

## ABSTRACT

An Electric Vehicle (EV) is a type of vehicle that is powered by electricity rather than fossil fuels like gasoline or diesel. EVs are gaining popularity due to their lower carbon emissions and reduced dependence on fossil fuels, as well as their potential to save money on fuel and maintenance costs. Indonesia is currently in the early stages of the electric vehicle (EV) revolution, with the government setting an ambitious target of having one million EVs on the road by 2025.

However, EVs can be more expensive to purchase initially than traditional gas-powered vehicles, and the availability of charging infrastructure can vary depending on location. To promote the adoption of EVs, the Indonesian government has implemented several policies and initiatives, including tax incentives for EV manufacturers, the development of EV charging infrastructure, and the introduction of regulations to encourage the use of EVs in public transportation.

The methodology used in this paper is using quantitative method with the purpose of descriptive research. This study aims to see into the sentiment of the public opinion in Twitter of EV using the non-probability method. A large dataset of geotagged hashtag tweets containing certain keywords relating to electric vehicle in Indonesia is analysed using text mining techniques such as topic modelling and sentiment analysis. Later, the Naïve Bayes is used for sentiment analysis of electric vehicles, and its related tweets are either positive, negative, or neutral. Finally, the collected data will be processed through LDA model for determining the trending topic of each sentiment.

Sentiment analysis resulted overall discussion is positive which has a total amount of percentage of 63.6% from the Naïve Bayes algorithm with accuracy of 71%. Topic modelling resulted various topics of discussion on electric vehicle in Indonesia including ecosystem, government subsidy, battery, charging stations, and government investment on electric vehicle industries.

The sentiment of electric vehicle in Indonesia could be one of a indicator that the market opportunity of electric vehicle in Indonesia is wide. The conclusion for the positive topic modelling, the most discussed in positive sentiment are the ecosystem. While the negative sentiment topic modelling could be concluded that the most discussed aspect in negative term is the subsidy.

Keyword: Sentiment Analysis, Topic Modelling, Twitter, Electric Vehicle