

ABSTRACT

A recommendation system is a system used to provide predictions in the form of ratings of an item given to a number of users so that users can be informed of new items that match what each user likes and preferences. This recommendation system is widely used in several applications such as online music platforms, YouTube, Instagram, and online movie platforms. The recommendation system only relies on numerical ratings to generate recommendations but does not consider user reviews, making it possible for the system to give inaccurate suggestions. User opinions are needed to improve the personalization and accuracy of recommendations. Sentiment analysis is used to analyze the sentiment of the reviews. The results of sentiment analysis will be combined with rating predictions from the recommendation system to produce more accurate recommendations. In this research, the method used is Bidirectional Long Short-Term Memory (BiLSTM) as a sentiment model and uses Word2Vec as word embeddings and Collaborative Filtering (CF) Recommendation System to provide recommendations to users based on sentiments from movie reviews. From this test, the accuracy of Sentiment Analysis is obtained with an average of 0.74 and the error rate in the recommendation system with RMSE 0.27 and MAE 0.21.

Keywords: *sentiment analysis, recommendation system, collaborative filtering, BiLSTM, word embeddings.*