



Bangladesh Army University of Science and Technology (BAUST), Saidpur

Movie Recommendation System Using Machine Learning

Course Title:Machine Learning Sessionel

Course Code:CSE 4140

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Introduction

Movies are a major part of entertainment, and choosing the right movie is difficult because thousands of movies release every year. Our system helps users get personalized movie suggestions based on their interests.

Main Features:

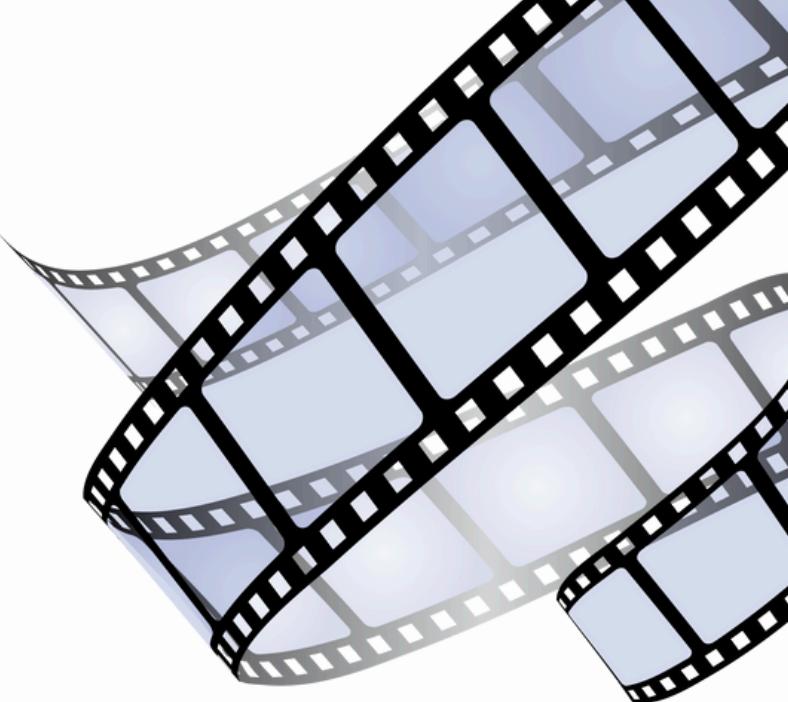
- Suggest similar movies
- Personalized result
- Easy to use



Objectives

- Recommend movies based on user input.
- Analyze movie features like genre, overview, keywords, etc.
- Suggest similar movies using ML algorithms.
- Improve user experience with relevant recommendations.

Related Works



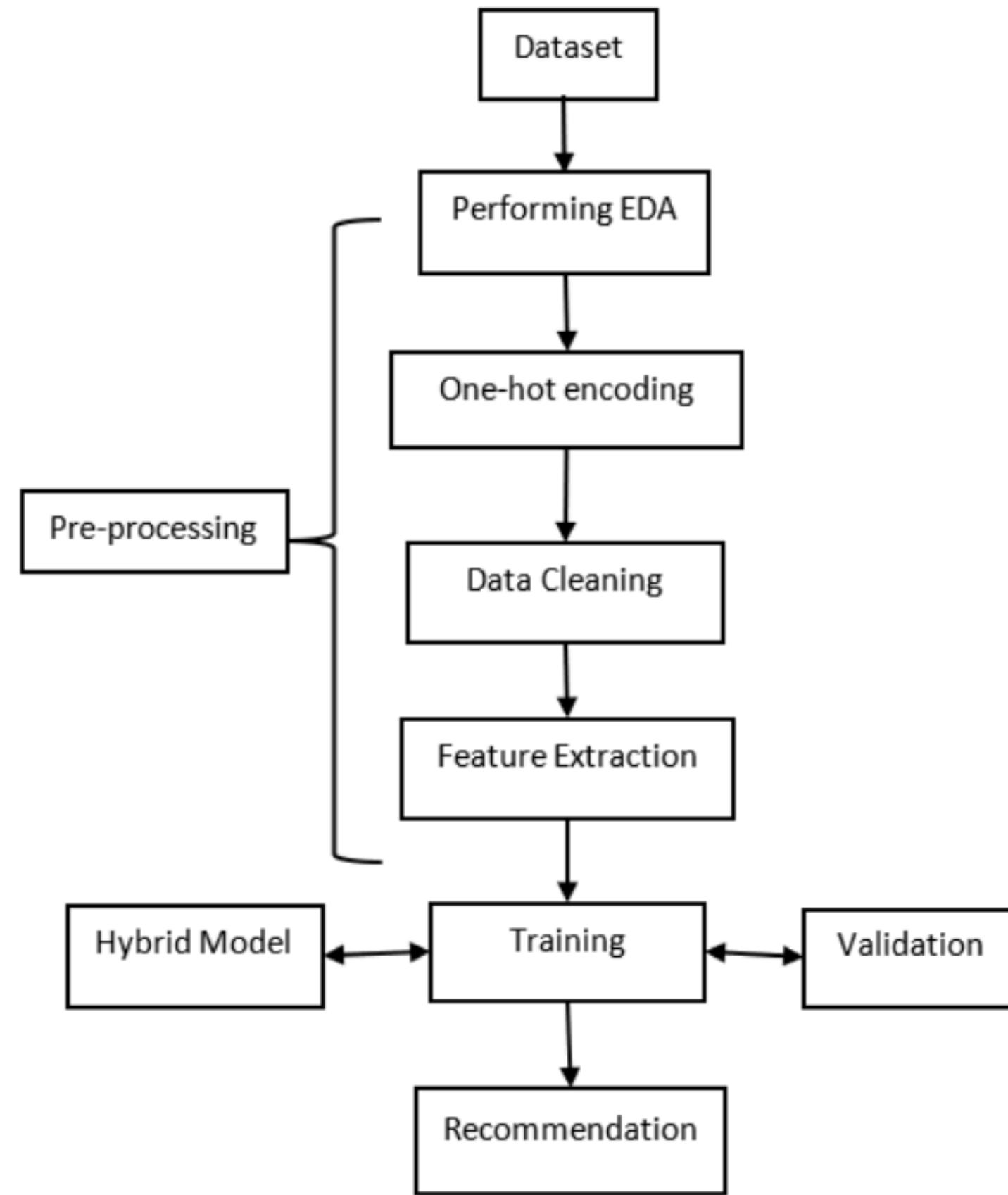
Previous Works Used:

- Collaborative Filtering
- User Rating Based Systems
- Deep Learning Recommenders
-

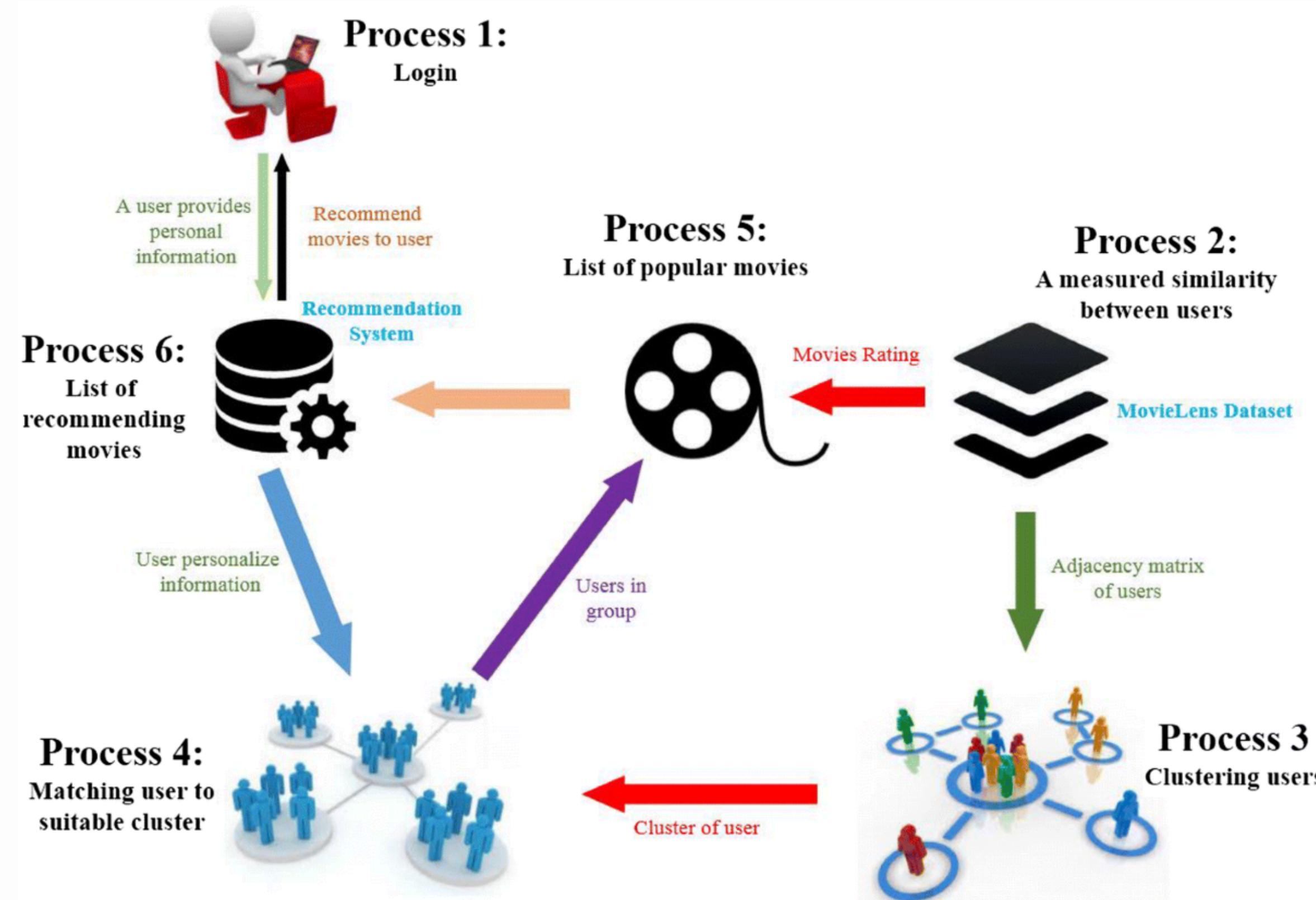
Limitations in Previous Works

- Needs large user rating datasets
- Not effective for new users
- High computational cost

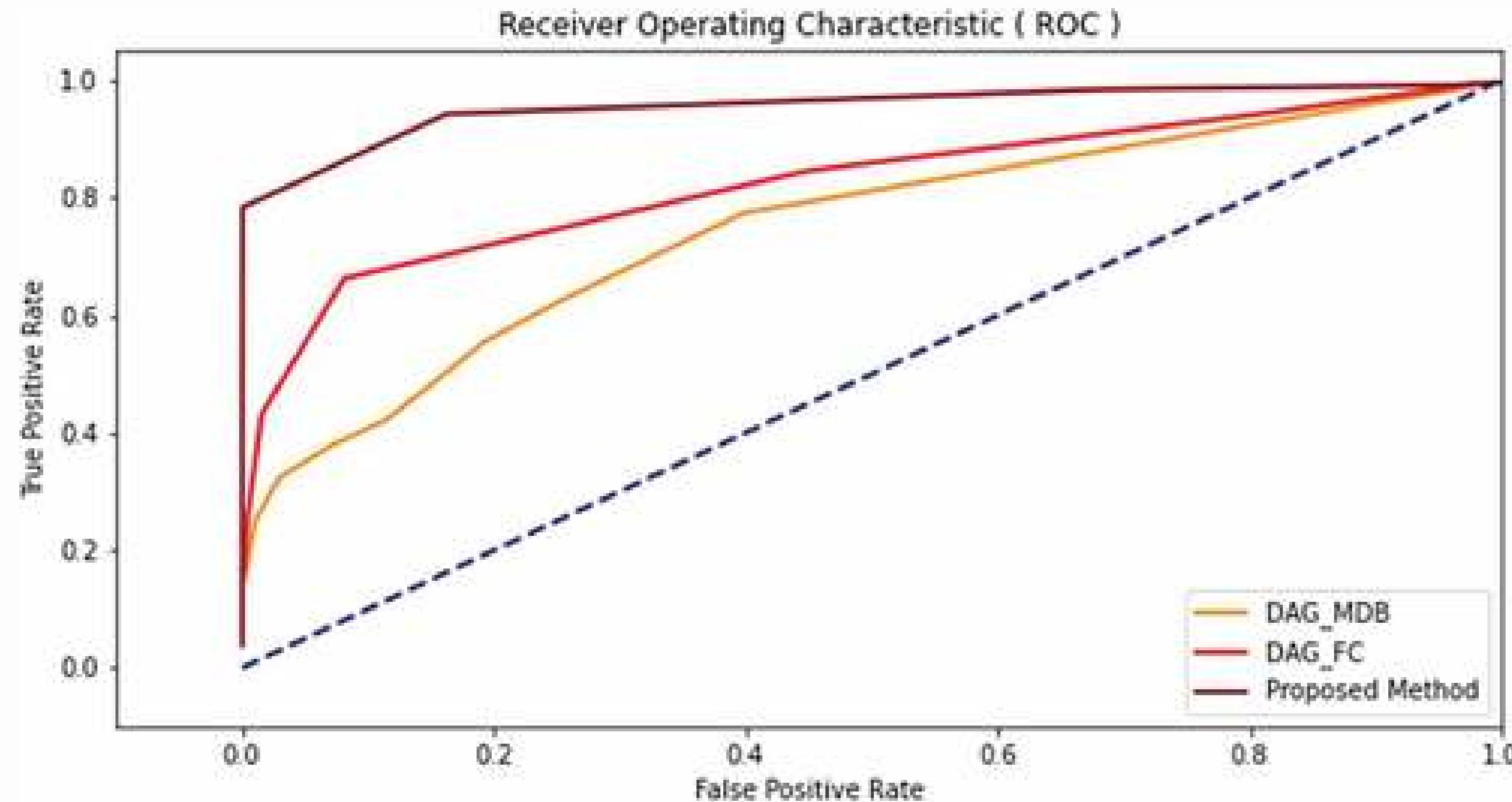
methodology



Dataset Overview



ROC Curve Analysis - Top Models

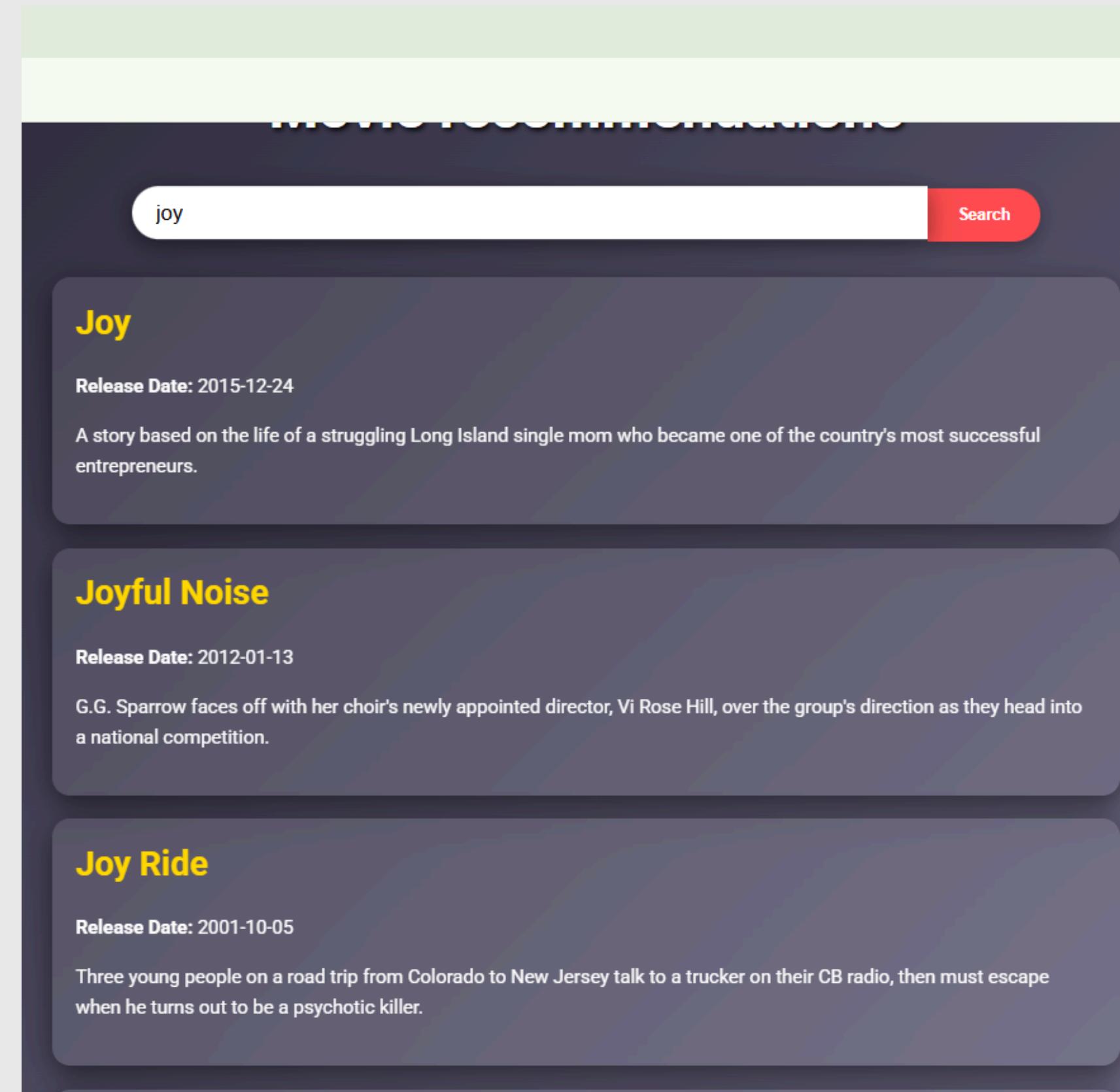


System Output (Example)

Input Movie: joy

System Gives Recommendations Like:

- joy
- joyful Noise
- Joy Ride



System Interface

Features of UI:

- Simple search bar
- Type a movie name
- System instantly shows similar movies
- Easy to use for normal users

The interface features a dark header with the text "Movie recommendations". Below it is a search bar with the placeholder "Enter movie name" and a red "Search" button. The main content area displays three movie cards, each with a title, release date, and a brief description.

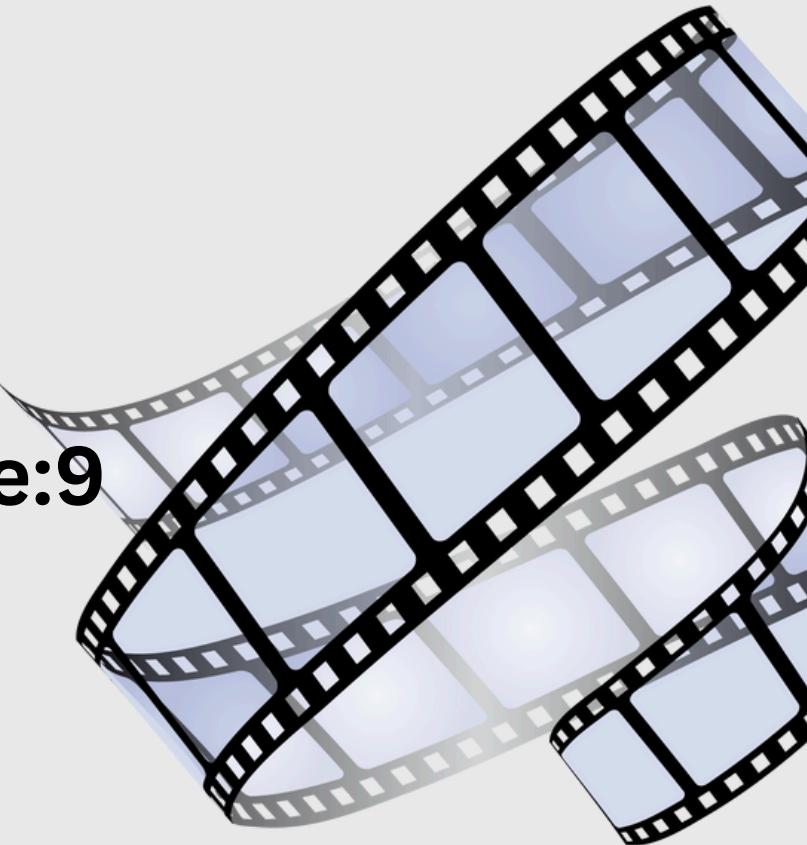
- The Good Dinosaur**
Release Date: 2015-11-14
An epic journey into the world of dinosaurs where an Apatosaurus named Arlo makes an unlikely human friend.
- A Good Day to Die Hard**
Release Date: 2013-02-06
Iconoclastic, take-no-prisoners cop John McClane, finds himself for the first time on foreign soil after traveling to Moscow to help his wayward son Jack - unaware that Jack is really a highly-trained CIA operative out to stop a nuclear weapons heist...
- The Long Kiss Goodnight**
Release Date: 1996-10-11
Samantha Caine, suburban homemaker, is the ideal mom to her 8 year old daughter Caitlin. She lives in Honesdale, PA, has a job teaching school and makes the best Rice Krispie treats in town. But when she receives a bump on her head, she begins to rem...



Limitations

- Cannot recommend movies not in dataset
- Only finds similarity based on text
- No real-time user feedback is used yet

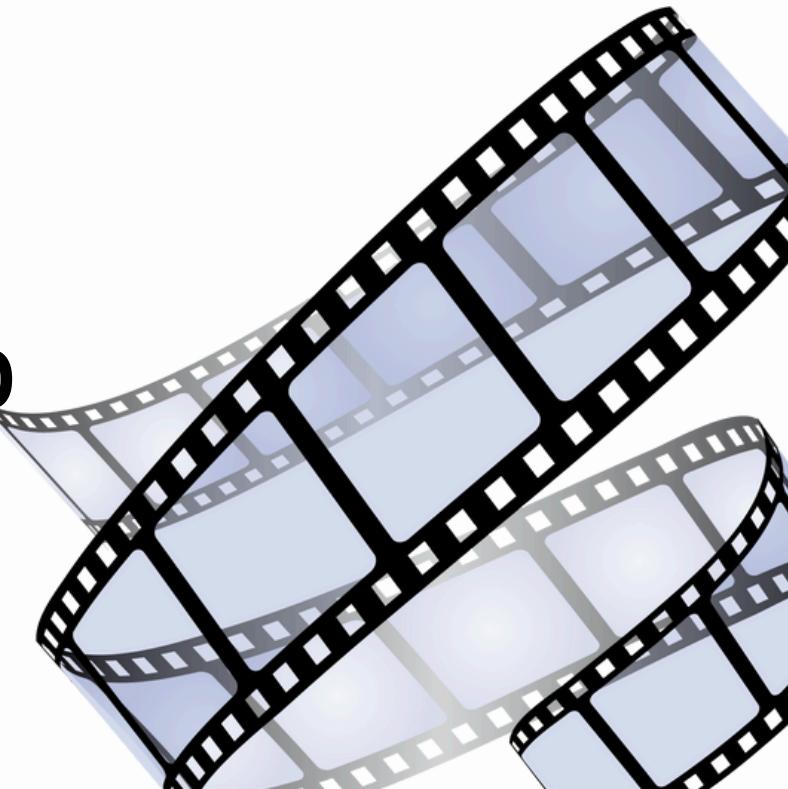
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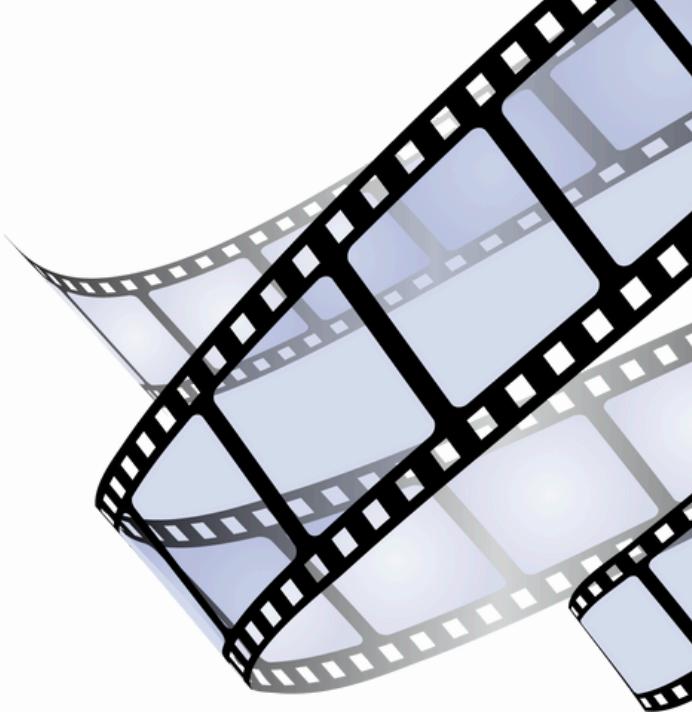


Future Improvements In future we will add:

- User Rating Based Collaborative Filtering
- Deep Learning-based Recommendations
- Trailer suggestions
- Watchlist + Login System
- Real-time trending movie suggestions

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Conclusion

- Our system solves the problem of choosing movies
- Works fast and gives high-quality suggestions
- Lightweight and easy to deploy
- Helps users find movies they will enjoy



THANK YOU!

