ABSTRACT

Eggs are a widely consumed food ingredient. According to the Central Statistics Agency, the eggs most consumed by the public are chicken eggs. High consumption must be followed by good egg sorting. Unfortunately, the sorting method in Indonesia has not utilized technology optimally because there are still few methods for sorting eggs with technology.

Based on this, through this final project research is offered a solution for Image Classification of Chicken Eggs Using the Convolutional Neural Network (CNN) Algorithm. CNN has good performance and accuracy for classifying images. The quality classification of chicken eggs analyzed was physical condition and color shell.

The results of testing the modified CNN architecture with the best parameters resulted in training accuracy of 79% and validation accuracy of 90%. The Classification Report yields a precision value of 67%, a recall of 75%, and an F1-Score of 71%. The modified CNN model has not been able to classify egg quality optimally and its performance is worse than using the Support Vector Machine. The results of the final test using the if and else logic functions are quite effective but in this study it became bad due to the poor classification model results.

Keywords: *Accuracy, Classification, CNN, Egg, F1-Score, Predicton.*