Abstract

The Indonesian government is actively promoting electric vehicles. This policy has generated many sentiments from the public, both positive and negative. Public sentiment can have a significant impact on the success of government policies. Therefore, it is important to understand public sentiment towards these policies. This research develops a sentiment classification model to understand public sentiment towards electric vehicles in Indonesia. Sentiment classification is the process of identifying and measuring the positive or negative sentiment in a text. This research uses a Bi-LSTM model to perform classification on a dataset of tweets related to electric vehicles. To evaluate the performance, testing was conducted through two main scenarios. In Scenario I, the focus was on finding the optimal embedding size for two Word2Vec architectures, namely CBOW and Skip-gram. Model evaluation was performed using cross-validation to gain a deeper understanding of model performance. Scenario II focused on searching for the best dropout parameters for the Bi-LSTM model. This step aimed to find the optimal configuration for the model to generate more accurate and consistent predictions in classifying tweets related to electric vehicles. The results showed that in the context of sentiment classification on tweets about electric vehicles, the combination of CBOW with an embedding size of 200 and the Bi-LSTM model with a Dropout value of 0.2 is the best choice and achieves an accuracy of 96.31%, precision of 92.57%, Recall of 98.61%, and F1-Score of 95.49%.