Visualizing the Spotify Soundscape

Personal Information:

Amartya Dutta
Email: amartya@vt.edu
Location: Blacksburg, VA

Goal:

The goal is to analyze and visualize the characteristics of the top “50 tracks on Spotify in 2023” a dataset available on Kaggle to uncover patterns and trends in music preferences. We aim to explore various dimensions such as genre diversity, artist representation, tempo, and mood across the most popular tracks. This project seeks to present these findings in an engaging, intuitive manner to highlight how these elements contribute to a song's success and popularity. The aim would also be to highlight what properties contribute to making a certain song popular.

Current Practice:

Currently, music trend analysis often focuses on qualitative reviews or numerical charts without deep data-driven insights into the underlying characteristics of the tracks. While streaming platforms provide raw data on track popularity, there's a gap in comprehensive visualization that integrates various music features to offer a holistic view of what makes a track popular. Most analyses don't provide interactive exploration tools for the audience to engage with the data. Furthemore, this is a relatively new dataset, so not a lot of in-depth exploration has been done using it.

What is new ?

This project aims to introduce several interactive visualizations, possibly also a dashboard that allows users to explore the Spotify Top 50 Tracks dataset through multiple lenses such as genres, artists, tempo, and audio features like danceability and energy. By correlating these features with popularity, we can offer insights into the anatomy of a hit song in 2023.

Who cares ?

Music enthusiasts, artists, producers, and industry analysts will find value in the insights generated by this project. It can inform artists and producers about current trends and what listeners are gravitating towards. For the general public and music enthusiasts, it offers an engaging way to understand the landscape of popular music in 2023, potentially influencing their music exploration and discovery.

What are the risks ?

The main risks include technical challenges in processing and visualizing, ensuring the visualization is accessible and user-friendly for a non-technical audience while keeping the analysis relevant and insightful without oversimplifying the data. Additionally, there's the challenge of making the visualizations engaging enough to capture the audience's attention.

What are the midterm and final "exams" ?

The midterm checkpoint could involve some of the visualizations with insights drawn from them. This could also include the dashboard with some of the visualization features as a part of it. The final exam would be the launch of the complete interactive dashboard that is user friendly along with a detailed report that describes the insights drawn from each of the individual visualizations.

Do you already have all of the necessary data ?

The dataset “Spotify Top 50 Tracks of 2023" is available publicly on Kaggle and provides a solid foundation for this project. However, additional data on listener demographics or external factors influencing track popularity could enhance the analysis. This supplementary data might need to be collected or inferred through additional research or public datasets. Furthermore, if additional data is available it could be extended beyond just the year 2023 to previous years to see if what makes a song popular has changed over time.