

Abstract

Mobile applications are currently experiencing very rapid development including applications in the financial sector. Livin'byMandiri is one of the mobile applications used to transact online without the need to go to the bank. This makes it very easy for customers to transact anywhere and anytime. Application reviews are user reviews that reflect the reputation of the application among the community, these application reviews can be found anywhere, so many companies use application reviews as a reference in developing their applications in the future. However, people's opinions on apps can vary and are influenced by many aspects. Therefore, aspect-based sentiment analysis can be applied to app reviews to get better results. This research focuses on analyzing the sentiment of Livin'byMandiri app reviews on the Google Play Store. In this research, the Bidirectional LSTM (Bi-LSTM) method is combined with TF-IDF and Word2Vec feature extraction. From the results of the experiments that have been carried out, the best accuracy results for the access aspect are 81.18% and F1-Score of 81.03%, the service aspect produces an accuracy of 82.82% and F1-Score of 82.74%, and for the convenience aspect produces an accuracy of 77.28% and F1-Score of 77.19%. In this experiment, it is also found that feature extraction has an effect on sentiment analysis, this is evidenced by an increase in accuracy of more than 1% for each aspect when TF-IDF feature extraction is added and also the combination of TF-IDF and Word2vec in the initial model built using only the Neural Network embedding layer.

Keywords: Aspect-Based Sentiment Analysis, Bidirectional LSTM, TF-IDF, Word2Vec, Application Review.