Enhancing Proxy Server cache Management using Log Analysis and Recommendations

Abstract

Now a day's web based applications are growing rapidly due to this the network performance is affected significantly. Thus a performance improvement technique is required by which the application speed is maintained and delivers the high performance web pages. Thus pre-fetching techniques are applied. There are various kinds of pre-fetching techniques are available among them a promising data model is find in [1]. In this technique the proxy log data is consumed for performing navigation pattern analysis. Thus this model incorporates a K-mean algorithm for cluster log data and then the Apriori algorithm is applied to find the frequent pattern rules. Using these rules the system recommends the possible user pages for prefetching. In order to enhance the performance of the traditional model two different techniques are implemented and compared with the traditional model. First utilize the Bayesian classification technique for analyzing pattern and in second method the ID3 decision tree algorithm for analyzing patterns. The comparison of the both the techniques are performed in terms of memory used, time consumption, accuracy and error rate. According to the obtained results the proposed predictive system offers high performance results as compared to the traditional data model.
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Index Terms

Computer Science

Networks
Keywords

web usage mining  web log  prefetching  ID3  K-mean  Bayesian classifier.