Abstract

Recommender system with Collaborative Filtering methods somewhat inaccurate due to data sparsity. One of these methods for increase the precision accuracy of the calculation is using Prediction Error-Based Enhancement with Counting Number of Common Neighbors (PEBE-CN) Method. This method is the development of user-based collaborative filtering, User-Based Pearson Similarity (UBPS). This method predicted by looking prediction error of the items that have been rated by the active user, and weighted based on common neighbors of desired items. Several things are examined here which is the influence of the parameter n, γ, and comparison of the amount of training set and test set towards prediction accuracy PEBE-CN method by using Mean Absolute Error (MAE) and its perfomance with precision, recall and accuracy. Based on test results, it was found that the parameter n,γ, and comparison of the amount of training set and test set affects the accuracy of prediction and perfomance of recommender system with PEBE-CN and UBPS methods. Found also that the accuracy of prediction and it's performance with PEBE-CN method proved to be better than UBPS method.

Keywords: recommender system, collaborative filtering, UBPS, pearson, PEBE-CN, prediction error