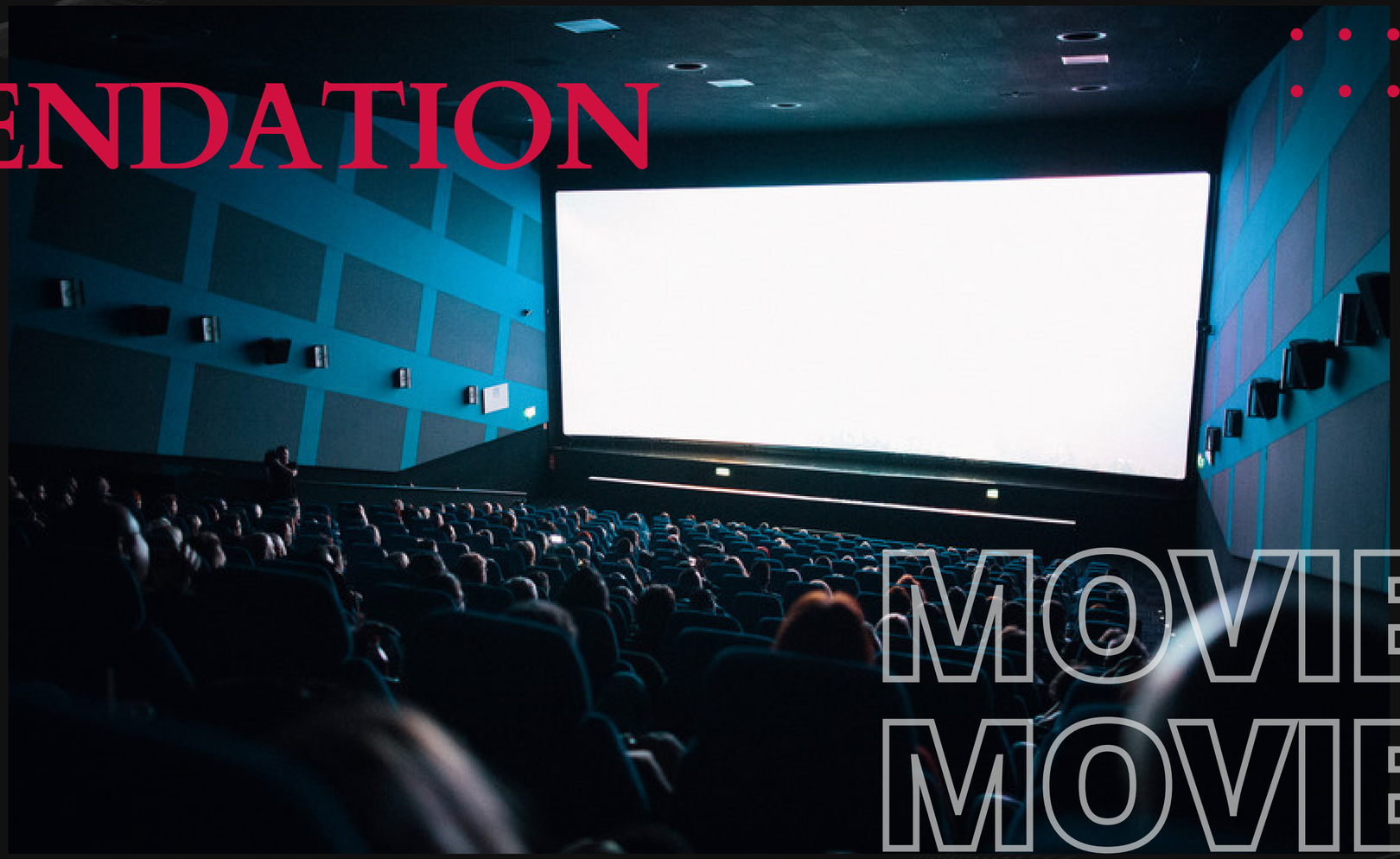
MOVIE RECOMMENDATION SYSTEM



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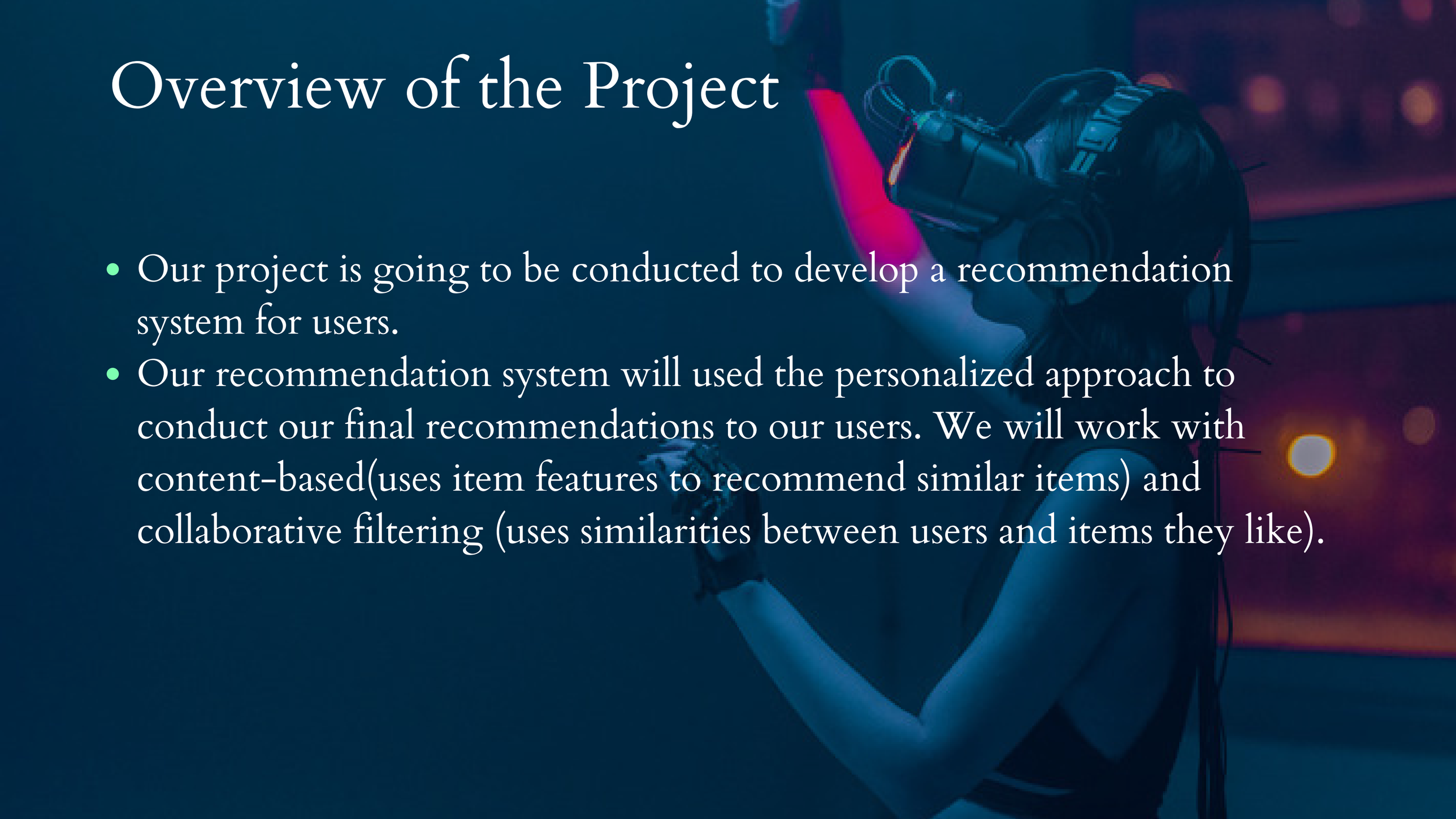
Overview of the Project



- Our project is going to be conducted to develop a recommendation system for users.
- Our recommendation system will used the personalized approach to conduct our final recommendations to our users. We will work with content-based(uses item features to recommend similar items) and collaborative filtering (uses similarities between users and items they like).

Problem Statement

Our goal is to develop a movie recommendation system that can provide personalized recommendations to users based on their ratings of other movies.

By leveraging the MovieLens dataset, we aim to create a model that can accurately identify the top 5 movie recommendations for each user.

Methods taken to actualise the project

Business

Business Understanding

Data

Data Understanding and data preparation

Insights

Evaluation and Deployment

Code

Modeling

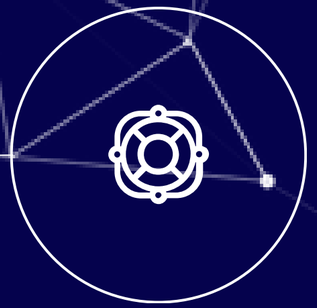
Questions we aim to answer

Main Objective

Develop an accurate and efficient movie recommendation system that enhances user satisfaction by providing personalized recommendations aligned with their movie preferences.

Specific Objectives

What movie genres are most popular to the users ?

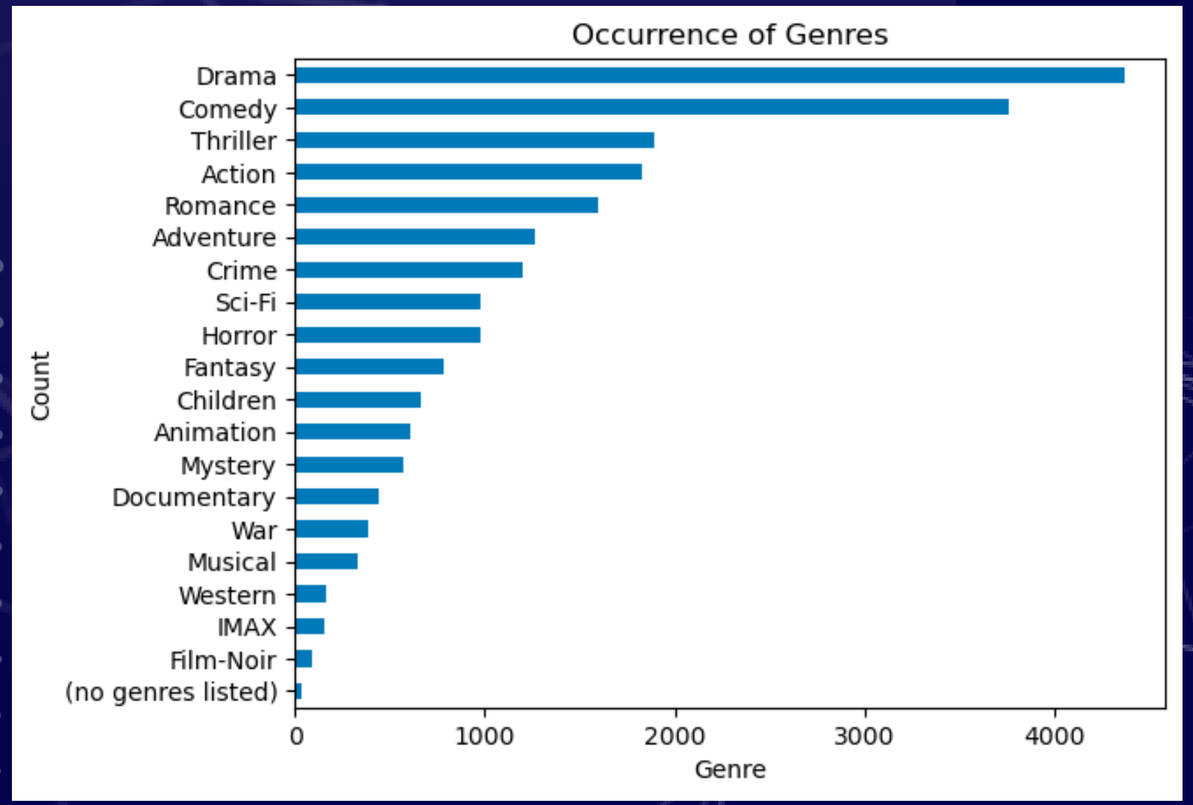


What genres have the most ratings?

Featured genres in the movies dataset

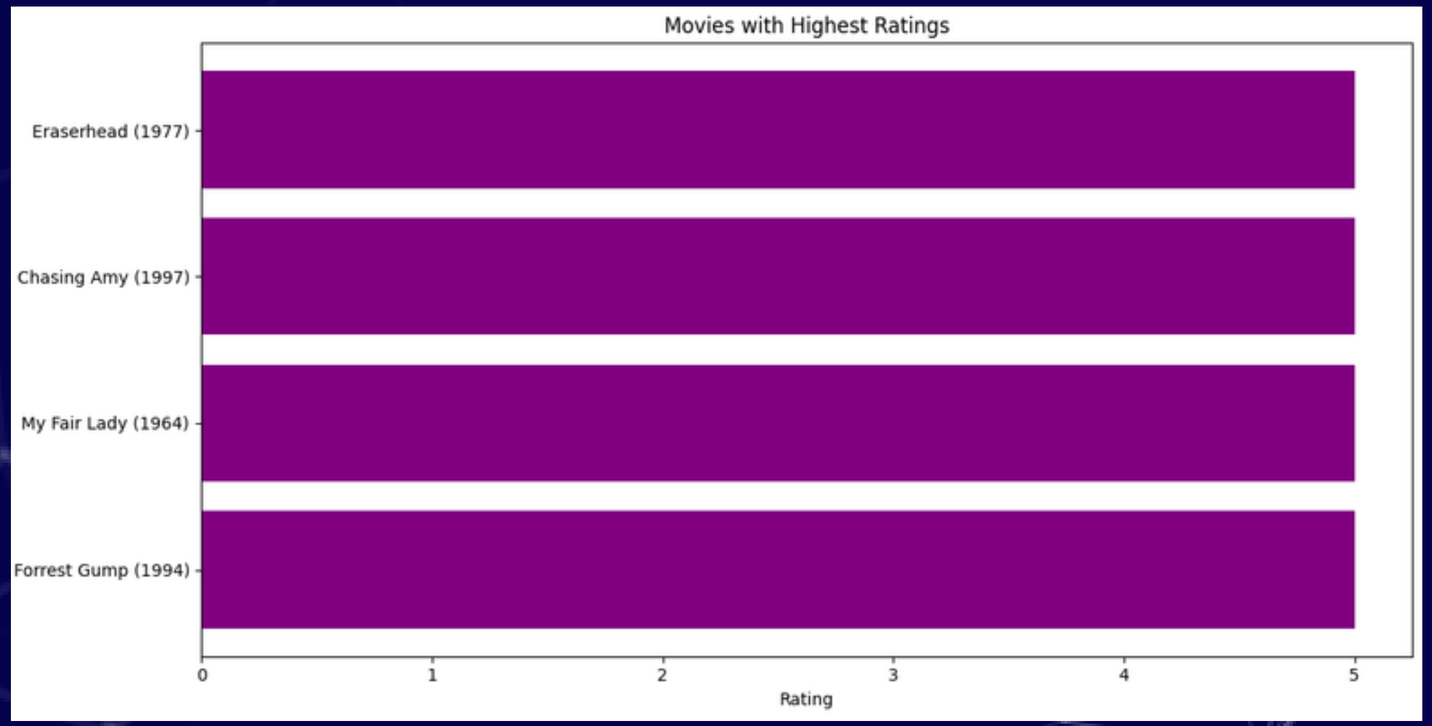
From our visual above, we can see the most featured genres in our dataset are that are coming out are: Thriller, Action, Sci-Fi, Adventure, Drama, Crime and so on.

Top occurrences obtained from our dataset



In this visual, we are able to see the occurrences of the various genres of the movies in our dataset.

High Rated Movies ratings



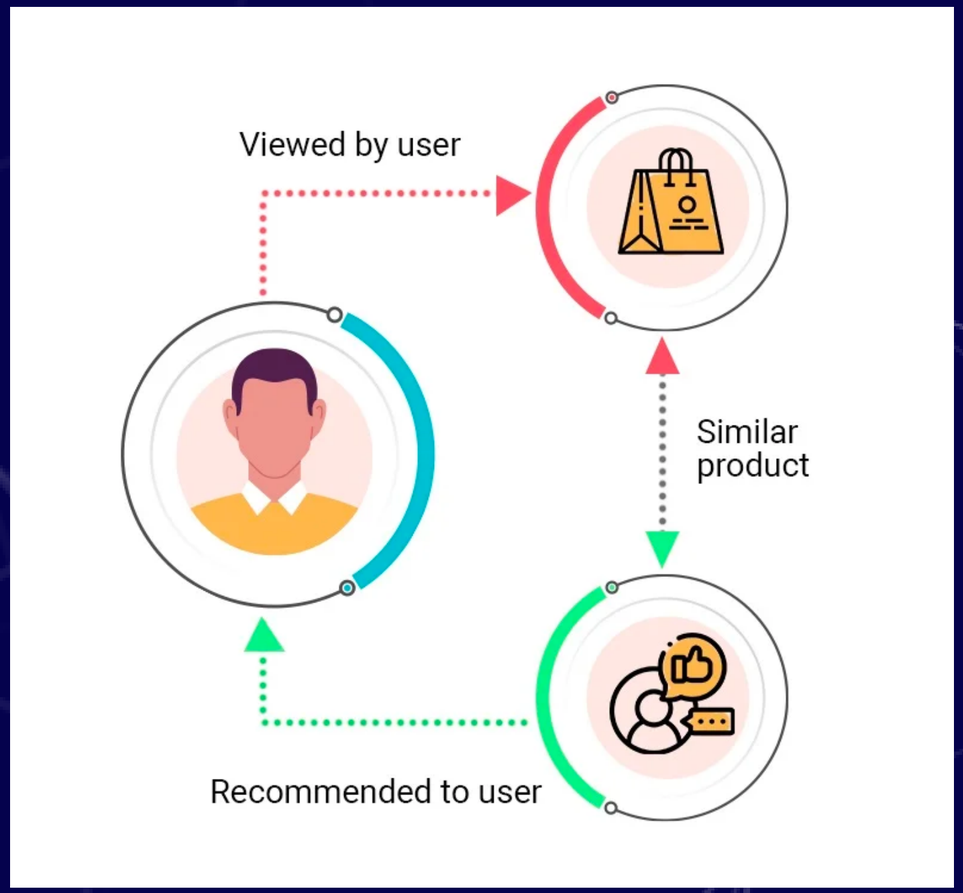
From our findings, we found that the top rated movies were rated 5.0 by the users.

Recommendation systems

There are two types of recommendation systems that we will use on our project. They are :

1. Content-Based &
2. Collaborative Filtering

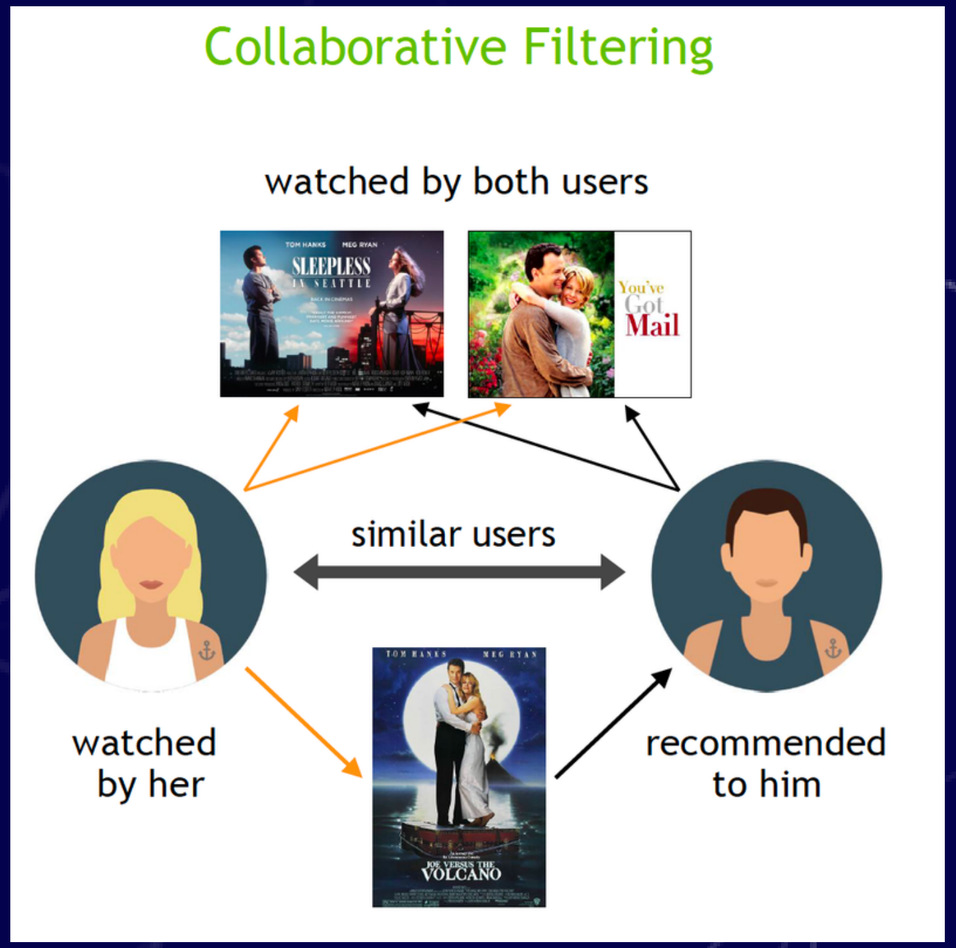
Content-Based Recommendation System



It attributes features such as genre, description, ratings, etc. for movies, to make suggestions for the users.

The intuition behind this sort of recommendation system is that if a user liked a particular movie or show, he/she might like a movie or a show similar to it.

Collaborative Filtering Recommendation System



The Collaborative Filtering Recommender is entirely based on the past behaviour and not on the context.

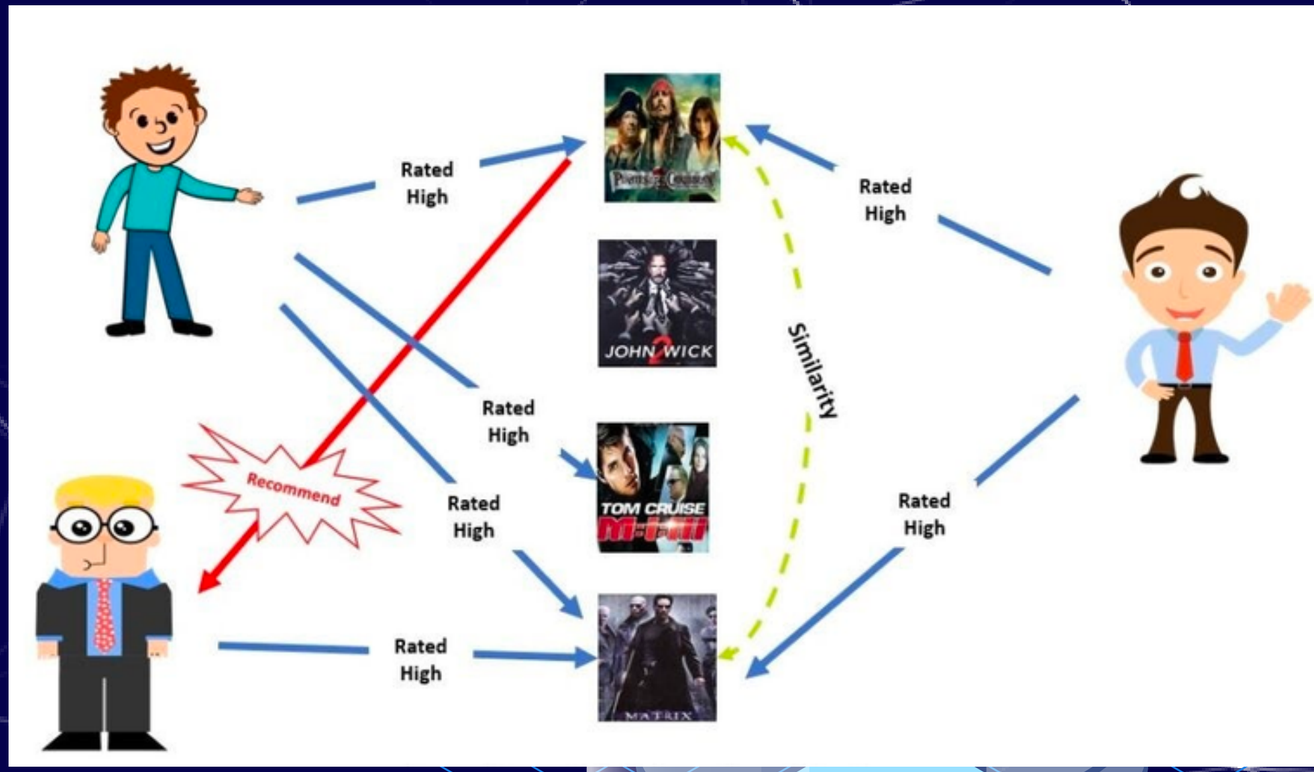
It is based on the similarity in preferences, tastes and choices of users. It analyses how similar the tastes of one user is to another and makes recommendations on the basis of that.

Collaborative Filtering Recommender Systems

These recommendations can be acquired using two broad categories:

a) Memory-Based Collaborative Filtering (Neighbourhood based).
It uses item-item similarity versus user-user similarity.

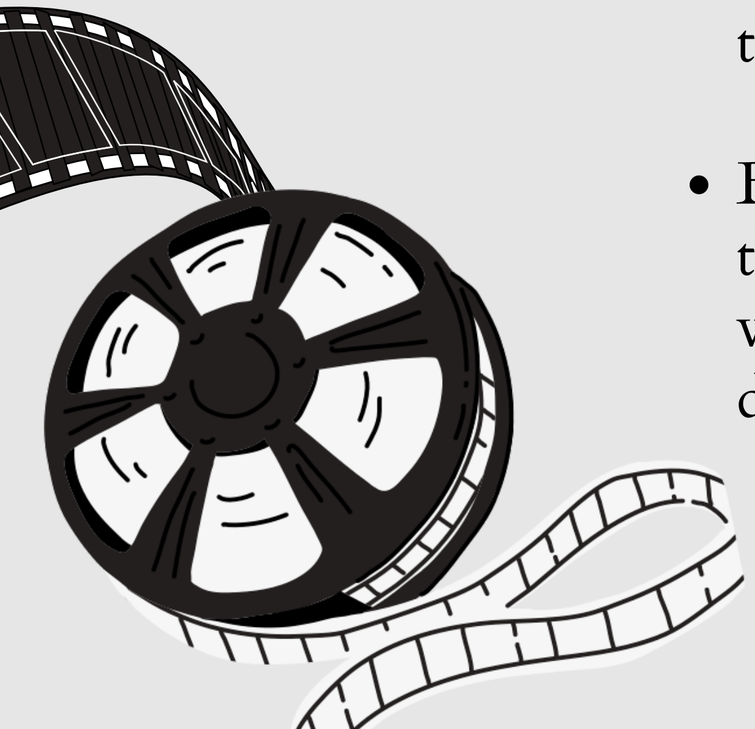
b) Model-Based Collaborative filtering.
It only takes into account the rated values, ignoring whatever items have not been rated by users.

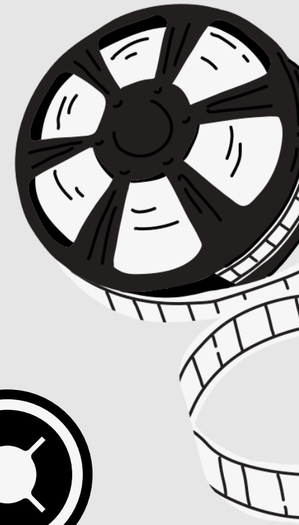


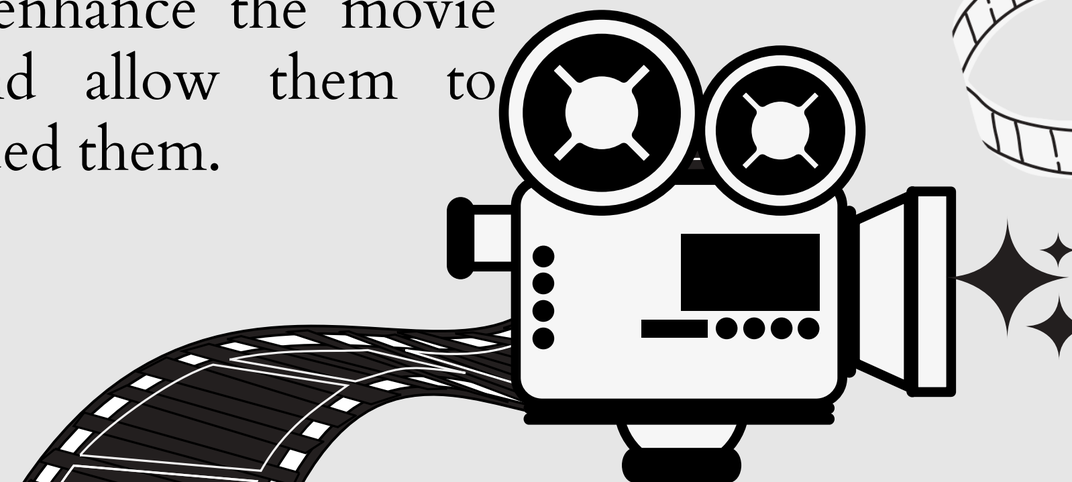
CONCLUSION

- Using the collaborative filtering approach specifically user-based, we identified similar users based on their movie ratings and genres which enabled us to generate recommendations based on the preference of users with similar tastes.

- By offering the top 5 movie recommendations to the users, we were able to enhance the movie viewage and experience and allow them to discover new films that intrigued them.







RECOMMENDATIONS

- Use of a hybrid recommendation systems that combines content-based and collaborative filtering, hence more accurate recommendations.
- Provide a diverse selection of highly popular films that users may enjoy based on the ratings of other movies.

THE END

Thank you