Abstract

Recommender system is a system that can be used to predict the items based on information obtained from users, so we get recommendations based on user profiles. Collaborative filtering is a technique commonly used in recommender system, but prediction results obtained is still less satisfactory because in its calculations, did not pay attention to the background / demographics of users or items. Therefore, it needs an additional information to better results, namely   Demographic   data.

This final project will implement a collaborative filtering recommeder system in combination with Demographic Data as a solution to process the prediction results which is better ratings. In addition, this final project also analyzed the prediction accuracy of the ratings generated by the recommender system with the method of evaluation MAE (Mean Absolute Error). The parameters used in the analysis are α, β and γ parameters. The data used are IMDB   data   sets.

Prediction accuracy generated by collaborative filtering algorithms with Demographic data is larger than plain collaborative filtering. The best performance occurs where the number of neighborhood at the greatest number of trend of user to rate an item. Results of recommendations on Demographic collaborative filtering algorithms in the recommender system shows the conformity between the item genre from result of recommendation with item genre that has been rated by active user.

Keywords: *recommender system, collaborative filtering, rating, demographic data, genre,* MAE.