

## **ABSTRACT**

*DANA app reviews should be considered because there are many other digital wallet apps that have almost the same total downloads and ratings as the DANA app, making it irrelevant to the assessment of the app. Usually these ratings and reviews cannot be used as a reference to assess the application due to the incompatibility of the ratings and reviews given. Furthermore, in several studies, Vader and Textblob have indicated differences in accuracy between these methods. Vader demonstrates higher accuracy with short and informal texts such as tweets, whereas Textblob is more suitable for longer and formal texts. These automated labeling methods yield distinct distributions of sentiment labels compared to manual labeling, each exhibiting unique tendencies in classifying texts as positive, negative, or neutral. The purpose of this research is to analyze the comparison of automatic labeling performance between Textblob and Vader against the SVM algorithm in the process of sentiment analysis of DANA reviews. The research conducted uses the Textblob and Vader labeling methods and the Support Vector Machine (SVM) classification method. Based on the labeling results using TextBlob, there are 4,898 positive labels, 1,790 neutral labels, and 3,992 negative labels. Meanwhile, Vader's labeling yielded 5,461 positive labels, 1,035 neutral labels, and 4,184 negative labels. Both methods tend to produce more positive sentiment data compared to neutral and negative sentiment data. The results showed that the performance of the Textblob and Vader automatic labeling methods on SVM classification resulted in an accuracy value of 80.48%, precision of 80.37%, recall of 80.48% and f1-score of 80.40% for the performance of Textblob labeling. The resulting value is quite low when compared to review data that applies Vader labeling which produces an accuracy value of 81.65%, precision 80.77%, recall 81.65% and f1-score 80.59%. These results prove that the performance of Vader labeling is superior to Textblob labeling in SVM classification. These results are influenced by several factors including, Vader method optimized for processing slang, non-standard words, and emoticons, while Textblob only processes formal text. Vader can also recognize important contexts within sentences, enabling it to interpret the meaning of a word within its context.*

**Keywords:** *dana, sentiment analysis, support vector machine, textblob, vader*