ABSTRACT

Papaya fruit in Indonesia is currently very popular because of its many benefits. Currently to determine the ripeness of papaya fruit and papaya fruit weight are still using the manual method, namely with human visual and scales. Seeing ripeness visually, humans have different views to determine the ripeness of papaya fruit. The level of ripeness of papaya fruit itself is divided into 3, namely unripe, half-ripe, and ripe. Currently, exports and imports in Indonesia are very profitable for papaya farmers and other fruit farmers. The quality of papaya fruit itself is determined by the ripeness and weight of the fruit. So we need an automation system can classify the ripeness of papaya and fruit weight, so that during the delivery process and the quality of fruit selection is maximized.

Ripeness classification was carried out using 60 imagges of papaya fruit obatained from fruit merchant using a smartphone camera. In this research, the author used the convolutional neural network (CNN) method to classify papaya ripeness and fruit weight.

The results obtained from this research that can classify the level of ripeness of papaya fruit and papaya weight. The classification of papaya furit ripeness level gets an accuracy of 100%, and 68%% for testing. As for the prediction of papaya fruit weight, the training accuracy level is 100% and 80% for testing.

Keywords: *Convolutional Neural Network (CNN), fruit papaya, ripeness of papaya fruit.*