ABSTRACT

Traditional tea quality assessment is performed by manually tasting directly by tea experts which is subjective and potentially biased. This research aims to develop a green tea organoleptic score Prediction system based on Electronic Nose (E-Nose) dataset using Boosting algorithm. This system is expected to provide a more efficient, accurate, and objective solution in assessing tea quality compared to traditional manual methods. This research uses the E-Nose dataset obtained from the Gambung Tea and Kina Research Center. Boosting algorithm is used to train a machine learning model that can Predict green tea organoleptic score based on E-Nose sensor data. The results show that this system is able to Predict green tea organoleptic scores with a high level of accuracy. The XGBoost algorithm showed the best performance with R2 value of 0.956 and MSE of 0.46. This research shows that green tea organoleptic score Prediction system based on E-Nose dataset using Boosting algorithm can be an effective solution to improve the efficiency and accuracy of tea quality assessment.

Keywords: Green Tea, Electronic-Nose, Boosting Algorithm, Organoleptic Score Prediction, Tea Quality.