PROJECT TITLE: MOVIE RECOMMENDATION SYSTEM

GROUP NUMBER: 13

GROUP MEMBER: DASARI JAYANTH
VEMULA SATYA PAVAN KALYAN

SUBJECT: PROJECT PROPOSAL

OVERVIEW

The Recommender system filters the data using different algorithms and recommends pertinent movies to users. It first captures the user's past behavior and suggests movies to watch as per the users' behavior.

- We can recommend movies to a user which are most popular among all the users.
- We can divide the users into multiple segments based on their preferences (user features) and recommend content to them based on their segment.

A recommender system optimizes the experience for users filtering through large movie title catalogs and increases their engagement with your product. It finds users who have similar preferences. It gives recommendations to one user from a set of new movies to that particular user and preferred by other users with a similar profile. For example, If a person liked Movie A, a movie recommender system would recommend movies with similar characteristics. Those characteristics could include producer, starring actors, genre, run time, release date, etc.

IMPORTANCE OF RECOMMENDATION SYSTEMS

Many online businesses rely on user reviews and ratings. Explicit feedback is essential in entertainment, where these ratings impact all user engagements. Online streaming platforms like Netflix, Prime Video, Aha, etc., rely on such rating data to power its recommendation engine to provide the best movie and TV series recommendations that are personalized and most relevant to the user.

User Churn rate from the platform is the main problem this project tries to solve. It's as crucial as user acquisition because a long-term user acts as a free word of mouth marketing channel and a strong advocate of the platform in his social group. We know organic word-of-mouth marketing is one of the most robust forms. It also attracts traffic, engages users through diversity, increases user satisfaction with the platform and user retention, boosts conversion rates. A movie recommender system can help the content providing platform by providing statistics on the users' preferences; this allows the management to choose onboarding movies that are more inline with preferences; these decisions can be corroborated using the provided statistics.

Depending on what content the user interacts with, the system recommends new content; this increases the user engagement in the website and can increase the user retention rate and decrease the churn percentage as users feel the product has so much content it has to offer catering to its preferences.

DELINEATING THE WORK INVOLVED

- The project requires a full-stack development with both the front and back end.
- Build a database of movies for the customer platform plans to offer users.
- We need a data set of user data about movies and series they are interested in watching.
- We need to build an ML model with both content and collaborative filtering.
- To build an engine that gives movie suggestions to a particular user based on the estimated ratings that it had internally calculated for that user.
- With reasonably good recommendations, the total system is deployed in a public hosting site like Heroku.
- So, This project will require a group of at least 3 members for a given time to complete the project.

Feasibility Report

1. CUSTOMERS:

Our customer is Aha Streaming service, an Indian OTT(over-the-top) streaming service that offers Telugu movies and series content.

2. COMMUNICATION:

Our Customers can contact us through Email-ID. Communication among team members will be through WhatsApp, google meet, email, and phone calls.

3. TECHNICAL FEASIBILITY:

- HTML
- CSS
- React
- MySQL
- Flask
- Bootstrap
- Machine learning algorithms
- Python
- Software engineering paradigms

4. DELIVERABLES:

A web application that shows different movies and user selection recommends the best-suited movies for a user from the dataset.

5. SOFTWARE MODEL:

For this project, we follow the AGILE methodology.

6. OUTLINE PLAN:

1) Front-end.
2) Back-end.
3) ML model.
4) Connecting Back-end and ML Model.
5) Deploying the Website on the Internet.

7. FINANCIAL FEASIBILITY:

All the technologies mentioned above are free to use, and the equipment required is already with us; hence there would be no financial problems for our project.

8. TECHNICAL FEASIBILITY:

For the project, we have sufficiently powered laptops with dedicated GPUs that can handle the project's processing requirements. The time is also enough to implement our application, and the team is educated enough to use all these technologies well.

9. RESOURCE & PERFORMANCE FEASIBILITY:

Resources that are required for the proper implementation of this project are:
• Programming devices like personal computers, workstations, or laptops.
• Hosting space on the local domain (freely available).
• Programming tools.
• Programming individuals.

The time required to store and process this information is negligible for modern-day processors, as they have high clock speeds. Thus, it's evident that this system has the required resource and time feasibility.

10. RISK FEASIBILITY:

• Size of the application depends upon the dataset into consideration that is dependent on the content customer has, and we are using a free-hosting service it has its limitations
•We have experience creating web apps, but this project is new with the technologies we are using, so we might find it challenging to integrate all these technologies, which might cause some delay in implementation.

11.SOCIAL/LEGAL FEASIBILITY:

The project uses freely available open-source development tools and provides the system as an open-source system. Potential customers will only be charged with the maintenance cost. Since it promotes less use of manual work on papers, it will benefit the organization financially and the environment.

CONSIDERATIONS:

1.TECHNOLOGY CONSIDERATIONS:

Movie recommendation systems available in the market are dependent on the dataset to contain large clusters of similar users and items.

2. USABILITY AND EASE OF USE:

Clients will need to handle no extra software or hardware apart from a stable high-speed Internet connection and a computer device. With the Movie recommendation system comes more efficient and streamlined administrative and customer relations processes.

3. AVAILABILITY:

The system will be available throughout the 24 hours. Meantime to failure and mean time to repair will be decided to increase the availability. With a paid hosting space, the availability can be guaranteed to great precision.