Classification of Disinformation Tweet on the 2024 Presidential Election in Indonesia Using Optimal Tranformer Based Model

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Abstract

Disinformation has been known as deceptive information. In the digital era, particularly during election periods, the spread of disinformation is conducted to mislead the public for specific purposes. Social media platforms like Twitter are used to disseminate disinformation. To identify information, we need to manually verify it with reliable sources. However, this approach requires effort and time compared to using a disinformation detection system. A good disinformation detection system is needed to reduce the spread of misleading information and its associated consequences. However, research on fake news detection systems in Indonesia still relies on outdated machine learning approaches. In this study, the author compared various machine learning methods and other transformer-based models such as Multilingual BERT, RoBERTa, and IndoBERT to handle Indonesian language datasets. The findings highlighted the superiority of the pretrained IndoBERT model, which achieved an impressive 95% accuracy. IndoBERT not only outperformed traditional learning models but also demonstrated improved computational efficiency. These results underscore the potential of transformer-based models, specifically IndoBERT, in enhancing disinformation detection systems. Leveraging natural language processing and deep learning, these models can effectively analyze and identify deceptive information with high accuracy. Adopting advanced techniques and leveraging natural language processing and deep learning, the use of transformer-based models like IndoBERT can play a crucial role in mitigating the spread of misleading content, particularly during elections and other critical periods.

Keywords: disinformation, BERT, indoBERT, classification, twitter