

ABSTRACT

Vehicles that function as a means of public transportation have become one of the factors of life that support the movement or mobilization of life. Currently, the technology of the automotive industry is starting to develop rapidly over time with the production of vehicles that use electrical energy and are environmentally friendly. The issue of using electric vehicles is currently a hot topic of conversation and of course invites various reactions and opinions from the public. Twitter is one of the most popular places to express opinions and contains a variety of opinion texts, making it a suitable platform for analyzing current opinion and an interesting research topic. This study examines the opinion of the Indonesian people through social network analysis about electric vehicles circulating in Indonesia. Sentiment analysis carried out in this study uses a machine learning approach with a classification method that can be used in handling textual data, namely Naïve Bayes to classify each comment into positive or negative sentiment by implementing imbalance data handling methods such as SMOTE for oversampling, and RUS for undersampling. After carrying out the classification process, the performance calculation of the model will be carried out which is evaluated using the confusion matrix. The best model that was successfully selected in this study was the Naive Bayes model with a data sharing ratio of 90:10 and the application of the RUS imbalance handling technique. This model produces the same values, namely an accuracy value of 94.3%, a precision value of 95.5%, a recall value of 98.5%, and an f1-score value of 97%.

Keywords— [Electric Vehicle, Twitter, Sentiment Analysis, Naïve Bayes, Oversampling, Undersampling, SMOTE, RUS]