Abstract

Telkomsel is a service that the people of Indonesia widely use. Complaints from users referring to Telkomsel's service and signal aspects are often made in Twitter tweets with harsh or good language. This is done because users continue to demand to get better service. Therefore, an aspect-based sentiment analysis technique is needed to determine a person's view of each aspect, such as Telkomsel's service and signal aspects. Aspect-based sentiment analysis is a solution to find out the opinions of Telkomsel users based on their aspects. In its implementation, the NBSVM method is used as a classification model that is proven to work well compared to other methods, namely MNB and SVM. The implementation of the FastText feature expansion can affect the level of performance model, and the best results are obtained in the Top 1 feature on the signal aspect and Top 5 on the service aspect with a combination of Twitter corpus and news. In this study, the data used is unbalanced and has been handled by applying SMOTE and AdaBoost techniques to the FastText feature expansion model. Based on the results of the tests that have been carried out, SMOTE can handle data imbalanced compared to AdaBoost. The performance results of the FastText feature expansion model after SMOTE are applied to get F1-Score 91.24% in the signal aspect and F1-Score 88.75% in the service aspect.

Keywords: sentiment analysis based on aspect; feature expansion; fasttext; nbsvm; handling imbalanced data