

**MOVIE RECOMMENDATION SYSTEM**

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A Project Report Submitted to the Department of Computer Science And Engineering for the Study Leading to a Project Report on Movie recommendation system as a mini project for evaluation in Computer Science of Graphic Era.

## Problem Statement

**Movie recommendation system**

# Literature Review

# 2.1 Introduction

The number of internet user has increased drastically which results in the increase in number of web searches performed on daily basis and the amount of information available from all these have so much unwanted as well as reliable data present there. So researchers generate recommender system to help the users .

Recommender systems are the systems that are designed to recommend things to the user based on many different factors. E-commerce companies and content providers use recommender systems to suggest related products or content to users.

The recommendation systems makes the prediction based on the user’s historical behavior’s. Specifically, it’s to predict user preference for a set of items based on past experience. To build a recommender system, the most two popular approaches are Content based Filtering and Collaborative Filtering. These are generally 2 main types of recommendation systems. Other than these 2 there are other types also which are Hybrid Approaches, Association rule mining, Deep Learning based, Popularity based recommendation system, Classification model based.

Here are some of the real life examples for recommendation systems and companies using them to serve their customers better in a personalized manner. These are:  
**Netflix Prize:**  
– Pioneered Latent Factor/ Matrix Factorization models

**Google-Youtube:**  
– Hybrid Recommendation Systems  
– Deep Learning based systems  
– Social Network Recommendations

**2.1.1 Content Based recommender system**

Content-based filtering or Content-based recommenders uses item features to recommend other items similar to what the user likes, based on their previous actions or explicit feedback. Content-based filtering recommends items based on the similarity in features between an item and a user preference.It try to figure out what a user's favourite aspects of an item are, and then make recommendations on items that share those aspects. It is one of the common methods in building recommendation systems.

A user preference can be determined by explicit information given by a user, like the demographic information, or information that can be indirectly collected from what the viewers watch, interact and purchase. Many recommender systems need to deal with the cold start problem when there is not enough information collected for a new user. Deriving user meta-information from user interactions is important. For example, we can collect descriptions for movies that a user watched and use that as input to extract a user preference.

# 3.Methodology

# 3.1 Dataset

In this content-based movie recommendation system I have used the movie dataset. I have taken this dataset from the Kaggle website. the dataset is in the 2 csv files in first file it has the userId, movieId and the genre of the movie and in the other file the movie name and the movie id is present.

**3.2 Project Methodology**

In this project we proposed movie recommendation system in which we are using two data set based on rating and movies. We are using content based filtering using genre correlation where first we are analyzing our rating and movie csv dataset using python libraries and then merge both the files to make a single data frame based common coloum i.e UserID and then find top ratings , different types of genre in dataset, movies name and drop coloumn which is not useful in dataset. After that we train our recommendation system and make it process to return list of movies names having the common genre from the movie name which I have entered and are in the top rating as output and the with the help of dill package we dump our model to generate a pkl file. After that we make fronted using html5, Css3 and bootstrap and use flask framework to connect our model to the frontend and take the input and display the required output and this webpage is deployed on the local server with the help of that liberary.

**4. TOOLS &LIBRARIES**

4.1 TOOLS

1.Anaconda

2.Jupyter Notebook

3. Spider

4.2 LIBRARIES

1. NumPy

2. Pandas

3. Spark

**5. CONCLUSION**

After the implementation of the project I get a working recommendation system in which I am giving the name of the movie and it recommends me the list of 11 movies whose genre is same as the genre of my movie and are in the top of the ratings and it runs on the local server.