

ABSTRACT

Meat is one of the most popular food ingredients in the world, meat contains high content substances suitable for human consumption. Meat also contains protein which is always consumed and is a source of protein, one of which is beef. Detection of a mixture of beef and pork is very important for society, because in Indonesia, in several religions and cultures, the consumption of pork is considered inappropriate or even prohibited. In research using the K-Nearest Neighbor (K-NN) algorithm and electronic nose (e-nose) as sensors, sensory data is collected from the e-nose to detect which meat is real beef and pork. The programming language used is Python for building machine learning models and Yii2 for the interface display and using MySQL as a data storage place. Program testing is carried out using Black Box Testing to ensure that the program functionality can be used properly. From the research results, the proposed method is able to detect a mixture of beef and pork with a high level of accuracy. The results of the classification of a mixture of beef and pork obtained an accuracy score of 0.9992.

Keywords: Meat, Electronic Nose Dataset, Machine Learning, K-Nearest Neighbor