

# MUSIC RECOMMENDATION SYSTEM

Simulation Based Assignment  
In  
Artificial Intelligence  
(INT-404)

Submitted To:

Ms. Nandini

Submitted By:

**Team 17 [K18KR]**

School of Computer Science Engineering  
Lovely Professional University, Jalandhar, Punjab 144411



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## **TITLE**

The title of our project is “ A Music Recommendation System ” from which we can say that when an user play a song in their device/system then according to their choice number of songs should be recommended to them which can be on of basis like i) Of their of choice ii) Popularity Based iii)Similarity Based and more.

## **DESCRIPTION**

The Internet evolution continuously generates several changes in social habits related to communication and lifestyle. The bandwidth growing originated the birth and late spreading of complex file-sharing systems. This systems known as peer to peer software let users share files they had stored locally in their personal computers with other users connected to the same system. Music sharing started thanks to software like Napster ([www.napster.com](http://www.napster.com)) or late Audio galaxy ([www.audiogalaxy.com](http://www.audiogalaxy.com)). These peer to peer systems revolutionized the music industry and so the habits of people related to musical collect and playback. Now it was easier to search music, easier to store music, and much cheaper to get it. This new situation led to massive music storage for sharing purposes and affected the way music was reproduced, changing from complete and straight album reproduction to the creation of complex playlists composed of many artist and musical genres.

This music recommendation system is based on two recommendation models:

1. Popularity Recommendation
2. Similarity Recommendation

It uses these two recommendation models to predict songs for a user.

1. Popularity Recommendation:

- a. This model recommends those songs which are popular in the users region.
- b. In other words, it predicts those songs to a user which are listened by most of the other users in his/her region.

2. Similarity Recommendation:

- a. This model recommends those songs which are similar to the songs which a user listen most.

## **What project is all about?**

The objective of this project is to develop a music recommendation system. The system will determine the musical preferences of users based on the analysis of their Interaction during use. This way it's possible to estimate what artist or group would be pleasing to the user at a given time. It has been taken into account that we do not always want to hear the same artists or genres, we have favorite bands, but sometimes a listener needs to be surprised, enjoy a new discovery. A music recommender needs a music catalog to be recommended, this project offers a review of several music services and their features, making use of musical information available online provided by some (friendly) music services. These services allow developers to access their musical collection to contribute with the proliferation of new applications. It has been created a web component that connects to music service providers to obtain this data. The web system implements the essential communication skills to use this information within the client web browser. This system helps users discover new artists, albums or songs making this music information accessible. For doing this, a complete analysis of the state-of-the-art

for music recommendation has been performed, giving clear highlights about the recommendation techniques used in many systems which implement recommendation through diverse mathematical models. The dynamic characteristics of the interface allows the user to browse music collections while listening to a song, album, or playing a video. The users will receive information related to their interaction patterns (profiles) as personalized recommendations of items which probably they would like, while they use the application.

## Work Division

Works	Done By	Reg. No.	Roll No.
Similarity Based Coding	Anish Kumar Jha	11812874	B-65
Popularity Based Coding and Dataframe part	Ashutosh Kumar	11803136	A-30
Code Snippet part	Deepak Kumar	11809945	B-46
Report and Video part	Anikesh Arya	11814733	A-26

## **Conclusion**

This review shows the variety of decisions to make when planning a recommender system, offering a complete summary that eases the decision making process upon analysis phase. Some decisions visualized after this analysis state that the user profile employed in this recommender could be based on history based generation, due to the monitoring capabilities of the web interface itself. The user profile will be refreshed when new information is retrieved from interaction, therefore user profile is continuously evolving. The only relevant feedback taken into account for this purpose is the purely implicit. It is retrieved optimally by the case-designed web interface.