Abstract

Recommender systems have been designed using association rule mining. However the rule generation complexity of ARM proves to be disadvantageous when dealing with huge amounts of data. Taking this disadvantage into consideration this paper proposes predicting missing items using associative classification techniques. To accomplish this task either a classifier or a clustering approach is chosen. This paper proposes classifying the items prior to prediction process using Naïve Bayes Classifier or hierarchical clustering approach. The advantages of the proffered approach are that the complexity of rule generation is lowered to a great extent and the prediction is done at a higher level of abstraction. The prediction algorithm chosen is associative classification mining using ComboMatrix. The classifier or the clustering mechanism maps huge datasets to a set of classes the size of which in most classes is smaller than the size of the dataset. Therefore this approach greatly reduces the size of the dataset and the overall complexity. This paper lists out the literature survey carried out in the field and the design of the proposed system. The experiment carried out shows that the performance and memory requirements of the proposed approach are more efficient than the method using only associative classification mining.
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- David F. Barrero and David Camacho and Maria D. R-Moreno, "Automatic Web Data Extraction based on Genetic Algorithms and Regular Expressions".
- J. Ben Schafer, Dan Frankowski, Jon Herlocker, and Shilad Sen, "Collaborative Filtering Recommender Systems".
- Hemalatha Chandrashekhar and Bharat Bhasker, "Personalized Recommender System Using Entropy Based Collaborative Filtering Technique".
- Benjamin C. M. Fung, Ke Wang, and Martin Ester, "Hierarchical Document Clustering".

Index Terms

Computer Science

Artificial Intelligence
Keywords

ComboMatrix  Graph based prediction  Hierarchical Clustering  Naïve Bayes classifier
Recommender systems