

ABSTRACT

Terasi is a basic ingredient of Indonesian food that many people demand in Indonesia. The Terasi products in each region have different characteristics. The selection of raw materials is very influential in the production results. And to maintain consumer confidence, a digital image processing-based system is required to classify the Terasi as raw material based on quality. The Terasi Sidoarjo can be classified into 3 types of Terasi group, namely: good quality, medium quality, and less good quality.

In this final task using the extraction feature LBP (Local Binary Pattern) and using the SVM (Support Vector Machine) method for classifying it to obtain information on each input image. At the end of this task is a pre-processing process consisting of resizing and grayscale operations. Statistic feature using in this project are mean, variance, kurtosis, and entropy. For the parameters variant SVM kernel using RBF and Polynomial as well as the determination of the Multiclass SVM (One Against One and One Against All) affects the accuracy and timing of computing.

The results obtained in this Final Project are a system that can classify the types of shrimp paste quality, ranging from good quality, medium quality, and poor quality. With a total of 60 training data and 30 system test data capable of producing an accuracy of testing data 100% for 3 class using LBP (Local Binary Pattern) transformation for with neighbors 4,1, median filter coefficient 7×7 and 9×9 , and feature extraction with statistical features of mean, entropy, variance, and kurtosis and using the SVM method (Support Vector Machine) for classification.

Keywords: terasi, SVM (Support Vector Machine), LBP (Local Binary Pattern)