

# Statement of Work

## Music Recommendation System

### (MusicForYou)

Team Members :-

Ronak Kumar - 100846194

Krishna Bakshi - 100804293

Kartik Sharma - 100803803

Aniruddhsinh Sodha – 100801844

# Problem Statement

- Our team will work on developing a music recommendation system. As music streaming applications are used excessively by all age groups across the globe, an advanced music recommendation website seems to be a potential idea for the market as well as the project.
- The end target would be to develop an Artificially Intelligent Music System which will provide the user recommendations for songs based upon their listening preferences and patterns. The goal of this project includes development of a user-friendly web app with AI algorithms running the backend to derive the best accuracy and possible outputs.
- Post this, we will be pushing the webapp for its deployment on GitHub



# Data sources and requirements

- Spotify dataset - A dataset with about hundred thousand songs that includes columns with song information like song attributes, song name, artist name, release year, popularity etc.
- Spotify API that we would use to preview songs on our website/application.
- User information - As per our requirement, this information will include user name, age, country, artist preference, genre preference and will help us train our model. At the initial stage, we will proceed with these attributes. However, we are anticipating to add more features as and when our analysis proceeds.

For some of the attributes, we will get the timestamp as well.

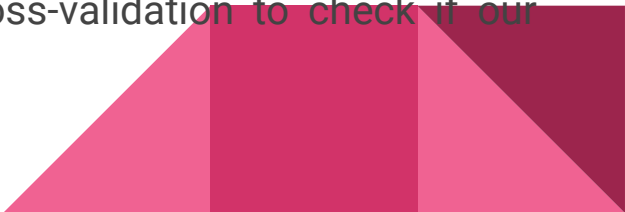


# Assumptions/Limitations/Constraints

- As there are over 100 million songs in the world, we assume that a dataset with about hundred thousand rows would be sufficient to train our model.
- One limitation and constraint would be to find a dataset having 2021 year songs as well since our present dataset doesn't support it. If we get additional dataset, we plan to merge it with our existing one



# Test Process

- Our project and model is heavily dependant on the quality and quantity of the data we use.
  - If we have enough data, our users could just enter the song name and get song recommendations, but if we are not able to collect required data to train our model, in this case we would need to collect more information about user preferences and use it along with our limited data to train our our model and provide recommendations to the user.
  - We will split the dataset into training-testing and apply cross-validation to check if our model performs well.
- 



Thank You !