

Abstract

Investing in Indonesia is increasingly popular, especially among the millennial generation. investments such as deposits, gold, stocks, and online investment applications are increasingly in demand, but their advantages and disadvantages are a measure of the quality of the app's services. This research focuses on the sentiment classification of user reviews of the Nanovest online investment application on the Google Play Store using the Support Vector Machine (SVM) method. SVM is used because it can classify opinions into positive and negative sentiment classes with good accuracy, by evaluating how effective Word2Vec features extraction that can convert words in a text into numerical vectors and TF-IDF that is capable of high-dimensional word weighting and TF-IDF Weighted Word2Vec combination features to produce richer vector representations. Tests were conducted using four SVM kernels namely Linear, Polynomial, RBF, and Sigmoid. The results show that Word2Vec with RBF kernel and 300 vector size produces the highest accuracy of 95.46%, the combination of TF-IDF Weighted Word2Vec also gives good performance with 95.29% accuracy on RBF kernel. However, TF-IDF alone resulted in the lowest accuracy of 93.31% on the Sigmoid kernel. This research shows that Word2Vec and combined feature extraction methods are effective in improving sentiment classification performance compared to TF-IDF.

Keywords: Sentiment Classification, Investment App, Word2Vec, TF-IDF, Support Vector Machine, Nanovest