

Buzzer Account Detection in Political Hate Tweets Using IndoBERT and Ensemble Learning: Case Study of the Indonesian Presidential Election 2024

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Abstract

The Indonesian Presidential Election of 2024 has seen a widespread use of social media such as Twitter for political campaigning and discussion. However, this has also enabled the spread of hate speech from buzzer accounts that are created to influence public opinions. This study implements a machine learning approach to classify buzzer accounts that are spreading hate speeches during the presidential election period. By utilizing IndoBERT for hate speech classification and a traditional machine learning model to classify buzzer accounts. This study analyzes 62,341 tweets for hate speech classification and 961 accounts for buzzer account classification. Our implementation of IndoBERT achieved a strong performance with 91.12% of precision and recall, and 91.19% accuracy and F1-score in hate speech classification. While for buzzer account classification, we compared Decision Tree, Random Forest, and XGBoost, with Decision Tree achieving the highest performance of 64% precision, recall, accuracy, and F1-Score. Our results demonstrate the effectiveness of combining deep learning for hate speech classification with traditional machine learning for buzzer account classification, contributing to the development of more effective content filtering for election discourse on social media.

Keywords: buzzer detection, ensemble learning, IndoBERT, presidential election, sentiment analysis, social media

I. INTRODUCTION

The 2024 Indonesian Presidential Election has captured the attention of Indonesians for these past few months. Since late November 2023, there has been a growing discussion regarding this topic, especially on the internet, due to the political party campaigns have started. Social media such as Twitter and Facebook, play a significant role in politics [1] by providing spaces for individuals to share views and engage in political discussions [2]. As the campaign season intensifies, the use of social media by Indonesian political parties to promote an advertise candidates is one example that demonstrates the role that social media occupies in politics. However, the open nature of Twitter can both encourage informed political discourse and create opportunities for the dissemination of hate speech, which could potentially shape public opinions about presidential candidates.