popularity/listeners
- Album information like release dates

E. What data will you be calculating from the data in the database? Be specific.

1. Average audio features for songs with annotations vs. those without.
2. Correlation between song popularity (Spotify) and annotation count (Genius).
3. Most common genres for annotated songs

F. What visualization package will you be using (Matplotlib, Plotly, Seaborn, etc)?

Matplotlib or RAWgraphs

G. What graphs/charts will you be creating?

Bar graph: Average audio features for annotated vs. unannotated songs
Scatter Plot
- Song popularity: Spotify
- Annotation count: Genius

Pie Chart
- Distribution of genres for annotated songs: Genius

H. Who is responsible for what? Please note that all team members should do an equal amount of programming and total work.

Hannah:
- Set up Genius API integration an databases and tables for the lyrics and song annotations
- Create functions to calculate and find metrics
- Create the bar and pie chart visualizations

Skylar:
- Set up spotify api integration and database tables for track and audio
- Create functions to find popularity and audio feature metrics
- Create a scatter plot to visualize the data

Both:
- Debugging
- Creating report
- Graphs