

A Hybrid searching strategies for recommendation systems

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ABSTRACT

The internet and world wide web have brought us an abundant information in various fields and due to the information overloading, it is very hard to find out relevant content so, Recommendation System come into existence. The main aim of Recommendation system is to provide suggestions to a user. The suggestions relevant to decision-making processes, like what items to buy, which music to listen to, which online news to read, or which movie is best one. The benefit of recommendation system depends on utility of the system. The utility can be measured in terms of accuracy, flexibility, reliability, sparsity. The proposed work mainly applies an association mining over clustering to recommend the best suitable items to the user by generating better rules. The Clustering is applied to the group of user's set into k clusters by applying k-means algorithm and Association mining is used for generating the rules.

1. Introduction

In everyday life, people rely on recommendations from other people through spoken words, reference letters, news reports from news media, general surveys, travel guides etc. So recommendation system plays an important role in finding the best items. A recommendation system consists of information filtering which applies different data analysis techniques to help the customers for finding the relative content with the help of a predicted likeness score^[11].

Here user's choices are given as input and output will be the list of recommendations. User's choices are known by the ratings which are given by the user. Recommendation system recommends items like music, movies etc. with the help of information filtering technique^[1]. The Content-based filtering methods are based on a description of the item and a profile of

the user's preference. Collaborative filtering methods are based on collecting and analyzing information of users' behaviors, activities or preferences and predicting what users will like based on their similarity with the other users.

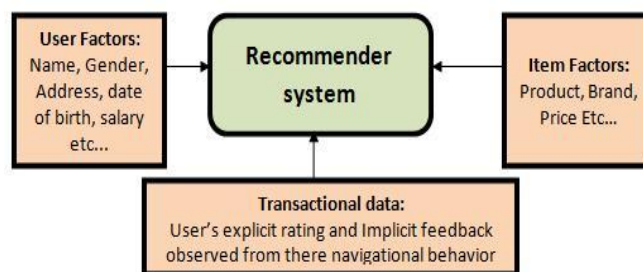


Figure 1 Recommendation Process

2. Comparison of Existing Methods

Methods	Description	Advantages
Hybrid Recommendation System Based On C-Means Clustering Method	In this approach it combines both content based and collaborative based approach to recommend the new item.	The advantages of this approach is it overcomes the cold-start problem and generates the better rules to get the most successful suggestions
Clustering Based Collaborative Filtering Recommendation System Algorithm	In this approach for recommending the items the clustering method is used and calculates the absent ratings.	The main advantage is it overcomes the problem of sparsity and improves the accuracy of the system
Hybrid Recommendation System Based On Association Rules	In this approach the association mining is used for generating rules and based on rules generated recommendation takes place.	The main advantage is it improves the accuracy by generating the efficient rules
Hybrid Approach with Collaborative Filtering for Recommender Systems	In this approach, estimation of the ratings for the unrated items is based on the weighted combination of user-based collaborative filtering and item-based collaborative filtering	The main advantages of this approach is it overcomes the sparsity and improves the accuracy
A New Item Clustering based Collaborative Filtering Approach	Here, First of all item base clustering takes place and then calculates the similarity between the items and prediction can be calculated on the basis of item score.	The main advantage of this approach is it recommends the new items based on similar features to the users.

3. Flowchart of Proposed Work

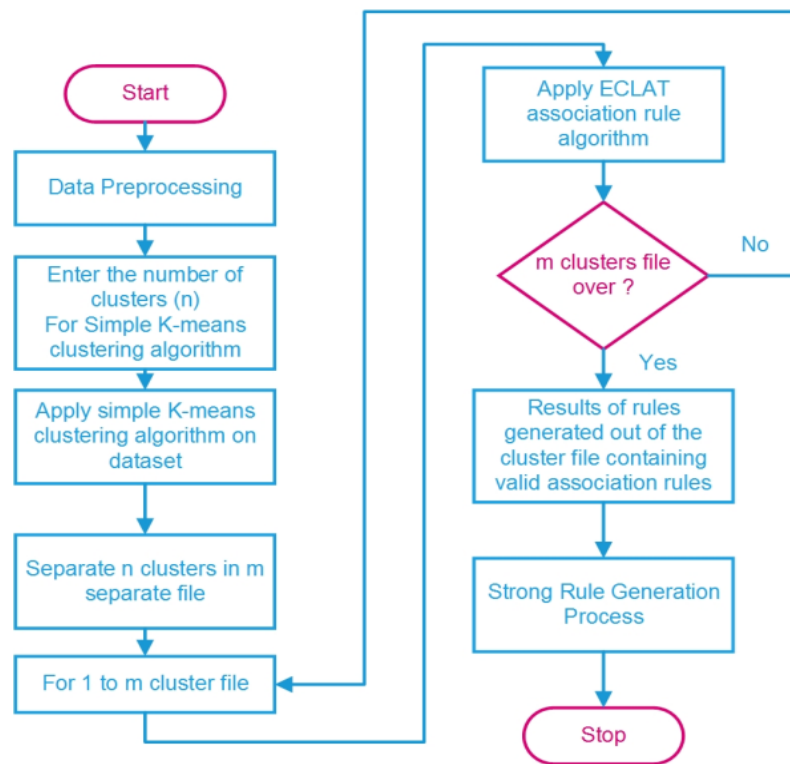


Figure 2 Flow Chart

4. Conclusion

The proposed system applies association mining over clustering. Initially the standard dataset is taken for evaluation by the system. The dataset is pre-processed and the pre-processed data is given to the clustering K-means algorithm and it will give clustered data and the results of K-means

algorithm are given to Association mining algorithm i.e. to generate the strong association rules from results. The optimized results from Association mining algorithm module are helpful in providing the better rules. With the help of these rules generated, we can provide the best suitable items to the user.

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