

## **ABSTRACT**

The egg is one of the animal-based foods besides meat, fish and milk. In general, Indonesians consume caged eggs in their daily life. Beside its economic-wise, the caged eggs can be processed into a different type of foods. However, the quality of the eggs is varied since those are sold in different places such as local groceries, traditional markets, or stockbreeding which having a different kind of standards in terms of the quality.

To determine the quality of such eggs can be observed from their albumens and yolks. Nevertheless, observing the egg without cracking it first is not possible. Hence, this has become an issue for the buyer who wants to get a high-quality egg in the available market. Generally, Indonesians are only concern about the egg cleanliness, which can not further predict the egg quality.

In this paper, the writer discusses the egg detection technique to classify the egg quality without cracking its shell by using a digital imaging process. The Convolution Neural Networks (CNN) method is used with VGG as its architecture. With this research, the egg quality detection can be done conveniently and more effective consisting of 2500 epoch with epoch accuracy at 92.68% while training data.

**Keywords: Caged eggs, Convolution Neural Network, VGG, Epoch**