Abstract− A person's personality offers a thorough understanding of them and has a significant role in how well they perform at work in the future. No wonder it attracted the interest of the researcher to develop a personality detection system. Although much research about personality detection through social media was conducted, this task has been challenging to implement, especially using conventional machine learning. The issue is conventional machine learning still insufficient to make the personality detection system perform better. The purpose of this research is to detect Big Five personalities based on Indonesian tweets and increase its performance by combining machine learning with deep learning, which is Gaussian Naive Bayes and IndoBERT model. The proposed combined model in this research is summing the log probability vector on each model. Gathered 3.342 tweets from 111 Twitter accounts that were used as a dataset. This research also implemented min-max normalization to rescale the data. The result showed that for the entire dataset, the combined model has more accuracy score than Gaussian Naive Bayes by 5.42% and IndoBERT by almost 2%, which indicates the combined model is better than the Gaussian Naive Bayes and IndoBERT models.

Keywords: Big Five Personality; Combined Model; Gaussian Naive Bayes; IndoBERT; Log Probability Value; Personality Detection.