ABSTRACT

Restaurant is a place that serves food and sells food to buyers (the public). The food served has many types with different tariffs. The condition of the restaurant and good service greatly affect the price of food to be purchased. Payments at restaurants are done by a cashier with a cash register. Existing cashiers do the payment process manually and are less time efficient. These problems created an idea to make the cash register detect food automatically and process payments faster.

Image Processing is a branch of knowledge about image processing (images) that are processed digitally. The development of technology is very fast in the field of computer vision that makes image processing not only to improve the image alone, but also to detect or track an object, read barcodes, and others. The stages when doing image processing are acquiring images from images, preprocessing, doing training data, feature extraction, and classification (recognition).

This study discusses the detection of food types using image processing. The method used is the Histogram of Oriented Gradient (HOG) for feature extraction and K-NN for classification. The parameter to be measured is accuracy. This study detected types of food with an 82% accuracy rate.

***Keywords**: detection of food types and prices, computer vision, HOG, K-NN, machine learning.*