MUSIC RECOMMENDER SYSTEM

PROJECT SYNOPSIS

Machine Intelligence

BACHELOR OF TECHNOLOGY- V Sem CSE

Department of Computer Science & Engineering

BATCH- 7

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Abstract and Scope

Recommendation engines are a subclass of machine learning which generally deal with ranking or rating products / users. Loosely defined, a recommender system is a system which predicts ratings a user might give to a specific item. These predictions will then be ranked and returned back to the user. By using music recommender system, the music provider can predict and then offer the appropriate songs to their users based on the characteristics of the music that has been heard previously.

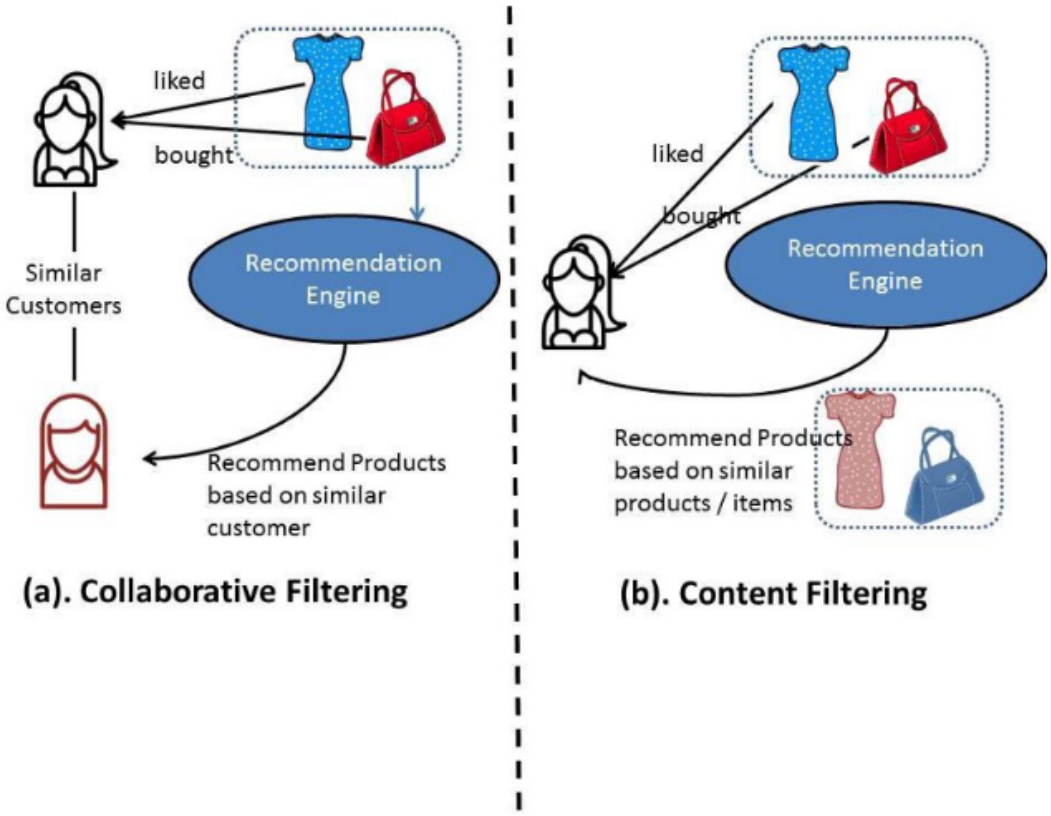
There are many different ways to build recommender systems, some use algorithmic and formulaic approaches like Page Rank while others use more modeling centric approaches but there are three main types of techniques for Recommendation systems; content-based filtering(based on the users preferences and profile), collaborative filtering(predicting the interests of a user by identifying preferences and information from many users), and knowledge-based system(based on an influence about a user's needs).

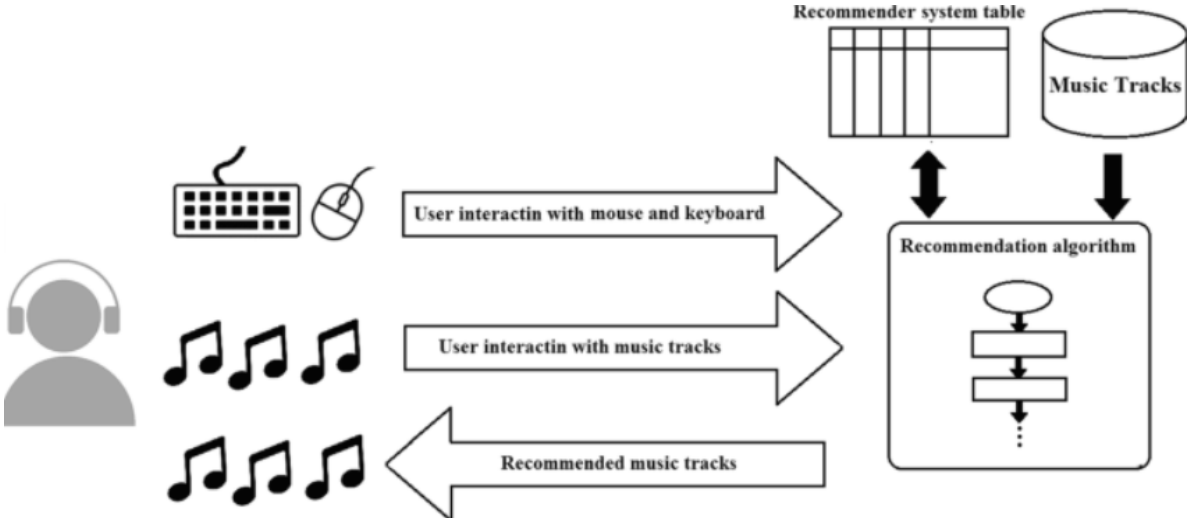
The method of evaluation of a recommendation is solely dependent on the dataset and approach used to generate the recommendation. Common statistical accuracy measures to evaluate accuracy of a recommender are RMSD (Root Mean Square Deviation), MAE (Mean Absolute Error), and K cross validation.

Feasibility Study:

Recommender systems aim to predict users' interests and recommend product items that quite likely are interesting for them. They are among the most powerful machine learning systems that online retailers implement in order to drive sales.
Music recommender systems helps music platforms to serve their customers or users by providing more of what they listen to based on their previous pattern and history
Companies using recommender systems focus on increasing sales as a result of very personalized offers and an enhanced customer experience. Recommender systems are a useful alternative to search algorithms since they help users discover items they might not have found otherwise.

Design Approach/ Methodology/ Planning of work:





References

1) “Collaborative Filtering for Music Recommender System“ - from

https://sci-hub.se/https://ieeexplore.ieee.org/abstract/document/7910613
An insight of how we can build a recommender system to be used as a commercial application.

2)“Efficient music recommender system using context graph and particle swarm”
- from https://sci-hub.se/https://link.springer.com/article/10.1007/s11042-017-4447-x
mentions the different algorithms and optimization techniques.

3) ”Music Recommender System Based on Genre and Convolutional Recurrent Neural Network” - from https://www.sciencedirect.com/science/article/pii/S1877050919310646
focus on genre classification using an ML model.

4) ”Knowing Me Knowing You’: personalized explanations for music recommender system”- from https://link.springer.com/article/10.1007/s11257-021-09304-9

5) ”An emotion-aware music recommender system: bridging the user’s interaction and music recommendation” - from https://link.springer.com/article/10.1007/s11042-020-10386-7
to build an intelligent application for music suggestions based on user preference.

6) ”An Emotional Recommender System for music” - from
https://sci-hub.se/https://ieeexplore.ieee.org/abstract/document/9204829

7) “Music Recommender System Based on Genre using Convolutional Recurrent Neural Networks” - https://www.sciencedirect.com/science/article/pii/S1877050919310646

Apart from the mentioned, we looked into various videos and websites to gauge more with respect to our project and will look into more papers for literature review.