Abstract

Sentiment analysis of product reviews is critical in understanding customer views and satisfaction, especially in the context of e-commerce applications. A marketplace provides channels where users can submit reviews of the products they purchase. However, due to the large number of reviews in a marketplace, analyzing them is no longer feasible to be performed manually. This research proposes a machine learning implementation to perform sentiment analysis on product reviews. In this research, the product review dataset on Shopee marketplace is used for sentiment analysis by comparing TF-IDF and TF-RF feature extraction using the SVM algorithm with stages of dataset, labeling, feature extraction and accuracy results. The importance of the comparison between TF-IDF and TF-RF feature extraction in thisresearch is related to the need to evaluate and determine which feature extraction method is most effective in increasing the accuracy of sentiment analysis. TF-IDF and TF-RF are two methods commonly used in text analysis, and a comparison of their performance can provide deep insight into the effectiveness of each in the context of product sentiment analysis.Thus, through this comparison, this research aims to determine the best approach that can provide the highest accuracy results, so that the results can serve asa guide for further research. Based on the evaluation, the highest accuracy value is achieved at 92.87% by using TF-IDF and SVM classifiers which outperformed previous research.

Keywords: sentiment analysis, shopee, svm, tf-idf, tf-rf