

Movie Recommender System

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Abstract: Usually there are different approaches and algorithms of data filtering and recommendations. Online content and service providers deal with the problem of providing similar content on a regular basis because of the sheer volume of data available. Our project deals with a similar problem of predicting user preference for movies using the database. We present a memory – based Collaborative Filtering algorithm that learns the behavior of the users. This representation allows us to use traditional clustering algorithm in this space. It also helps us to overcome one of the biggest problems which is that of lengths of user features options in the voting space. Here, nearest-neighbor scheme is implemented. In the end we will show the main challenges recommender systems come across.

Keywords: collaborative-filtering, contentbased-filtering, database, nearest-neighbour, recommendation.

I. Introduction

A recommender system is a type of information recommend movies to user according to their area of interest. Our recommender system provide personalized information by learning the user's interests from previous interactions with that user[2].

In pattern recognition, the k-nearest neighbours algorithm (k-NN) is a flexible method used for classification. In following cases, the input consists of the k closest examples in given space. If $k = 1$, then the object is simply assigned to the class of that single nearest neighbour[9].

1.1 Collaborative Filtering

Collaborative filtering (CF) is a technique used for recommender systems. Collaborative filtering predicts the users opinion by using the opinions of other user. Collaborative filtering is the most researched techniques of recommender systems since this approach was mentioned and described by Paul Resnick and Hal Varian. The idea of collaborative filtering is in finding users in a database that share appreciations. If two or more users have same or almost same rated items in common, then they have similar tastes.

1.2 Content Based Filtering

Content-based filtering works with accounts of users created. A account has information about a user and his/her taste. Taste is based on how the user rated movies. When creating an account, the recommender systems takes a survey, to get basic information about a user to avoid a new-user problem. Here, the system compares the movies that were rated positively by the user with the items he didn't rate and looks for similarities. Those movies that are primarily similar to the positively rated ones, will be recommended to the user.

1.3 Need

The World Wide Web grows at an exponential rate, the size and complexity of many websites grow along with it. Now to a user google would be of some help if he/she the movie they are searching for this is where recommender system come in the give users recommendation according to their behaviour so there are more chances of user finding the desired result using recommender system.

1.4 Review Of Literature

In the early 1990s, collaborative filtering began to arise as a solution to deal with overload in online information spaces. 'Tapestry' was a collaborative filtering system: it allowed the users to search for items in a domain, such as corporate e-mail, based on other users opinions or actions. Automated collaborative filtering systems followed, automatically locating relevant opinions and aggregating them to provide recommendations[1].

II. Figures

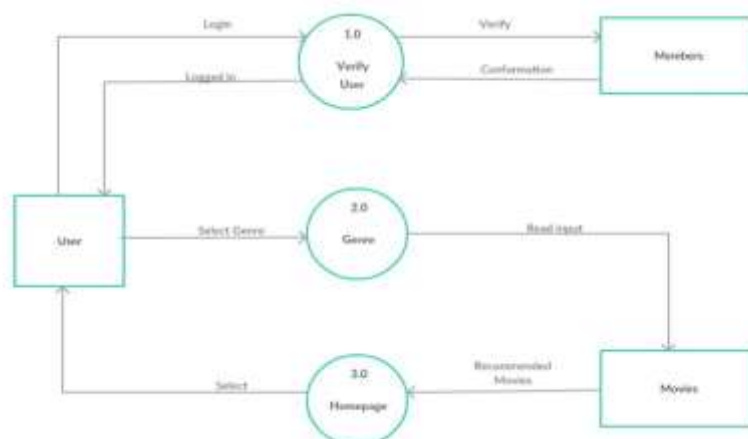


Figure 1: DFD Level-1

Here the user first has to login using his/her username and password. Once the user is verified from the member database he/she is logged in. Now the user can select the genre he/she wishes to watch and the input is read by the movie database. Now the system searches for movie of similar genre which is rated highly by other users and displays it to the user. Now he/she can select movies to watch from the recommended list.

III. Conclusion

In this project, we designed a new web recommender system for movies based on user behavior. The movies are a complex object and emotions are a human reaction, and it is difficult combining them together. In this paper, we tried to integrate movie recommendation by hybrid approach, which consists of Content Based Filtering and Collaborative Filtering system with our algorithm. Thus, our algorithm calculated the user rating 1 and 5 because the users absolutely liked or disliked the movies. This system provides better recommendations to users as it helps the users to understand the relation between their behavior and the recommendations. We recommend to improve this idea through:

- 1) Selecting the movies to finding most viewed using colors by system.
- 2) Using more than two recommendation techniques to get best of the movies.
- 3) Using more than three colors to finding human emotions.
- 4) Design a new algorithm to solving the movie recommender system.

The advantages are as follows,

Users end up being more engaged in the website when individualized item recommendations are made. They are able to dive even more deeply into the product without needing to carry out any search.

Providing guides is a part of personalization system. Providing the user precise and up to date reporting permits users to make solid choices about the website.

The most common recommender systems applications include: recommendations for movies, music, and IPTV. Personalized newspapers articles, recommendation for documents, recommendations of Web pages.

Acknowledgements

We would like to thank our mentor Ms. Divya Kumawat as well as our principal Dr. Shrikant Kallurkar who gave us the golden opportunity to do this project on the topic of Movie Recommender System, which also helped us in doing a lot of research and we came to know about so many things.

Secondly, we are indebted to our friends and family who have been supportive and helped us finish the project within the given time.

We are making this project in order to increase our knowledge

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