

Implementation of Book Recommendation Application using Hybrid Mining Approach

Nishi Grover, Kapil Sahu

M-Tech Scholar, Assistant Professor

*Department of Computer Science & Engineering
Sanghvi Institute of Management & Science, Indore*

Abstract- Recommendation system is an information filtering system, which recommends information based on users interest. Prediction is performed in recommendation on the basis of rating and reviews of users interested item. With the rapid growth in information due to social networking sites, online portals, shopping sites and many different applications, information is increasing with a great speed. Proposed work is based on book recommendation system where interested books are recommended based on rating and reviews by forming clusters of fascinated books. A custom grouping approach is used in presented work, which is the combination of K-mean and collaborative filtering. Using cloud computing, complete environment is deployed based on java technology.

Keywords- Book recommendation system, K-mean, collaborative filtering, Similarity weight calculation,

I. INTRODUCTION

Recommendation system are the information filtering system, which filters the particular items. This online approach helps user in finding items, which is required or searched, by user. Major purpose of Recommendation System is to suggest items which user wants to buy. This technique of recommendation system is very important and help user to buy books according to their need and requirement. In recommendation system, large data is analysed and extracted as per the importance of information. Recommendation System plays an important role in ecommerce. Recommendations System is now become a trend, it is preferred because it provides an easy way to buy and transact items. Main task of recommendation system is to help finding the item, which is needed as per the requirement from the huge amount of data. Today's generation is rapidly enhancing as per the need of user. Recommendation System is a new trend and technology, which is very helpful for user to find the desired item. Recommendation System also increases profit for buyer as well as seller. The approach of recommendation system is used for information filtering and based on user preferences and rating, which is helpful for any user to purchase items according to their need of interest. Recommendation system directly provides a way to user so that they can search information depending on their interest, can find products of their requirement.

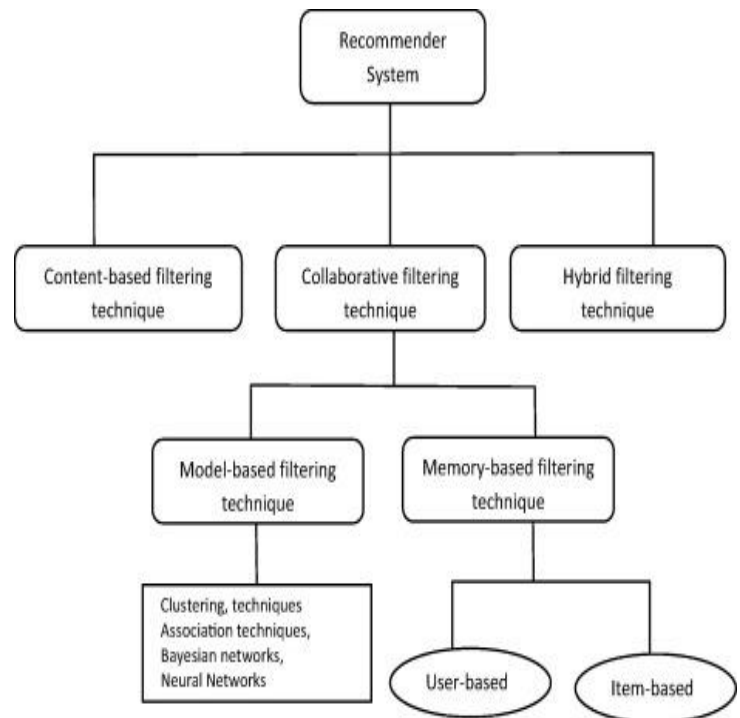


Fig.1: Recommendation System

- Recommendation System is needed to help finding the user interest of item from the large data set.
- Recommendation system by using association rule, collaborative filtering and content based filtering, filters the huge amount of data and provides with the data, which is of user interest.
- It is the way of getting user preferences and rating by filtering information.
- Recommendation system suggest users to search items of their need of interest.
- It evaluates number of alternatives to user offered by websites.
- It appears the list of similarities of items, depending upon the product/items searched.
- It is a tool for new generation used over Internet, and navigates the information over Internet and retrieves according to preferences.
- Recommendation system stores students profile and work according to user interest.
- It directly provides a way to user for searching products depending on their interest and requirement.

- Recommendation system is an online approach and used in online ecommerce website.

II. RELATED WORK

Sharandeep Kaur et al. In[1] due to the availability and growth of information because of social media, online portals and online shopping sites, the scope of information filtering technique increases. Recommendation system uses filtering technique for personalized decision making of user. Author uses the concept of typicality to search nearest neighbour.

Pranav Bhure et al. In[2] introduces a system for Book Recommendation using a technique called Opinion Mining. Using the collection of comments, feedback and rating of user it deploy and creates Book Recommendation System. This analysis is done using opinion mining. Categorization of books on top result is based on the users given reviews and ratings and then is displayed as a recommend to user. Normalization and common trust is in the used algorithm.

Shun-Hong Sie et al. In[3] introduces about a book recommendation, which is based on Latent Topic Aggregation called "Library Book Recommendation". By this, he proved that library provides better-personalized services like suggest reading. He proposed that circulation logs are created by collaborative filtering method, which consist of past transaction or any borrow history. To search the relevant or required topic of book, he used a technique called Latent Dirichlet Allocation. It has a drawback of time in which lots of time is wasted, if not getting effective and efficient recommendation from the history details. To identify customer lot of time is wasted.

A. Shepitsen et al. In[4] proposed to increase the efficiency of personalized book recommendation system; a metric called imp is used. This method evaluates the improvement level of the approach compared that is why non-personalized approach is recommended for the resources like resources of books, in our paper. The calculation of the personalized recommendation on the basis of improvement of overall ranking is done by average improvement of recommended books. Ranking strategy will be better in case of high imp score because imp shows good personalization technique.

J. Koberstein et al. In[5] proposed that ranking is done for each book and prioritize is set for each book so that the degree of prioritize can be increases. It identifies the friends and determines the books, which are used in priority catalog. Significant comparison is done for achieving processing time. The comparison done is more, then to minimize it personalized recommendation is applied and the blocking strategy for the sets of candidates yield are created to recommend books for consideration. Similar tag identity can be found by reducing the word correlation matrix.

III. PROBLEM STATEMENT

Recommendation system helps in evaluating the alternatives for those users who does not have any experience in website evaluation. Millions of results are viewed while searching, but in that user gets confused to select the one. Recommendation system helps in deciding whether to but the item or not of their interest. It becomes pathetic when user recently joins any social networking sites. Initially, user account start with zero friend and user may find it worthless and boring. Here, finding the old friend from huge user list and not be possible to send friend request. Subsequently, user may want to connect across the world people who match their lifestyle and can help in their problem.

1. Sparsity issue, which generates incorrect and irrelevant values.
2. More additional features may be added.
3. There is a need to develop popularity and user based recommendation tool to gather popular and important relevant Friends at one place.
4. Do not cover professional attributes and research interest along most favourable brands and products.
5. Existing solution suffers with less accuracy and assumption of independent class condition.
6. Existing system only recommend items with rating of it and does not recommend the item, which is not rated.

IV. SYSTEM ARCHITECTURE

System architecture of the presented work is divided into different modules; these modules perform their work using techniques evaluated. Description is evaluated below:

Module 1: Parsing Module

Parsing module includes data cleaning procedure to remove incomplete tuples from data source. Afterwards, stop words removal and lemmatization module has been developed to improve the quality of data source by grouping down of inflected words for analysis of single item. Next, Tokenization scheme and abbreviation removal has been applied to break complete work into individual values and extract more accurate answers. The complete work explores more accurate results.

Module 2: Clustering Approach

Clustering approach works on the basis of custom grouping. The data that is processed in parsing module is firstly quantified using quantification process, where quantification is calculated by mapping the matches. Afterwards, custom grouping is performed using K-mean clustering. Certain clusters formed using nearest neighbors for relevant items.

Collaborative Filtering:

Collaborative filtering collects the preferences items from user and creates database of that preferences items. It is a personalized recommendation based on similarities of interested products. In other words, we can say it is a method of rating for products by the predicted targeted user.

Module 3: Proposed Solution

Data mining observe that clustering approach can be a good approach to prepare group of similar users and reduce effort of recommendation using similarity weight calculation, which calculates similar weight items. Threshold Filter is applied and value is set. Even, value can be fixed. Relevant user recommendation is performed at last.

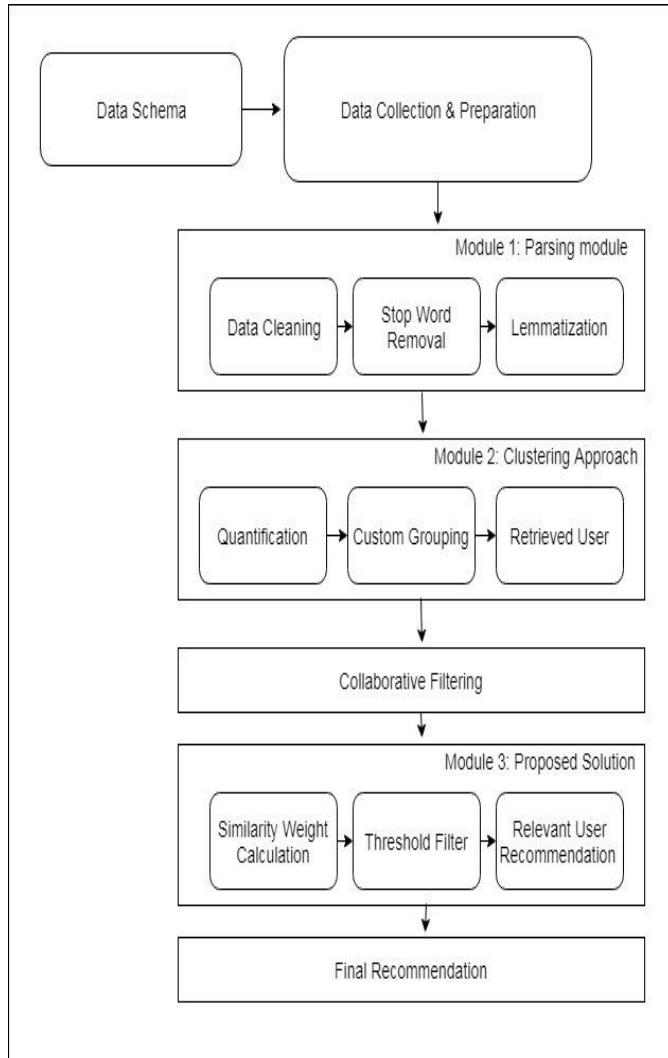


Fig.2: System Architecture

V. CONCLUSION

Our work is based on creating and deploying a recommendation system, which will help user in recommending books. This online system helps to get reviews and rating of books and provides recommendation according to rating and reviews of users. Existing system facing the issue, which are highlighted in the concluded work so that some techniques can be evaluated to overcome the rising issue. Combination of collaborative filtering with K-mean Clustering and Similarity Weight calculation is used in proposed work.

VI. REFERENCES

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