

Abstract

In general, the recommendation system is recommending a number of items that the user needs, especially in recommending a book, but sometimes recommendation systems is recommending some books that are not required by the user. The cause of a recommendation system recommends books that do not fit the needs of users, which is because the recommendation system focuses only on book ratings and not on personal or user personalities. The Bayesian Personalized Ranking (BPR) method is a method of ranking-based items that are based on favored items or items that known by the user, rather than applying a technique by predicting a rating. In this final project, will implementing Bayesian Personalized Ranking (BPR) method in recommendation system for recommending books, the dataset will be used in the system using Goodreads and Bookcrossing dataset. Dataset will be modeled using the Matrix Factorization (MF) technique. This final project aims to find out the value of Area Under Curve (AUC) produced by using BPR-MF method. From the results of this final task is obtained value of $AUC(u) = 0.962$ for datasets Goodreads and $AUC(u) = 0.95518$ for Bookcrossing datasets. From the scores obtained explained that the BPR-MF method works well in predicting books to be recommended to users.

Keywords: recommendation system, bayesian personalized ranking, matrix factorization, book