PROJECT REPORT: MOVIE RECOMMENDATION SYSTEM

INTRODUCTION:

Movie Recommendation System project implements a Simple effective system using Collaborative Filtering and Content Filtering technique for providing top 5 Recommendations to different users.

Built using Python and deployed in Streamlit UI for personalized experience based on their preferences and selected movie ids.

ABSTRACT:

It uses MovieLens Dataset 100k which contains real-world user ratings along with movie details.

Collaborative Filtering: Suggests movie based on similar preferences

Content Filtering: Based on similar in genre/content to selected movie.

TOOLS USED:

Python Pandas NumPy Scikit-Learn Streamlit.

STEPS INVOLVED:

DATA LOADING:

Used the MovieLens 100K dataset containing movie details and user ratings.

Using Pandas and NumPy data manipulation and its operations.

DATA PREPROCESSING:

Merging the contents based on movie_id. Creating matrix for filtering.

COLLABORATIVE FILTERING:

Using Cosine similarity for filtering top N films.

Weighted recommendations are generated from the top-N most similar users.

CONTENT FILTERING:

Used genre information of movies as feature vectors.

Computed Cosine similarity between movies using genre vectors.

STREAMLIT DEPLOYMENT:

Simple UI interface.

Users can choose between Collaborative or Content-Based filtering.

Output shows top 5 recommendations dynamically.

CONCLUSION:

It demonstrates movie recommendation system with interactive web interface in Streamlit UI.