

Movie Recommender System

# PROBLEM STATEMENT

With the vast and ever-growing number of movies and TV shows available across various platforms, users often face difficulty in choosing what to watch. This content overload leads to decision fatigue and wasted time scrolling through recommendations that don’t align with user preferences. Additionally, most streaming platforms provide generic suggestions based on popularity rather than personalized taste, missing the opportunity to enhance user engagement through intelligent recommendations. There's a need for a smarter system that provides relevant, insightful, and user-centric movie suggestions.

# PROJECT OVERVIEW

Our team developed a movie recommendation system that leverages the power of real-time data from the TMDb API, combined with a visually interactive interface using Streamlit. The system allows users to search for a movie and instantly receive detailed information including cast, reviews, and intelligently suggested similar movies. The system further enhances user engagement by enabling deep exploration of cast biographies and exploring recommendations via an elegant, user-friendly design.

# SOLUTION OFFERED

* The solution consists of a Streamlit-based web application that fetches real-time data from The Movie Database (TMDb) API. Upon entering a movie name, the system displays:
* Movie overview, release date, budget, and revenue
* High-quality poster and backdrop images
* Top 10 cast members with profile images and biographies
* Top 5 user reviews with expandable content
* Top 5 similar movie recommendations with clickable previews
* This intuitive recommendation flow allows users to continuously explore content based on their interests, reducing time spent searching and increasing satisfaction with content selection.

# WHO ARE THE END USERS?

* Movie enthusiasts
* Streaming platform users
* Researchers or developers looking to study recommendation systems
* Content aggregators and entertainment apps

# TECHNOLOGY USED TO SOLVE THE PROBLEM

## 1) Frontend/UI

## Streamlit: Used to build an interactive and visually appealing web interface.

## Custom CSS: Enhances the visual styling and responsiveness of components like buttons, text boxes, and images.

## 2) API Integration

## TMDb API: Used for fetching real-time movie data, including metadata, cast details, reviews, and recommendations.

## 3) Backend and Logic

## Python: The core programming language used to integrate API data with the Streamlit frontend.

## Requests Library: To fetch data via RESTful API endpoints.

## Session State Management: Used for storing user selections like current movie or clicked cast members.

## 4) Deployment

## The application can be run locally or hosted on platforms like Streamlit Cloud or Heroku for public access.

# GitHub Link

https://github.com/Vermaji2077/cu.git

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