

ABSTRACT

Chicken eggs are known by many people with protein and nutritional content including 90% calcium, minerals, iron contained in egg yolks and containing 6 grams of protein and 9 essential amino acids found in egg white. With low prices, eggs have high-quality protein and a complete composition of essential amino acids so that many eggs are used as ingredients for food preparations. However, the nutrients contained in it are not always good and fresh, so it is necessary to do the classification of quality and freshness of eggs.

To find out the quality of eggs, can be found from the outside / eggshell and the height of the egg whites by breaking from the shell, but there have been several studies that discuss the quality of eggs based on egg white height. In this Final Project the author uses digital image processing technology to classify and determine the quality of eggs based on patterns, and textures of egg's shell images.

In this Final Project, the author discusses detection techniques to classify the quality of domestic chicken eggs with images that are not solved using digital image processing. The method used in this research is Deep Learning and classification methods with the ResNet Neural Networks (CNN) architecture. With this final project, detection of egg quality can be done easily and more effectively with an accuracy value of 83.33% for a distance of taking photos as far as 10 cm.

Keywords : Local Indonesian Eggs, *Deep Learning*, *CNN (Convolutional Neural Networks)*, *Resnet (Residual Networks)*.