**SYNOPSIS REPORT**

**ON**

**Building real world song recommendation engine with python**

**Submitted by:**

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**STUDIES**



# School of Computer Science and Engineering

**University of Petroleum & Energy Studies, Dehradun**

**Project Proposal Approval Form (2018-19)**

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**Major**

**Synopsis Report (2018-19)**

**Project Title: Building real world song recommendation engine with python**

**PEOP**- Project Evaluation and Observation Platform

1. **Abstract:**

A recommendation engine application that provides a person recommended songs on the basis of their listening history. On the faculty end, it gives the ability of continuous evaluation and provide the feedback to the project.

This app will contain a short description explaining the functionality of that particular project in their respective language.

Our project aims to ease the recommendation system and selection process and automate the whole process through an Web App. This will result in a user getting better experience and wider array of songs which he/she may like to choose from.

1. **Introduction:**

The project is aimed to keep track and analyze the songs in order to provide them a managed and classified recommendation of their taste. It can be achieved by implementing Jupyter Framework and Development Operations (DevOps). It is integrated as a Web App and hosted on local host.

We will be developing a web-application solution to our problem. Web App would provide a Graphical User Interface(GUI) to the user to interact with the application deployed on Local Host. Jupyter Framework is a tool designed to make it easier to create, deploy, and run applications by using Python. Jupyter is fast and easy to access.

Our project aims to ease the recommendation system and selection process and automate the whole process through an Web App. This will result in a user getting better experience and wider array of songs which he/she may like to choose from.

Our aim would be to digitalize the project evaluation process. Automation of the process and evaluation of all the reports is done using the given parameters provided by the university.

**Problem Statement:**

Problem Statement:

• Most users streaming music often times end up being recommended content they might not like as it is not so refined.

• The main objective is to create such a refined recommendation system that the user always keeps on discovering content of his liking

1. **Literature Review:**

[1]The proposition issue in the music region has additional challenges as person & music perception depends upon various parameters and constraints. In a research it was found that songs acumen is impacted by the setting of the customer. They found that music preference mainly differs on the basis of age differences, locations and languages .These parameters further can be classified into sub age groups, countries, states, regional languages and many more. It was reported that artists of similar sounds does not necessarily have the similar music and taste of listeners may differ. [2]Music can be near or undeniable to the extent in every way that really matters any property that can be used to depict music, for instance, sort, melody, beat, arrive starting and instrumentation, which makes it possible to answer the subject of similarity between two skilled workers from different perspectives. In a research it was found that most of the music listeners are in the age between 16 to 45 years of age and that was further divided into sub - groups: i. Broad taste: People whose melodic learning are exceptionally broad .They contributed 7 percent of total division. ii. Enthusiasts: There is lot of people in this world who believes that music is life and they are crazy for music. Indeed, music is the most relaxing thing in this world. They include 21 percent of this division. iii. Casual music listeners: People who casually listen to music in their free time include 32 percent of this division. iv. Indifferent: They have different mindset about music and including 40 percents of this age group. As per a research every person requires unique set of suggestions. Academics is exceptionally urgent and are along these lines the most troublesome audience members to give suggestions to. They require unsafe and shrewd proposals rather than famous ones. Lovers then again value a harmony between fascinating, obscure, and commonplace proposals. Casuals and indifferent, who speak to 72% of the populace, don't require confused proposals and famous standard music that they can without much of a stretch relate to would accommodate their melodic needs. In this way, it is critical for a recommender framework to have the capacity to recognize the kind of client and act as needs be. 8 The objective was to enhance suggestion precision by including more sound information from numerous melodies. For this purpose, songs from similar collection and similar artists were analysed to find the correlation and was named as “collection effect”. As of late, be that as it may, inquire about on recommenders utilizing communitarian separating has picked up a greater prominence in the music space. The main music recommender framework utilizing community oriented. It utilised a compelled person connection for computing similarity effect which corresponds to total like content. Then again, slithered client related to an enormous account of robotized tunes that drove web looks of blueprints to somebody's gifted specialists. [3]They utilized system sifting techniques on the information to diagram proposals. Then they utilized substance based and synergistic sifting approaches unreservedly to support music subject to music and client social gatherings. The music packs contained melodies the client was beginning late enchanted by and client bunches set clients with comparative interests. They accomplished higher precision with the substance-based framework, yet the synergistic secluding system gave all the moreover dumbfounding suggestions. Sanchez-Moreno et al. (2016) proposed a total separating method that utilized listening coefficients as an approach to manage area the decrease sheep issue of synergistic sifting. In order to distinguish between clients, the listening clients conduct with respect to specialists they tune into which is utilized to describe the clients dependent on the exceptionalness of their inclinations. The proposed strategy fundamentally surpassed more customary community oriented sifting technique.

1. **Objective:**

This web app will help us to get song recommendations and help us to listen to similar songs of our taste without searching for them.

**Sub objectives:**

1) This web app will help us to listen our favourite genre continuously.

2) Everyone just install it on localhost and get song recommendations easily and hustle free.

1. **System Requirements:**

**Hardware requirements:**

One personal computer with:

* Minimum 4 gigabytes of RAM

**Software requirements:**

* WAMP SERVER
* Jupyter Notebook

1. **References:**

* [1] McFee, B., BertinMahieux,T., Ellis, D. P., Lanckriet, G. R. (2012, April). The million song dataset challenge. In Proceedings of the 21st international conference companion on World Wide Web (pp. 909916).ACM. [2] Aiolli, F. (2012). A preliminary study on a recommender system for the million songs dataset challenge. PREFERENCE LEARNING: PROBLEMS AND APPLICATIONS IN AI [3] Koren, Yehuda. ”Recommender system utilizing collaborative filtering combining explicit and implicit feedback with both neighborhood and latent factor models.”
* Udemy

**Synopsis verified by:**



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