



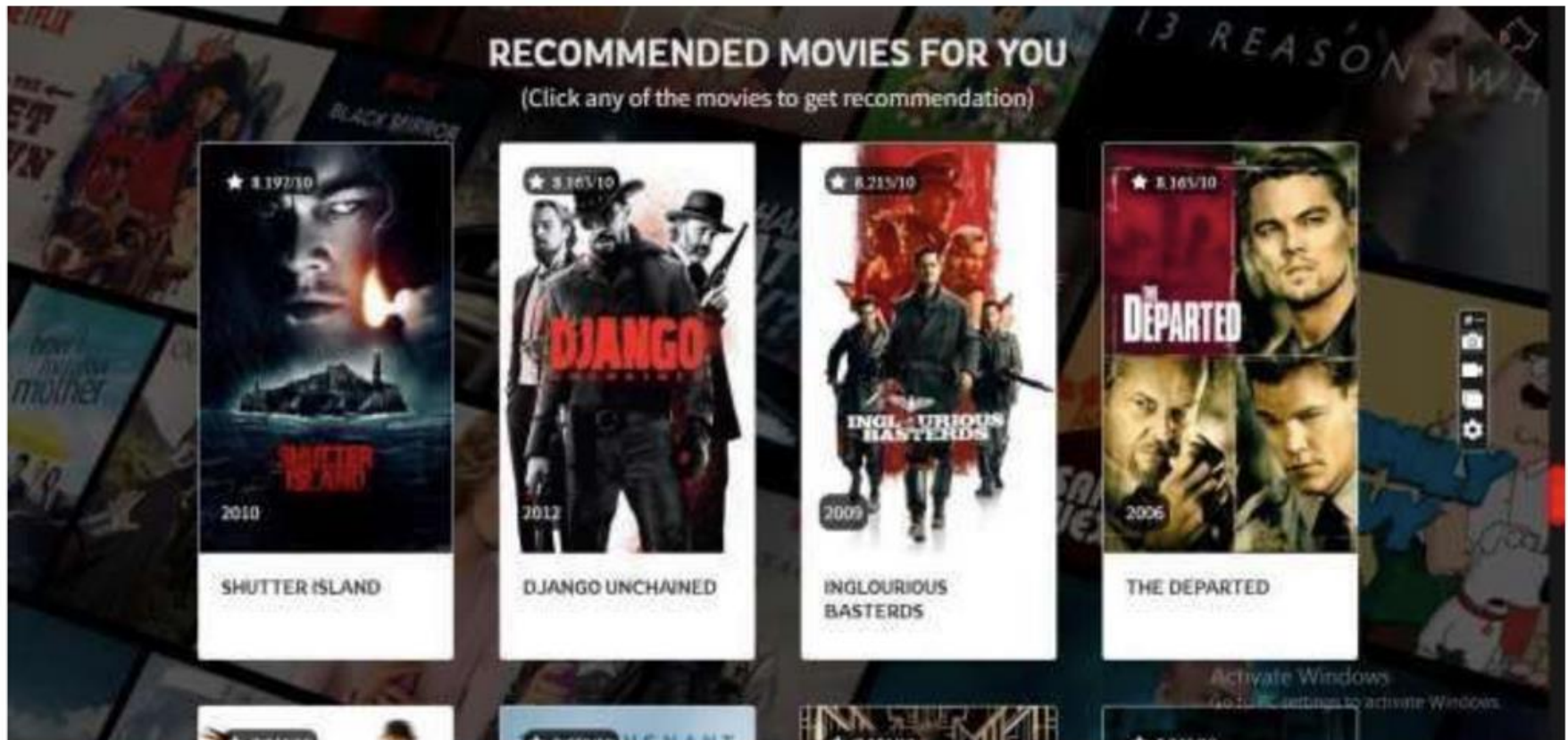
PRESENTATION
On
“Movie Mate: Your Film Companion”

**Presented
by**

Kashish Mahana(2210990497)
Khushi Bansal(2210990511)

**Under the supervision
of
Dr. Jatin Arora
Mr.Shubham Singhal**

“MOVIE MATE: Your Film Companion”



- Movie recommendation system that provides personalized movie recommendations based on a user's movie preferences.
- In today's digital world, there are countless options for movie streaming services, but finding the right movie to watch can be overwhelming. Movie Recommender is designed to solve this problem by providing movie recommendations, making it easier for users to find movies they will enjoy.

- **Traditional Movie Recommender:** They are often not personalized enough to meet the unique preferences and tastes of individual users. Many users find it difficult to discover new movies that they will enjoy watching, and this can result in reduced user engagement and satisfaction.
- The Movie Recommender System aims to address this problem by providing personalized movie recommendations to users based on their viewing preferences. The system can accurately recommend movies that users are likely to enjoy watching, thereby increasing user engagement and satisfaction

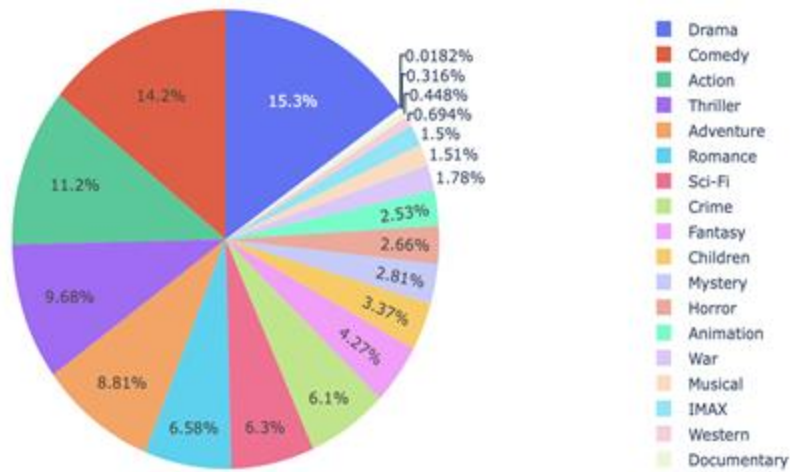
The project aims to meet the following objectives:

1. To provide personalized movie recommendations to users based on their viewing preferences.
2. To improve user engagement and satisfaction by accurately recommending movies that users are likely to enjoy watching.
3. To provide an easy-to-use interface for users to interact with the system, making it accessible and user-friendly.
4. Provide sentiment analysis to the movie reviews to help users decide properly

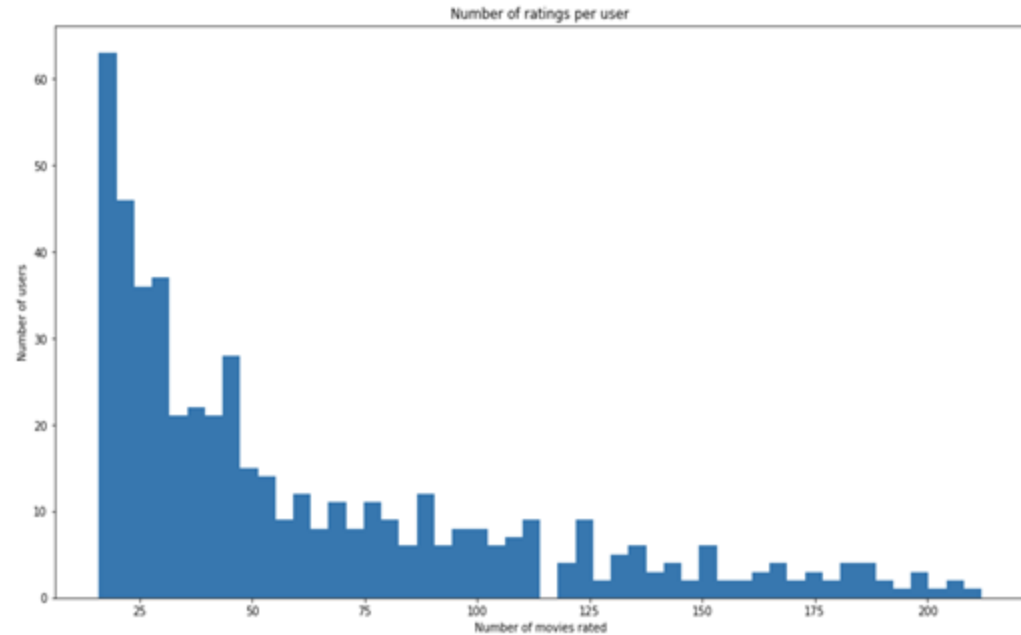
- MovieLens review dataset (ml-latest-small)
 - Ratings: 100k
 - Movies: 9k
 - Users: 600
- Integrated the dataset with IMDB and TMDB data set publically available.
- Split the dataset into 80% training and 20% testing based on the User ID.



1. Genre Distribution:



2. Number of ratings per user:



1. Popularity based model
2. Content based model
3. Collaborative Filtering
4. Sentimental Analysis

- Content-based filtering recommends items (like movies) based on their attributes or features. In the context of movies, these attributes could be genre, actors, directors, and plot keywords.
- The system learns your preferences from the items you've liked in the past and suggests similar items.
- Example:
Imagine you really enjoyed "The Dark Knight." A content-based filtering system might recommend other superhero movies like "Avengers" or "Spider-Man," because they share similar attributes such as action-packed scenes, superhero themes, and intense plotlines.

- Collaborative filtering recommends items based on the preferences of other users who are similar to you. It doesn't rely on the attributes of the items themselves but rather on the behavior and preferences of users.
- It finds patterns in users' behaviors, like ratings or movie-watching history, to make recommendations.
- Let's say you and your friend have similar tastes in movies. If your friend enjoyed watching "Inception" and "Interstellar," a collaborative filtering system might suggest those movies to you because it identifies your similarity in tastes. It assumes that if your friend liked those movies, you might enjoy them too.



- Content-based filtering looks at the characteristics of items to make recommendations, while collaborative filtering looks at the behavior and preferences of users to make suggestions.
- Both methods have their strengths and weaknesses, but when combined, they can create more accurate and diverse recommendations for users.

- Sentiment analysis involves analyzing text data to determine the sentiment or emotion expressed within it.
- In the context of movie reviews or comments, sentiment analysis can help classify whether a review is positive, negative, or neutral based on the language used.
- Let's say you write a review for the movie "The Shawshank Redemption" saying, "Absolutely loved it! The storyline was captivating, and the performances were brilliant." Sentiment analysis would classify this review as positive because it expresses admiration and satisfaction towards the movie.



- Genre wise popular movies
- Computed on:
 - Popularity metric from TMDB data
 - Weighted Rating from IMDB

$$W = R \frac{v}{v + m} + C \frac{m}{v + m}$$

W = Weighted Rating

R = Average rating of a movie (scale: 1-10)

v = number of votes for the movie

m = minimum votes required to be listed in top

C = Mean vote average

Popularity Model



Action Movies Animated Movies

title	wr	popularity
The Dark Knight	8.195690	123.167259
Fight Club	8.168962	63.869599
Inception	8.014656	29.108149
The Empire Strikes Back	8.000738	19.470959
The Lord of the Rings: The Return of the King	7.957014	29.324358
Leon: The Professional	7.928865	20.477329
Star Wars	7.928306	42.149697
Guardians of the Galaxy	7.789792	53.291601
The Matrix	7.778960	33.366332
Inglourious Basterds	7.736255	16.895640
Harry Potter and the Deathly Hallows: Part 2	7.724874	24.990737

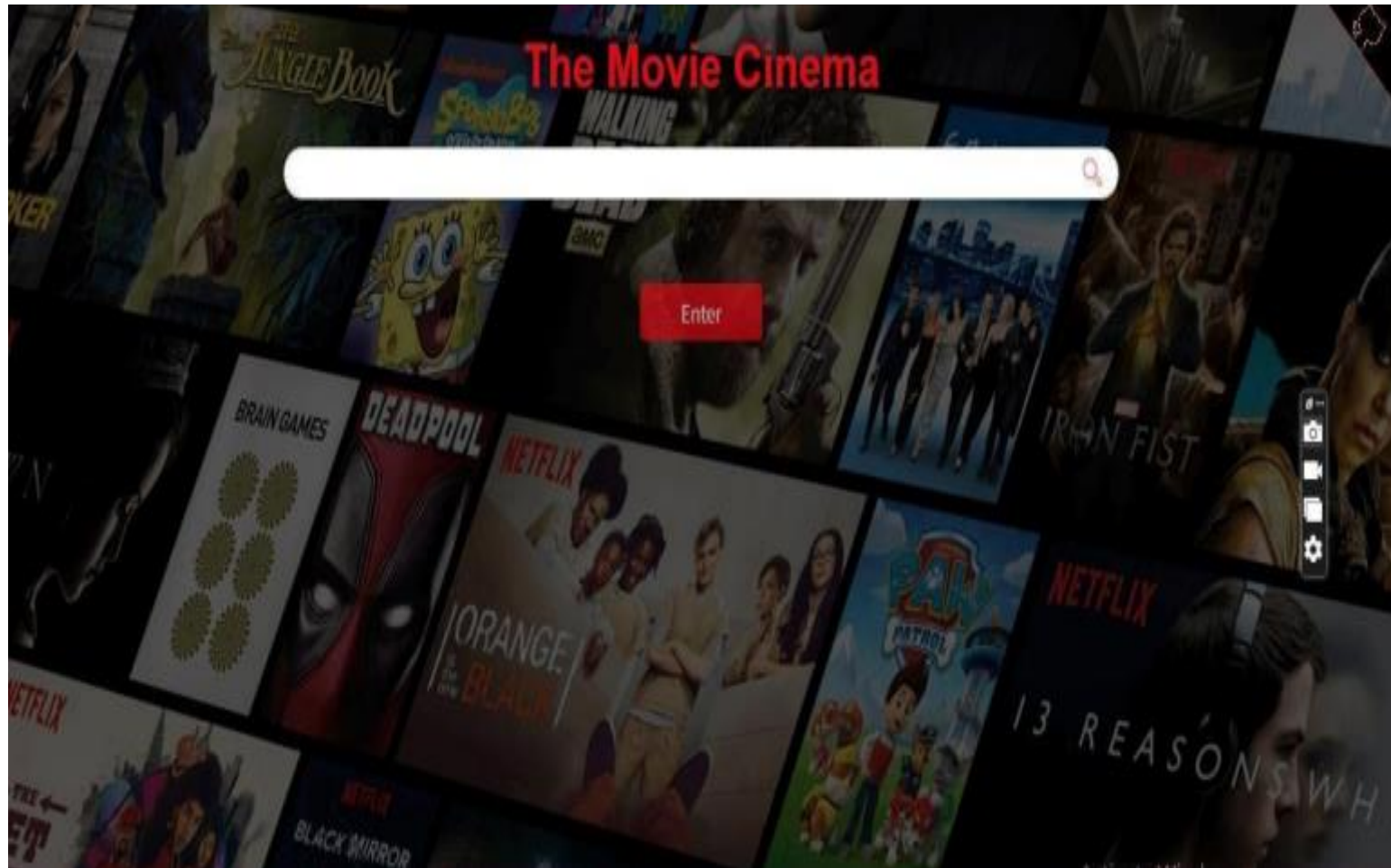
title	wr	popularity
Spirited Away	7.998988	41.048867
The Lion King	7.799319	21.605761
Inside Out	7.739429	23.985587
Howl's Moving Castle	7.683828	16.136048
Princess Mononoke	7.682159	17.166725
Up	7.651904	19.330884
WALL·E	7.638781	16.088366
Big Hero 6	7.635184	213.849907
Your Name.	7.535617	34.461252
Toy Story	7.517976	21.946943

Evaluation metrics:-

Metric	Content based (Genre)
RMSE	0.9185
MAE	0.7095

Metric	Content based (Genre)
Precision	0.800932214
Recall	0.495168862
F-Measure	0.6119842046
NDCG	0.945576877

ScreenShots



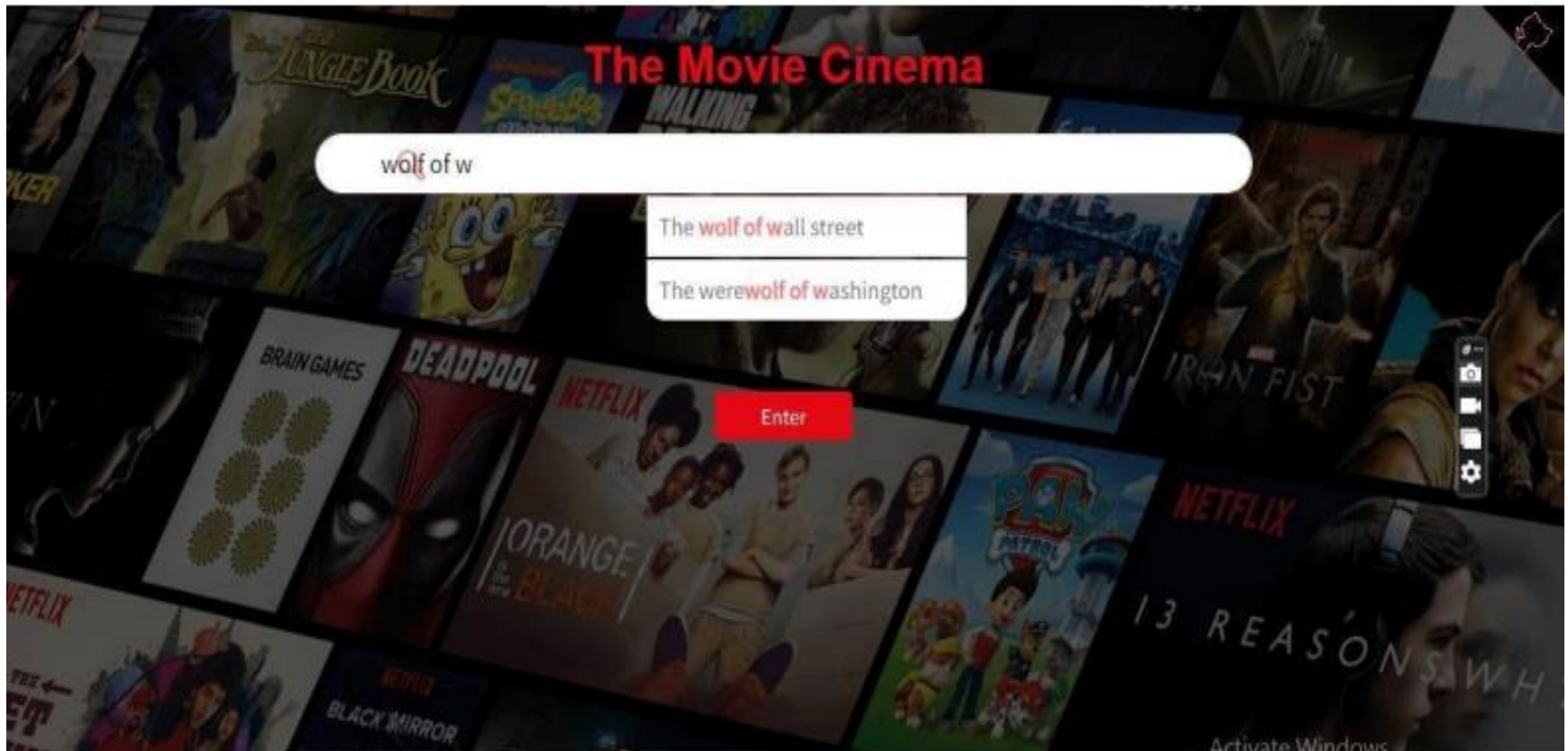


Fig: Autocomplete feature

USER REVIEWS	
Comments	Sentiments
The movie Leonardo DiCaprio should have gotten an Oscar for. His portrayal of the character is perfect. The movie is well-written, leaving no details out of the original story. Martin Scorsese never fails to impress. One of the only example where the movie is better than the book. The movie never gets boring, I could watch this anytime.	Positive : 😊
This film is every definition of the word "impeccable." Scorsese's fantastic storytelling ability mixed with phenomenal acting from DiCaprio, Hill and the rest of the cast makes for an awesome combination. The film is never boring and gives you a glimpse into the life of a man who had everything in the world only to have it taken away.	Positive : 😊
What can I say. This is such a great movie. I remember seeing this for the first time, not really knowing what it was about. Straight from the first scene, it immediately put a smile on my face, which lasted about for the rest of the entire movie. Great entertainment, I love over the top movies like this. I haven't seen something this good since Fear and Loathing in Las Vegas. I have seen it about 4 times again since it came out and I just keep loving it. The only downside was maybe the scene with the ludes and the Lamborghini. Even though it was great, maybe it was a bit too much over the top :)	Positive : 😊
The movie is just the best, the acting is great and even I say that it was Oscar-worthy and the plot is simply one of the best ones; the message that it brings to you that money brings power and it is not always for the best because in this movie we see the downfall of a man that will learn that actually in life the money can be a drug and will simply make you cause damage to yourself.	Positive : 😊

Fig: User Reviews being labelled “Positive” or “Negative”

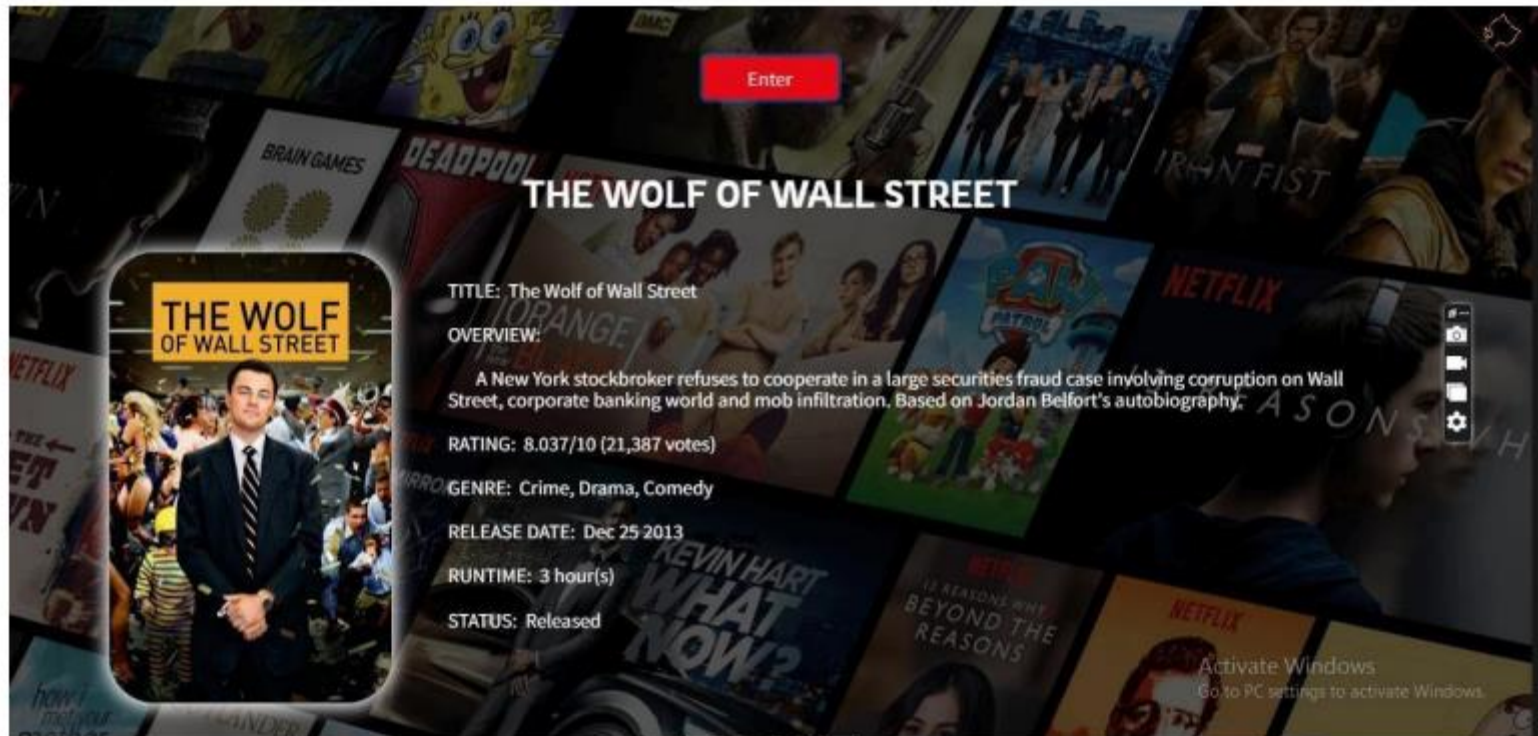


Fig: Information on selected movie

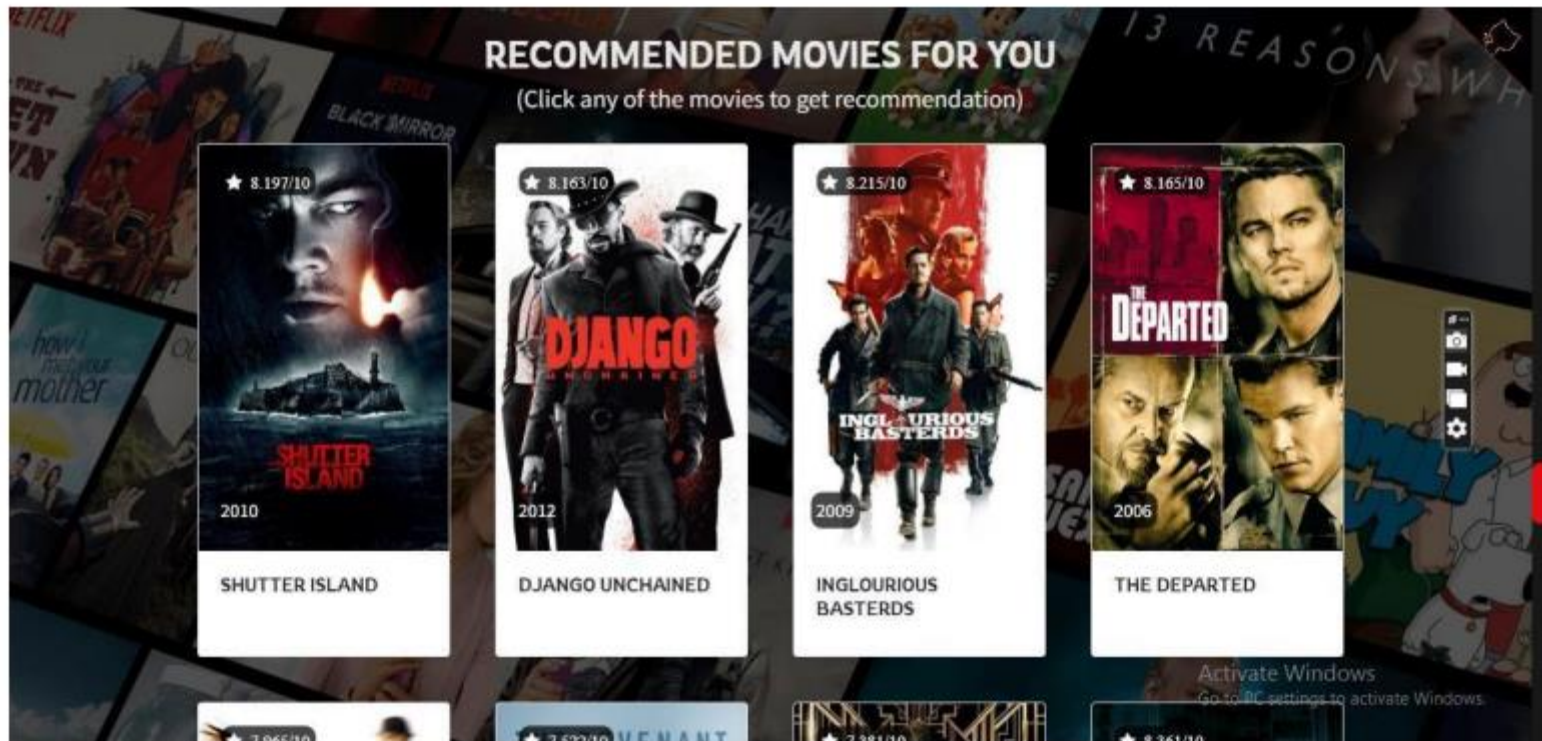


Fig: Recommended Movies



Thank You!