ABSTRACT

The rapid development of social media and online news platforms has made it easier for both accurate and misleading information to spread widely. The massive circulation of hoaxes—shared in various formats and languages without proper verification—makes it difficult for users to assess the credibility of the content they encounter. Hoaxes can mislead readers and weaken public trust in information sources. To address this issue, this study proposes a hoax classification system that uses a hybrid deep learning model combining Convolutional Neural Networks (CNN) and Recurrent Neural Networks (RNN), with Word2Vec used to convert text into numerical form. A total of 10,382 Indonesian-language texts from Kaggle were processed and tested using three models: CNN, RNN, and a hybrid CNN-RNN. The hybrid model is designed to combine CNN's ability to detect local patterns in text with RNN's strength in understanding word sequences and context. The models were tested using different Word2Vec embedding sizes (100, 200, and 300) and train-test ratios. Among all models, CNN achieved the highest accuracy of 8S.c4%, followed closely by the hybrid model. These results show the potential of combining deep learning models to build an effective and automated hoax detection system for Indonesianlanguage social media content.

Keywords: Fake News, CNN, RNN, Word2Vec, Hybrid CNN-RNN