

## ABSTRACT

Recommender system is an application that can search and give a recommendation in term of rating prediction of an item, based on the similarity of user characteristic in giving information. Collaborative filtering is a common technique used in recommender system that predict an item (movie) based on existing information from users or other items.

User-to-user correlation is a fundamental component of Collaborative Filtering on Recommender Systems. In this final task, implement and analyze the user-based collaborative filtering recommender system, which apply Dynamic Item Weighting and Selection method performed. This final project focuses on item weighting and item selection methods aimed at improving prediction and rating prediction accuracy which produced by recommender system on introduced the user-to-user correlation metric. The data used is the data set of IMDB (Internet Movie Data Base). The parameter used in analyzed is parameter  $f$  that is number of item, which the highest weight will selected on the selection futur, and comparing the number of data on the training set and test set.

Item selection is a complex problem in CF. The huge amount of items and the extreme sparsity of data make common feature selection techniques not effective on CF systems. In this final task we introduce the methods aimed to overcome these problems by using Dinamyc Item Weighting and Selection system. The highest weight items which appear in the user profile from active user will be selected. Recommender system with Dynamic Item Weighting and Selection collaborative filtering method has an advantage that can using weight inter item which has been calculated for used on the prediction. The prediction accurated of the result generated by selection with best-f-per-target and best-f-per-user will increase with increasing the number of data in training set.

**Keywords:** recommender system, collaborative filtering, Dynamic Item Weighting and Selection method.