

WebPUM : a web-based recommendation system to predict user future movements.

ABSTRACT

Web usage mining has become the subject of exhaustive research, as its potential for Web-based personalized services, prediction of user near future intentions, adaptive Web sites, and customer profiling are recognized. Recently, a variety of recommendation systems to predict user future movements through Web usage mining have been proposed. However, the quality of recommendations in the current systems to predict user future requests in a particular Web site is below satisfaction. To effectively provide online prediction, we have developed a recommendation system called WebPUM, an action using Web usage mining system and propose a novel approach online prediction for classifying user navigation patterns to predict users' future intentions. The approach is based on the new graph partitioning algorithm to model user navigation patterns for the navigation patterns mining phase. Furthermore, longest common subsequence algorithm is used for classifying current user activities to predict user next movement. The proposed system has been tested on CTI and MSNBC datasets. The results show an improvement in the quality of recommendations. Furthermore, experiments on scalability prove that the size of dataset and the number of the users in dataset do not significantly contribute to the percentage of accuracy.

Keyword: Web usage mining; Web-based recommendation systems; Navigation pattern mining.