

Abstract

One form of information and communication technology development is a *smartphone*. Today's popular *smartphone* products are the iPhone and the social media used to share opinions is Twitter. One of the topics that is often discussed on Twitter is related to iPhone reviews which can refer to different aspects. Therefore, aspect-based sentiment analysis can be applied to iPhone reviews to get more detailed results. This study applies TF-IDF feature extraction as a weighting vocabulary and the *Support Vector Machine* (SVM) *classification* method. This study also uses hyperparameter tuning to optimize parameters to get the best performance. The results of this study obtained the highest accuracy performance results by using the Support Vector Machine classification on the linear kernel and TF-IDF feature extraction on the camera aspect with *accuracy* 98.07%, battery aspect with *accuracy* 97.52%, design aspect with *accuracy* 96.82%, price aspect with *accuracy* 98.62%, and specification aspect with *accuracy* 97.07%. As well as getting an increase in the results of the highest *accuracy* performance by using hyperparameter tuning on the linear kernel for the camera aspect with *accuracy* 98.07%, battery aspect with *accuracy* 97.52%, design aspect with *accuracy* 97.02%, price aspect with *accuracy* 98.82%, and specification aspect with *accuracy* 97.22%.

Keywords: Aspect Based Sentiment Analysis, Iphone, Support Vector Machine, Hyperparameter Tuning