

Abstract—In the era of information overload, finding the right book that matches one's preferences and interests has become a challenging task for users as many online book provider service websites such as Amazon, Goodreads, and Gramedia provide books of various types and choices. Recommender systems can be used in addressing such issues, it works by filtering information that provides predictions and suggests the best product or service to the user. Currently, various book recommender systems have been developed, but the systems do not provide interaction between the user and the system. Therefore, we propose a recommender system built with a conversational approach so that it can interact with natural language. Recommender system built using matrix factorization method with Singular Value Decomposition (SVD) algorithm, SVD is proven to have advantages for handling large datasets, extracting features, reducing noise and dimensionality so as to speed up computation. We performed two types of evaluation on the system. First, we tested the prediction accuracy using Root Mean Squared Error (RMSE) and Mean Absolute Error (MAE) metrics. Second, we use questionnaires to measure user satisfaction levels. The evaluation of the system shows that the results of the prediction accuracy obtain an MAE value of 0.6481 and an RMSE value of 0.8287. Then, the accuracy performance of the system found that 83.2% of users get recommendations according to their interests. The user satisfaction with the whole system is 87.9%. The system built can provide a fairly good recommendation performance, and the chatbot can interact well with users based on the evaluation results obtained.

Keywords: book recommender system; chatbot; collaborative filtering; singular value decomposition; matrix factorization