Abstract— **Background:** The 2024 Indonesian Presidential Election is ideal for analyzing public sentiment on Twitter. Data collection began with crawling from the data source to create a dataset, which included 62,955 entries from Twitter, 126,673 entries from IndoNews, and a combined Tweet+IndoNews dataset totaling 189,628 entries. **Objective:** This study aims to explore sentiment using a hybrid model integrating Convolutional Neural Network (CNN) and Long Short-Term Memory (LSTM) methods, with feature expansion via Word2Vec optimized by a Genetic Algorithm (GA). **Methods:** The research evaluates the effectiveness of the hybrid CNN-LSTM model in analyzing sentiment from 2024 Indonesian Presidential Election tweets, aiming for higher accuracy and deeper insights compared to traditional methods. **Results:** The hybrid CNN-LSTM model, optimized with a Genetic Algorithm, significantly enhances accuracy, achieving the highest accuracy of 84.78% for the news data, marking a 3.59% increase. **Conclusion:** This study illustrates the innovative application of a hybrid CNN-LSTM model with Word2Vec feature expansion and Genetic Algorithm optimization for sentiment analysis in a national election context, demonstrating how advanced techniques can improve accuracy and efficiency in sentiment analysis.

Keywords—CNN-LSTM; Twitter; Election; Genetic Algorithm; Word2Vec