

Project 4, Group 6
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1. Introduction

- a. Our dataset consists of Spotify tracks spanning 125 different genres, with each track accompanied by various audio features.
- b. We chose this dataset because we love music
- c. <https://www.kaggle.com/datasets/maharshipandya/-spotify-tracks-dataset?resource=download&select=dataset.csv>

2. High Level Questions

- a. Can machine learning models accurately classify songs into danceability categories (Low, Medium, High) based on audio features in the dataset?
- b. What mood categories correlate with the highest streams and the most popular songs?
- c. How do audio features like energy, tempo, loudness and danceability vary across music genres?

3. Inspiration - A great inspiration for using a Spotify dataset in machine learning comes from how the music industry is already using data-driven models to improve the user experience.

- a. <https://www.kaggle.com/code/abhineet8/spotify-clustering-and-classification>
- b. Tableau Public

4. Visuals

- a. Scatter Plot - Audio Features vs. Genre/Danceability
- b. Bar Chart - Energy Distribution
- c. Heatmap - Audio Features by Mood
- d. Violin Plot - Audio Features by Genre
- e. Clustered Scatter Plot - By Songs, similar in terms of their audio features
- f. Two Tableau Dashboards

5. Classifications

- a. We are predicting the popularity of songs

6. Color Palette

- a. <https://coolers.co/424342-244f26-256d1b-149911-1efc1e>

7. Roles and Responsibilities

- a. Data Cleaning - All
- b. Research Questions - All
- c. Machine Learning - Misha
- d. Tableau - Cecilia & Willian
- e. Flask App - Adam
- f. Slide Presentation