Abstract

Regional Head Election is a political agenda held every five years. Everyone has their point of view on assessing the candidates. These political conversations often appear on platform X, a social media to exchange information, responses, comments, and even emotions. These public expressions can be classified into positive, negative, and neutral sentiments. This political phenomenon is the object of research to understand a hybrid deep learning model that combines Convolutional Neural Network (CNN) and Support Vector Machine (SVM), enhanced with TF-IDF extraction features, IndoBERT semantics to understand the deeper context of Indonesian text and Word2Vec that represents words in the form of vectors with similar meanings against testing on three corpus X, IndoNews, and X+IndoNews. This research analyzes the perspectives of Indonesian social media users surrounding the 2024 Regional Elections using 60,000 Indonesian tweets collected with keywords related to the 2024 Regional Elections from the X platform and a similarity corpus of 124,925 from the IndoNews collection. This study uses CNN to extract spatial patterns from textual data, while SVM serves as a classification model for sentiment prediction. The test results show the highest accuracy of 81.67%, with an improvement of +1.83% compared to the CNN baseline and +3.51% compared to the SVM baseline. The completion of sentiment analysis using the hybrid model and features applied in this research successfully detects public opinion for candidates, campaign teams, media, or survey institutions to understand the dynamics of voters surrounding the 2024 Regional Elections.