ABSTRACT

Seafood or seafood is an important trading commodity both domestically and internationally, because Indonesia is a maritime country with superior marine products, it is hoped that this will increase the country's economic growth. The official standard test to determine the freshness and safety of seafood and meat products is carried out using the Total Available Amount (TVC) method. The proposed method for classifying quality and microbes in seafood is using machine learning k-nearest neighbor based on electronic nose datasets. Where application development uses SDLC prototyping with several stages, namely gathering needs, building prototyping, evaluating prototyping, coding the system, testing the system, and evaluating the system. The programming language used is python as the development of machine learning models and php for the interface and uses MySQL as a place to store the data, and program testing is carried out using black box testing to ensure that the program's functionality can be used properly. From the experimental results, the results obtained from the classification of seafood quality are obtaining an accuracy score of 0.9949, while the regression results are R2 0.995 and RMSE 0.003.

Keywords: Seafood, Electronic Nose Dataset, Machine Learning, k-Neares Neighbor