

## **Abstract**

**Information can be found and shared through social media effectively and quickly. One of the most widely used social media is Twitter. Any information shared on social media is not always true. With millions of social media users, the platform cannot be separated from disseminating information whose truth is uncertain. This has a negative impact on society because it can increase people's distrust of information circulating on social media. To find out this information, we need a system that can detect hoax information on social media using deep learning. This research focuses on detecting hoaxes using the Convolutional Neural Network (CNN) and Recurrent Neural Network (RNN) methods. To obtain optimum results, this study utilizes Feature Expansion in the form of GloVe (Global Vector) and Feature Extraction with TF-IDF (Term Frequency-Inverse Document Frequency). The uniqueness of this research lies in the combined application of GloVe feature expansion with TF-IDF feature extraction using CNN, RNN, and CNN-RNN hybrid deep learning methods. The results of this study prove that the hoax detection system, by implementing a combination of feature extraction and feature expansion, can increase the accuracy value to 95.09% in the CNN classification method, the RNN classification method obtains an accuracy of 95.12%, and the CNN-RNN hybrid classification method obtains an accuracy of 95.61%.**

**Keywords: Hoax, Twitter, Convolutional Neural Network, Recurrent Neural Neural Network**