Abstract

World Wide Web is developing in a chaotic and unfocused process, and this process has resulted in production of documents which are linked with each other, and which are not logically organized. Therefore, the aim of recommender systems is guiding users to find their favorite resources and meet their needs, by using the information obtained from the previous users’ interactions. In this paper, to predict the users’ navigation pattern with high precision, a hybrid algorithm of FCM fuzzy clustering techniques, weighted association rules, and fuzzy systems are presented. This algorithm is implemented in two phases, namely offline and online phases. In offline phase, using the recorded data in log file of the web server, the users’ navigation patterns are extracted. In online phase, the recommender system suggests, as the initial proposed set, a list of the current user’s favorite webpages which he/she has not visited yet. Then it expands this set using HITS algorithm so that the new webpages which have recently been added to the website have the chance to be present in the list of the proposed webpages. The results of the simulation in real-world data indicate the higher efficiency of the proposed algorithm in terms of precision and coverage comparing to other algorithms.
References

- Han, J., 2000, Data Mining: Principles and Concepts, Morgan Kauffman Publisher.
Predicting the User's Navigation Patterns in Web, using Weighted Association Rules and Users' Navigation Information


Index Terms

Computer Science

Web Services

Keywords

Recommender System   FCM Clustering   Fuzzy Inference System   Weighted Association Rules.