

Abstract

The development of information technology supported by Internet technology has caused scattered distribution of data and information. Particular technique or technology should be used so the information gotten by user is as what desired. One of such technology is Recommender System. Recommender System will provide information that may correspond with user profiles. Thus, the information received by the user is the one that may be desirable or proper to user want.

To generate accurate recommendations, Recommender System is supported by some methods in the implementation; they are the SVD algorithm, Adjusted Cosine Similarity and the Weighted Sum (Prediction). SVD algorithm is used for matrix decomposition aimed to improve the scalability of the system. Adjusted cosine similarity is the algorithm that calculates the level of similarity between the users of the rated items. Prediction (Weighted Sum) is the algorithms that calculates the similarity value and obtains the prediction value rating. To determine the quality of the system, an error calculation known as the Mean Absolute Error (MAE) is used.

The results of this system are the predicted value ratings of an item based on user profile. From these results, it will continue to issue recommendations to the user items. Each user will receive a different item recommendation corresponded with the user profile of every user.

The conclusion of this research is the SVD algorithm can be collaborated with item-based algorithms to generate predictions and the predictive value of SVD algorithm obtain the smaller error than the item-based algorithm.

Keywords: Recommender System, Adjusted cosine similarity, Weighted Sum, MAE