

Abstract- As the use of digital applications in banking services increases, user opinions about these applications become an important source of data to study Wondr by BNI, which receives many user reviews, is one of the applications studied in this research. This research aims to build an accurate sentiment classification model and compare the effectiveness of two word representation methods, Word2Vec and FastText, to automatically classify sentiment into two classes, positive and negative, from unstructured review text using informal language. The data was processed through pre-processing, labeling, and processing stages using a hybrid CNN-LSTM model with 20,000 reviews available on the Google Play Store. The training process is carried out using 5-fold cross-validation and hyperparameter optimization using the random search method. The results show that the model with FastText has an accuracy of 86.38%, precision of 86.82%, recall of 86.46%, and F1-score of 86.46%. In contrast, the model with Word2Vec has an accuracy of 85.90%, precision of 86.38%, recall of 85.80%, and F1-score of 85.87%. These results show that FastText is better in accuracy and performance consistency compared to Word2Vec. This research provides a better understanding of how word representation methods affect sentiment analysis in app reviews and is expected to be a reference for future development of similar models.

Keywords: Sentiment Analysis, Wondr by BNI, CNN-LSTM, Word2Vec, FastText