

Recommendation System



Meet The Team

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Introduction




Recommendation systems help users discover movies they'll likely enjoy by analyzing both user preferences (ratings) and movie features (genres, actors). Using collaborative filtering, the system recommends movies based on the tastes of similar users. With content-based filtering, it suggests movies with similar features to those the user has liked before. Combining both methods, the system provides personalized movie suggestions that match the user's interests and viewing habits.





Project Background

With the growth of streaming platforms, users struggle to find movies. Recommendation systems help by suggesting personalized content based on user ratings and movie features. They use Collaborative Filtering (similar users' preferences) and Content-Based Filtering (similar movies). These systems enhance user experience with relevant suggestions



Project Planning

A

Data Collecting &
Preprocessing

(Salma Saeed)

B

ML & Modeling

(Salma Saeed)

C

Advanced Techniques
& MLOPs

(Ganna Taher)

Project Goals

1.

Enhance User Experience:

Provide personalized movie recommendations that align with user preferences, improving engagement and satisfaction.

2.

Increase Content Discovery:

Enable users to discover new movies they may not find on their own, thereby increasing overall viewing time and platform usage.

Process

1.

- **Data Preprocessing**

- **Collect:** Gather ratings and movie metadata.
- **Clean:** Handle missing values and remove duplicates.
- **Transform:** Encode categories and normalize ratings.

2.

- **ML & Modeling**

- **Select Algorithms:** Choose collaborative or content-based methods.
- **Train Models:** Build the recommendation system with training data.
- **Evaluate:** Use metrics to assess performance.

3.

- **Advanced Techniques**

Generative Models: Use GANs for improving recommendations

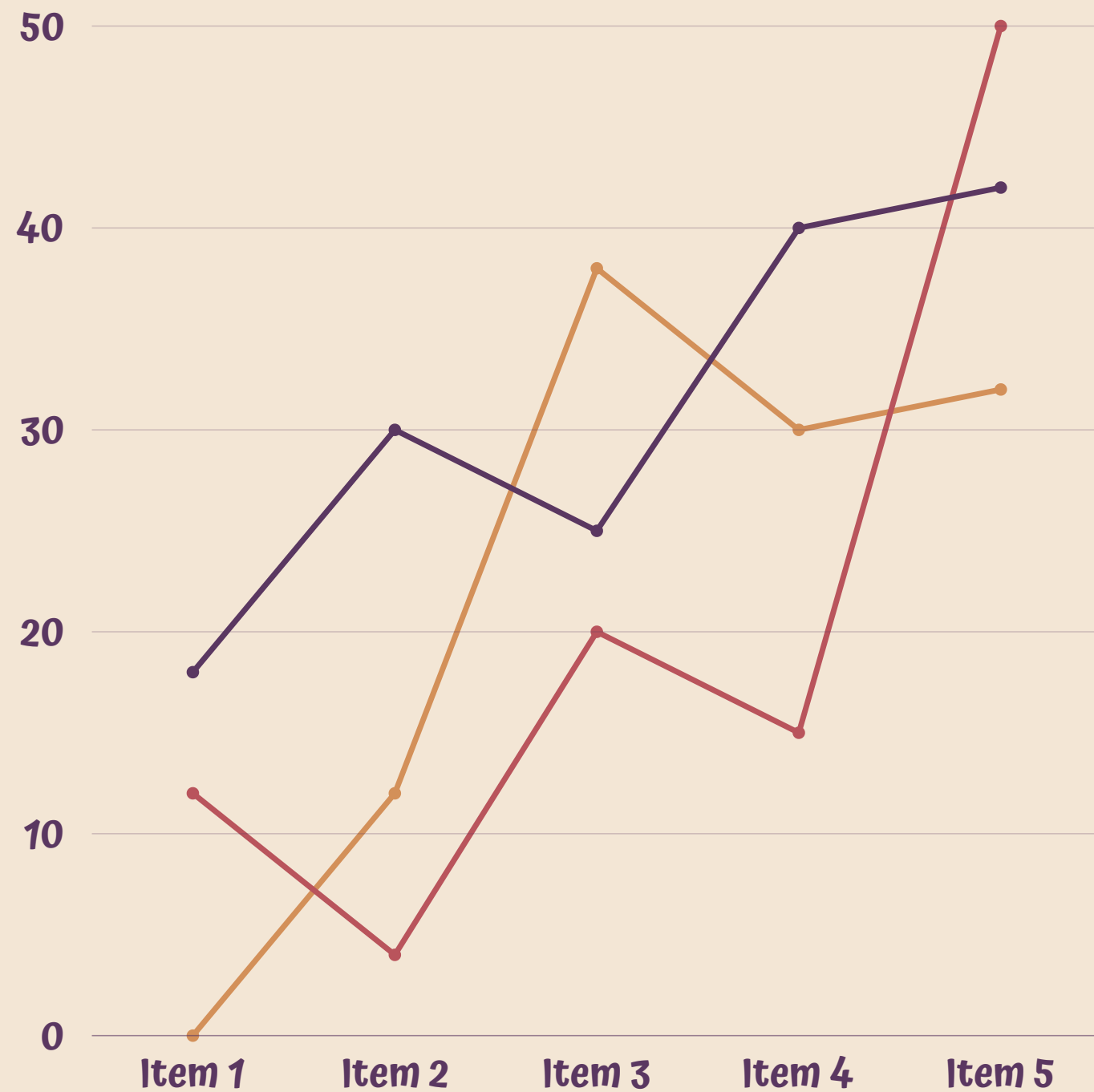
4.

- **MLOPs**

MLOPs: Manage and Track Models with Mlflows.

Prompt Engineering: Develop prompts (Chatbot).

Data Used



Data

- **User Ratings:** Ratings provided by users for movies (user ID, movie ID, rating).
- **Movie Details:** Metadata about movies (titles, genres, release years).

Result

Increased Engagement.



Users spend more
time on the platform.

Enhanced Discovery.



Users find a wider
variety of movies

Boosted Revenue.

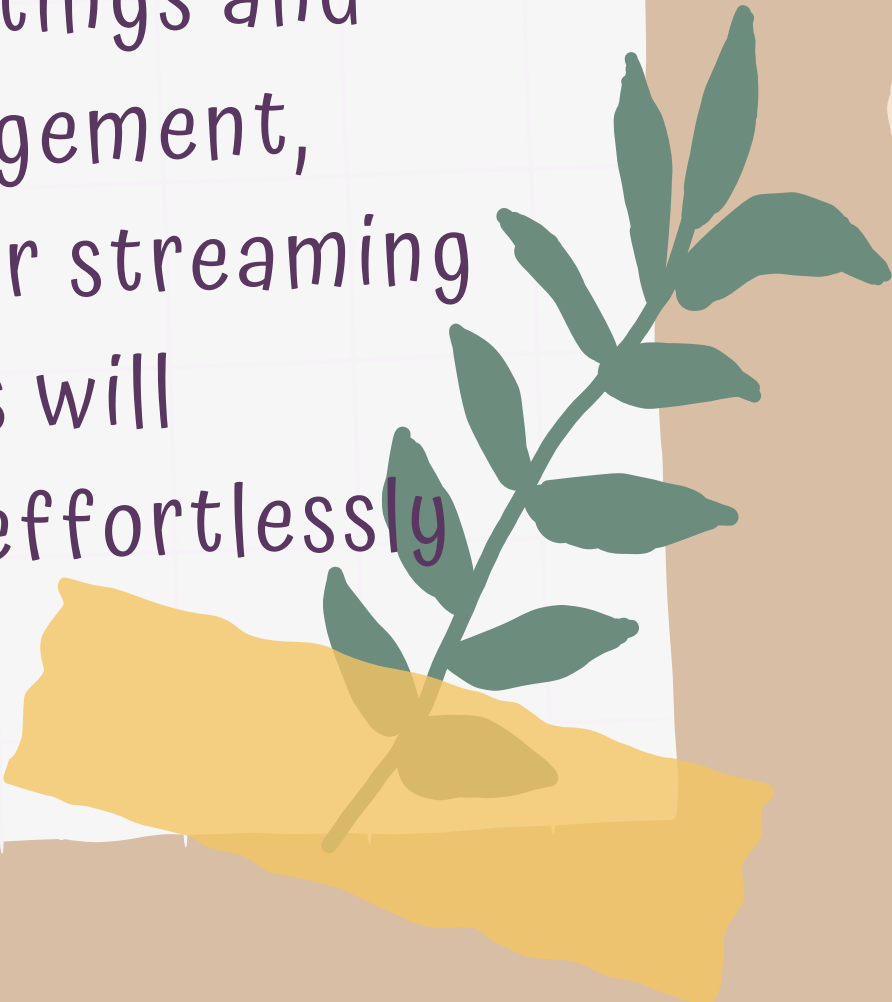


Higher
subscriptions and
ad income



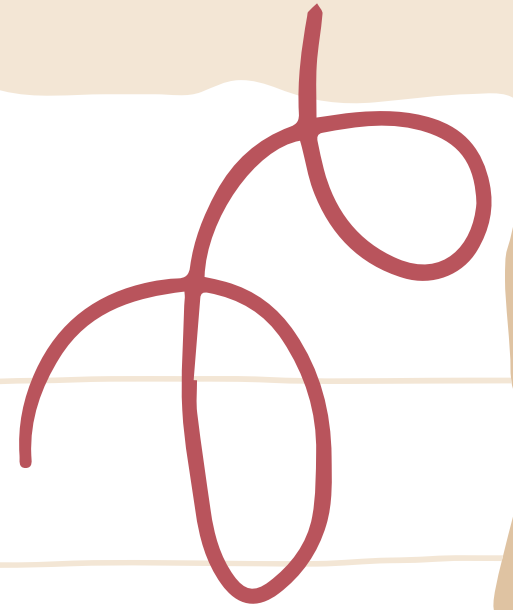
Conclusion

A recommendation system enhances user experience by offering personalized suggestions based on user ratings and movie metadata. This leads to increased user engagement, improved content discovery, and higher revenue for streaming platforms. Continuous advancements in algorithms will further optimize recommendations, helping users effortlessly find films that align with their preferences.



**Any
Question ?**





Thank
you

