

Abstract

In today's digital era, information about food recipes is abundant, which results in people experiencing confusion in choosing food recipes that match their preferences. Therefore, a recommendation system is needed that can overcome these problems. Some studies have successfully built a food recipe recommendation system, but have not utilized sentiment analysis aspects, especially in user review texts. Therefore, this research uses the Bidirectional Long Short-Term Memory (Bi-LSTM) model to generate sentiment analysis in the form of sentiment scores, then combined with Collaborative Filtering (CF) techniques to build a system that can recommend food recipes to users according to their preferences. The performance of the system to recommend food recipes is measured using Mean Absolute Error (MAE) and Root Mean Squared Error (RMSE) evaluation metrics. The results show that by utilizing sentiment scores in the CF technique, the recommendation system can produce a fairly optimal metric evaluation value in the Item-Based CF test with the highest value in testing the alpha parameter of 0.7 which results in an MAE value of 1.30 and an RMSE of 1.49, but the recommendation system cannot match the recommendation system that only relies on ratings which produce an MAE value of 0.23 and an RMSE of 0.68.

Keywords: recommender system, sentiment analysis, bidirectional long short-term memory, collaborative filtering