ABSTRACT

The restaurant is the most visited place, restaurants are usually very crowded with customers, especially during lunch or dinner hours. At present, the payment process in restaurants is still manual and inefficient because it uses a cash register. A cashier will check what foods are ordered, then calculate them with the cash register. This will take a long time and be inefficient. Then the food scan tool and estimated automatic food prices have answers to these deficiencies.

This final project discusses the design and implementation of food detections and the estimated price of a food to be purchased. Detect food in one shot with several types of food, and estimate food prices in one picture frame.

The implementation and benefits of food detection aim to make it easier to find out the price of food that must be paid by detecting food and estimating food prices automatically using the Convolutional Neural Network (CNN) classification method.

The result of this final project is that the application can detect 6 types of food on 80% data partition training data and 20% test data, with image taken in storage. The accuracy of the use of the CNN reaches 100% with a detection time of less than 1 minute.

Keyword : *Food Detection, Desktop, Image Processing, CNN.*