Sentiment Classification of Fuel Price Increase With GRU and FastText

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Abstract

The government usually implements a policy of increasing fuel prices and reducing subsidized fuel every year. Rising fuel prices have had a mixed impact on society. The rapid development of information technology has led to easy access and an increase in the number of internet users. Social media platforms, such as Twitter, are widely used by people to express themselves in everyday life. Through this social media, the public can submit reviews regarding public policies implemented by the government regarding fuel prices. The reviews submitted varied, ranging from positive, neutral to negative. Sentiment analysis can analyze the types of reviews submitted by people, including positive, negative, or neutral. This research uses Gated Recurrent Unit and FastText feature expansion to classify sentiments related to rising fuel prices on Twitter. This system was developed through several stages, namely data crawling, data labeling, data initial processing, feature expansion, classification, and evaluation. This study aims to determine the classification performance using Gated Recurrent Unit and FastText. The data used was 8,635, and the highest accuracy reached 90.15% with an F1 score of 90.06%. The research results may help the government in determining how individuals feel about fuel price increases. By understanding public sentiment, the government can reevaluate its policies or even establish new ones that serve the public interest.

Keywords : Sentiment Classification, Fuel Price, Twitter, GRU, FastText, SMOTE