

Music Data Analysis

Agenda

1. Overview
2. Problem Statement
3. Get Data from the APIs
4. Data Explorations
5. Cluster Similar Artists

6. Cluster Similar users (used for targeting)
7. User Profile Analysis
 - a. Gender
 - b. Age
 - c. Country
 - d. Registered on
8. Build Recommendation Engine to recommend similar artist
9. Business Strategies
10. Assignment

Overview

- Objective of this session is to Build Data Science Solution end to end from scratch.
- Steps:
 - Data Collection
 - Data Exploration
 - Statistical Data Analysis
 - Unsupervised Learning : K-Means Clustering
 - Recommendations Engine: Collaborative Filtering

Problem Statement

Music Data Project Case Study:

- A leading Music company Spotify wants to analysis the large amount of data collected from the website & app.
- Objective is to understand user's behaviour so that it can be used to do better recommendations.
- Targeting of right set of users for the Ads to increase the revenue.
- Calculate the Royalties of different Artist & Music companies.
- Understand more about the users demographics like:
 - Gender: understand behaviour of male vs female users
 - Age: Create age buckets & track behavior of this bucket.
 - Country: this will help to expand the company in other countries.
- Cluster similar users
- Cluster similar Artists

Business Strategies

1. Based on the country analysis, take action which country required more Ad spending, which should be the next market to enter.
2. Based on Gender & Age analysis, Decide How the Ad should be, whom you should target, Also the content of Ads. Helps in deciding the Hoardings, youtube Ads, other Ad campaigns. Targeting users in a better way.
3. How many registered on which date, It will help to find the impact of any big campaigns or promotions. Also build strategy to increase the registered users in the platform.
4. Negotiation with Artist or Music company based on their performance in the platform
5. Evaluate royalties for artist or songs.
6. Decide pricing model of subscription.
7. Performance boost after applying recommendations engine
8. Increasing user engagement with the platform.

Part 2 – Optional

- User based collaborative filtering
- Recommend:
 - Less known Artist
 - Unknown artist (new artist), so that user can explore new songs music
- Build Prediction Model to predict whether a user will listen to an Artist's songs.
- Build Prediction Model to predict how many times a user will listen to an Artist's songs.

Questions?

Thank you :)