

**Abstract**—Twitter is a social media platform that allows users to share thoughts or information with others for all to see. However, twitters often use abbreviations, slang, and incorrect grammar because tweets are limited to 280 characters. Topic detection often has problems with low accuracy, one method that can be used to overcome this problem is feature expansion. Feature expansion on Twitter is a semantic addition to the process of expanding the original text syllables to make it look like a large Document. That way, feature expansion is used to reduce word mismatches. This study uses the expansion of the GloVe feature with the Convolutional Neural Network (CNN) and Gated Recurrent Unit (GRU) classification methods. The results show that the topic detection system with the GloVe feature extension and CNN-GRU hybrid classification has an accuracy of 94.41%.

**Keywords:** Twitter; Feature Expansion; GloVe; CNN; GRU