Movie Recommendation System

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Abstract: Recommendation systems facilitate users notice and choose things (e.g., books, movies, restaurants) from the large variety out there on the online or in different electronic data sources. Given a large set of items and a description of the user &their needs, they present to the user a small set of the items that are well suited to the description. Similarly, a movie recommendation system provides a level of comfort and personalization that helps the user interact better with the system and watch movies that cater to his needs.

In today's digital world wherever there's associate degree endless sort of content to be consumed like books, videos, articles ,movies, etc., finding the content of one's liking has become an irksome task. On the opposite hand digital content suppliers need to interact as several users on their service as doable for the most time. This is where recommender system comes into picture where the content providers recommend users the content according to the users' liking.

Keyword– Collaborative Filtering, Content Based Filtering, Movie Recommendation Psychological Test, Sentimental Analysis, Naïve Bayes Classifier

I.   INTRODUCTION

In Whenever a person has to make a choice, a significant piece of the decision-making procedure is to know the attitude of other people about it and be acquainted with their experience. The advice may be obtained from friends, relatives or an expert in the field. However as there is an enormous development in the generation of review information online, we have now started to consider the internet as a big source of opinion evaluation. Now, we check the comments, star ratings, likes and customer reviews of the product before buying it. Be it customer ratings of the merchandise or the political position or the latest socio-economic inclination of the people, opinion mining finds its utility in most of the subjects. One of the key challenges with the user today is that the review data is so enormous that it makes nearly impractical for a person to visualize the cumulative result. The discovering, analyzing and cleaning of the information on the opinion sites is a frightening job due to the sanitization of the different sites . Sentimental analysis or opinion mining is a technique for processing natural language so as to evaluate the position, sensitivity or assessment of the people about a specific subject, merchandise or topic. It is conjointly referred to as sound judgment analysis or review mining.

The customer's hunger and reliance on the online recommendations is a major reason behind the sudden increase in the interest of corporate giants, politicians, individuals and researchers in this field . The analysis result can be further employed for evaluation of customer choices; product quality improvement; yardstick databases; market research; advertising, recommendation systems and facilitate future research .

In this paper, we describe opinion mining, its scope, levels, and types. Movie reviews are a good source for analysis as they clearly express an opinion. Movie reviews have been used by Bo Pang et al. to train an algorithm that detects sentiment. Section second throws light on the categorization and levels of sentiment analysis. In the next section, we discuss the means and resources for gathering review data. In the forth section, a range of methods for evaluation and the problems related to them are discussed. In the sixth section, the proposed approach is discussed along with the algorithm. At the end, the outcome and future potential are presented

Naive individual classifiers ar a family of straightforward "probabilistic classifiers" supported applying theorem with sturdy (naive) independence assumptions between the alternatives.

II.   LITERATURE SURVEY

Content-based Filtering Systems :

In content-based filtering, also referred to as cognitive filtering, items are recommended based on a comparison between the item profile and a user profile. A user profile may be seen as a group of appointed keywords (terms, features) collected by algorithmic program from things found relevant (or interesting) by the user. An item profile could be a set of appointed keywords (terms, features) of the item itself. For example, consider a scenario in which a person goes to buy his favorite cake 'X' to a pastry. Unfortunately, cake 'X' has been sold out and as a result of this the shopkeeper recommends the person to buy cake 'Y' which is made up of ingredients similar to cake 'X'. This is Associate in Nursing example of pure content-based filtering within the universe.

Collaborative filtering based systems :

Collaborative filtering system recommends items based on similarity measures between users and/or items. The system recommends those items that are preferred by similar kind of users. This is based on the scenario where a person asks his friends, who have similar tastes, to recommend him some movies.

Hybrid System :

Owing to the various demerits of pure content-based andpure CF based systems, we have proposed a hybrid recommender system which is known as content-boosted collaborative filtering system. This hybrid system takes advantage from both the representation of the content as well as the similarities among users. The intuition behind this technique is to use a content-based predictor to fill the user-rating matrix which is sparsely distributed.

Gaurangi, Eyrun, Nan. "MovieGEN: A Movie Recommendation System", UCSB[2]. In this we have studied to collect movie data and also clustering is used for generating questions.

ManojKumar ,D.KYadav ,Ankur Singh, Vijay Kr. Gupta,". A movie recommendation system –MOVREC"International journal of computer application. In this we have studied content based and collaborative filtering.

EhsanAslanian, MohammadrezaRadmanesh and Mahdi Jalili, Senior Member, IEEE. Hybrid Recommender Systems based on Content Feature Relationship. ieeexplore.ieee.org.

Shouxian Wei, XiaolinZheng⇑ ,Deren Chen, Chaochao Chen. A hybrid approach for movie recommendation via tags and ratings. www.sciencedirect.com.

III.   PROPOSED SYSTEM

Owing to the various demerits of pure content-based and pure CF based systems, we have proposed a hybrid recommender system which is known as content-boosted collaborative filtering system. This hybrid system takes advantage from both the representation of the content as well as the similarities among users. The intuition behind this technique is to use a content-based predictor to fill the user-rating matrix which is sparsely distributed.
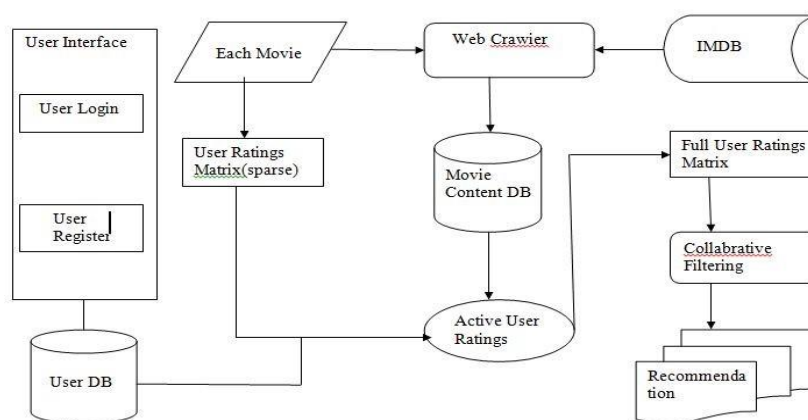

Fig-1 System Architecture Diagram.

The main steps proposed in the system are:

1) Enter Movie– The name of the movie whose reviews are to be acquired is entered.

2) Retrieve Reviews- Movie reviews are obtained from various sources but are in unfiltered form.

3) Data Pre-Processing- The reviews are raw and unfiltered, these may include unnecessary and non-opinion words, hashtags, URLs, stop words etc. Hence data cleansing is vital before analysis.

4) Polarity Key Words- A list of positive and negative keywords, positive and negative and negation keywords is provided for the analysis.

5) Apply content based and collaborative filtering Algorithm- In this step, the pre-processed data is analyzed with the help of both the algorithm.

6) Sentiment Orientation Calculated- The reviews are classified as positive, negative or neutral based on the Score value.

IV.　　IMPLEMENATION PLAN :

Algorithm for collaborative filtering :

Item based mostly cooperative filtering may be a model-based rule for recommender engines. In item based mostly cooperative filtering similarities between things square measure calculated from rating-matrix. And based mostly upon these similarities, user's preference for AN item not rated by him is calculated.
 The steps are as follows:
•Step 1: Write the user-item ratings data in a matrix form.
•Step 2: We will now create an item-to-item similarity matrix whose idea is to calculate how similar an item is to another item using cosine similarity measure .

Words	Count	
	User 1	User 2
Harry	1	0
The	1	1
Conjuring	1	1
Potter	1	0

Two vectors are: $v1= \{1,1,1,1\}$ and $v2= \{0,1,1,0\}$

Cosine Similarity Computation:

$$\cos(v1, v2) = (v1 \cdot v2) / \|v1\| \|v2\|$$
$$= (0+1+1+0)/ [\sqrt{4} * \sqrt{2}]$$
$$= 0.707$$

V.　　EXPERIMENTATION RESULTS

1. In this proposed system we can use Navie Bayes alogorithm for analyze the movie review.
2. Extract the movie reviews information from another web using web mining technique.
3. Analyze this reviews using sentiment analysis.

   LOGIN PAGE :
   - This is screenshot for login page.
   - which is in this user enter the name and password for the login in movie recommendation system
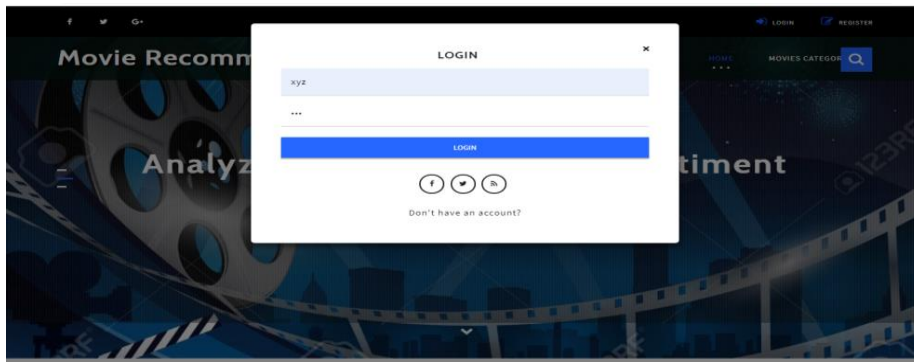
SELECT CATEGORY PAGE :

- This is screenshot for select category.
- Whenever user is login in this movie recommendation system at that time next page is open which is select category.
- In this user is select category for movie.
- Which as like
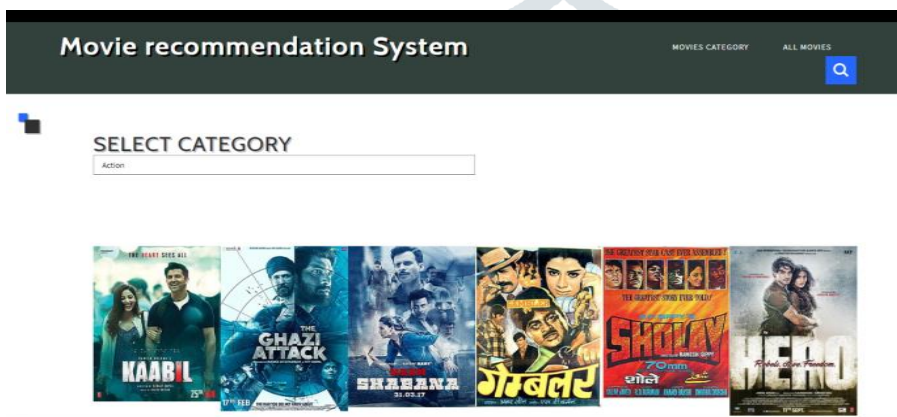
REVIEWS DETAIL :

- This two screenshots is for movie information and review details.
- When we select the category of movie then next page is open which is for select the movie.
- Then this movie recommendation system shows the specific movie information and review detail.
- Also we can give the rating for this movie.
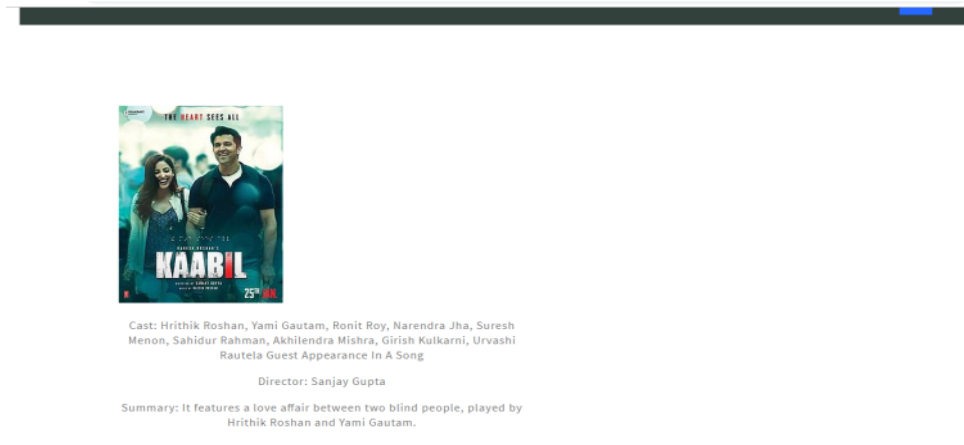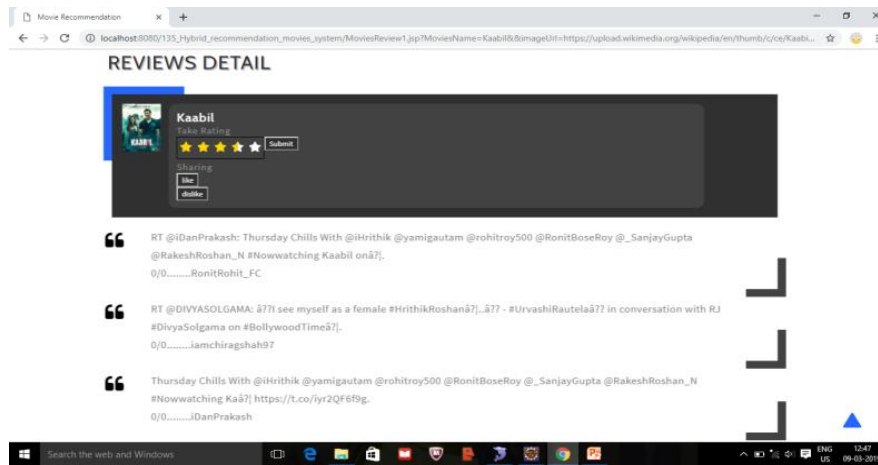
V. CONCLUSION

A recommendation system will be implemented based on hybrid approach of collaborative filtering engine and context based engine. It improves the performance by overcoming the drawbacks of ancient recommendation systems. Techniques like Clustering, Similarity and Classification are used to get better recommendations thus reducing MAE and increasing precision and accuracy. In future we can work on hybrid recommender using clustering and similarity for better performance. This recommender system will assuredly be a great web application, which can be clubbed with today's high demanding online purchasing web sites. Our approach can be extended to various domains to recommend movie, songs, video, venue, news, books, tourism and e-commerce sites etc

VI: REFERENCE:

[1] Costin-Gabriel Chiru,Vladimir-NicolaeDinu ,CatalinPreda ,MateiMacri; "Movie Recommender System Using the User's Psychological Profile" in IEEE International Conference on ICCP, 2015.

[2] Gaurangi, Eyrun, Nan; "MovieGEN: A Movie Recommendation System", UCSB.

[3]Luis M. de Campos, Juan M. Fernández-Luna *,JuanF. Huete, Migue A. "Combining content-

based and collaborative recommendations: A hybrid approach based on Bayesian networks",InternationalJournal of

Approximate Reasoning, revised 2010.

[4] ManojKumar,D.KYadav,AnkurSingh,VijayKr. Gupta," A MovieRecommenderSystem: MOVREC" InternationalJournal of Computer Applications

[5]DietmarJannach, Gerhard Friedrich; "Tutorial: Recommender Systems", International Joint Conference on Artificial

Intelligence, Beijing, August 4, 2013.

[6]PreranaKhurana ,ShabnamParveen; 'Approaches of Recommender System: A Survey'; International Journal of Computer Trends and Technology (IJCTT) – Volume 34 Number 3 - April 2016.

[7]Utkarsh Gupta1 and DrNagammaPati l2," Recommender System Based on Hierarchical Clustering Algorithm Chameleon" 2015 IEEE International Advance Computing Conference(IACC).

[8]Patent number 9666083, United states patent, Sanders, Oct 11 2016. Item Recommendation.

[9] Sarwar, B, "Item-based collaborative filteringrecommendation algorithms"in WWW10 Conference, pp. 285–295 (2001)
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