# ABSTRACT

Personality identification is a prevalent subject within online communities that seek to ascertain the personalities of social media users. This detection employs social media content comprising social acts disseminated or uploaded by individuals. Investigations into personality recognition have employed singular machine learning and deep learning methodologies; yet, the performance outcomes remain subpar. Deep learning neural networks demonstrate distinct operating mechanisms and differing performance in data processing. Notable deep learning neural network techniques employed in research encompass CNN, RNN, LSTM, and BiLSTM. This research presents a hybrid approach employing CNN and BiLSTM on the Big Five personality dataset obtained from 27 individuals sanctioned by the psychological team. Assessments were performed on three individual CNN and BiLSTM methodologies, subsequently compared with the Hybrid BiLSTM model. The Big Five personality framework comprises openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. The analysis of the trial results indicated that the CNN + BiLSTM hybrid attained a peak accuracy of 61%, succeeded by CNN at 60% and BiLSTM at 45%. In the detection of short sequence phrases, CNN exhibits the maximum precision at 58% for the agreeableness label, while the CNN + BiLSTM hybrid attains a precision of 61% for the openness label in the detection of lengthy sequence sentences.

This signifies a divergence in the methods for executing data according to the characteristics of the data being processed. The hybrid CNN and BiLSTM model surpasses both BiLSTM and CNN in personality analysis based on the Big Five model. The Hybrid CNN + BiLSTM model may extract pertinent information independently of temporal context, while also considering the sequence of text, leading to enhanced accuracy and efficiency.
**Keywords:** Big Five Personality, BiLSTM, CNN, Media Social