

Abstract

Collaborative filtering-based Recommender system is a system that can give a recommendation in term of rating prediction of an item, based on the similarity of user characteristic or user preference in rating an item. This system has widely used by companies or non-profit organization. Thus, the sheer number of user demands collaborative filtering – based recommender system that can gracefully cope with the vast size of the data.

In this thesis, we implement and analyze the user-based collaborative filtering recommender system which applies ClustKNN algorithm and user-based algorithm as comparator. ClustKNN is a simple and intuitive algorithm that is well suited for large data sets which resulting better time prediction than user-based KNN. Then, the analysis is carried out to the accuracy of rating prediction result that is given by the recommender system. Comparison parameter on training set and set test, number of cluster, and neighbor size is used in the analysis.

In ClustKNN algorithm, users' preference very extremely determine the result of predicted ratings. The accuracy of prediction, which is resulted by ClustKNN algorithm, increases with the increase of the number of data in the training set, number of cluster, and neighbor size

Keywords: *recommender system, user-based collaborative filtering, ClustKNN algorithm, user-based KNN.*