**Project Proposal**

**Question/need:**

The idea of the project is a recommendation system for music. And it works by feeding the system with a song. Then It should be able to return a music list that are similar to the inputted song.

The purpose is to analyze the song characteristics and return a list with songs that has the same vibe and mode.

This system is directed to everyone who enjoys music. Also some companies can adapt this system to their platform; because it can increase the time that the user will be spending listening and discovering new music that matches his liking, to increase satisfaction and engagement of the user, to make the platform more personalized, and boost sales and subscription rates

**Data Description:**

I found a dataset one Kaggle named Dataset of songs in Spotify.

<https://www.kaggle.com/mrmorj/dataset-of-songs-in-spotify/version/1>

The dataset contains 42305 songs, and 22 features, and like Danceability, energy, key, mode, and tempo and more which can be so helpful to find a pattern and to use this pattern to find songs that are match the user taste.

The data is list of many genres which are Trap, Techno, Tech-house, Trance, Psytrance, Dark Trap, DnB (drums and bass), Hardstyle, Underground Rap, Trap Metal, Emo, Rap, RnB, Pop and Hip-hop.

I’ll be using K-Means to cluster similar songs together and use it to see which songs are similar to the inputted song.

**Tools:**

I’m planning to K-Means learning model, PCA, SpotiPy, Pandas and NumPy libraries. For visualization I’ll be using Matplotlib, and Seaborn

MVP Gaols:

* The user can search for a song
* Return a list of songs that are similar.
* Create a playlist to the user in his account with the recommended songs.