Abstract

Web services are the components usually called as integrated software components which support the interoperable machine-to-machine interaction over any network. In today’s world, the availability of web services is increasing actively. A recommender system is presented that helps the users to select services with good Quality-of-Service (QoS) performance. This recommender system extracts the information from two parameters called location and QoS values. The basic idea is to predict Web service QoS values and recommend the best one for users based on historical Web service QoS records. Firstly, Locations are clustered using Euclidean distance and then the similarity of users of that particular location is calculated. Likewise, Web services are clustered based on the similarity and then prediction is done based on the clusters formed. After Clustering, the missing data is being predicted using the Pearson correlation of nearest neighboring approach. Prediction is done from both service perspective and user perspective. Once missing data is obtained, services are ready to be recommended. Lastly, users are recommended with services which are being used by them in the history with better QoS values. QoS values (throughput and response time) help in finding best services to
be utilized by the user. The system is evaluated using MAE, which is majorly used to evaluate the predicted values.

References


Index Terms

Computer Science
Information Sciences
Keywords

Recommender system, Collaborative filtering, mean absolute error.