Abstract

Recommender system is an application giving prediction of an item based to user based on user's characteristics in giving information.

This final assignment implements and analyzes Naive Bayes Classifier and Item Based Collaborative Filtering in Switching Hybrid Recommender System.

This final assignment is to analyze influence of sparsity to the accuracy of the rating prediction generated by recommender system after the implementation of Swiching Hybrid method with Naive Bayes Classifier and Item Based Collaborative Filtering.

Swiching Hybrid method in Recommender System can assist improving accuracy by exploiting the advantages of both method , Naive Bayes Classifier and Item Based Collaborative Filtering. Both of these algorithm have a high performance computing value prediction calculation so can produce high degree accuracy and the algorithms will provide an outcome prediction if one method fails in making the manufacture of predicted results. It's Happen because the weakness of the method used here is sparse data that would make the predistid results of item based CF is zero and inaccurate so combined with naïve bayes classifier is handle sparsity problem and give value prediction. For selection of prediction using value α and value β, α is the difference between the value of the probability of the Naïve Bayes that have been sequenced and the difference between the predicted value of Item Based Collaborative Filtering with Naïve Bayes Classifier.

Test Results showed that more the number of neighborhood will give resulting good prediction accuracy. The best performance occurs when value of α and β used is the optimal value(α=0.35 and β=0.8).

Keywords**:** *Switching Hybrid, Item Based Collaborative Filtering, Naive Bayes Classifier, Scalability, Sparsity*