ABSTRACT

Chicken egg is one of the most favorite foods of Indonesian society. Besides the taste is delicious, the affordable price could be the reason why this shelled object is favored. In addition, the nutrients that contained in the eggs are often considered for the consumer. The nutrients could be identified by considering two parameters, the quality and the freshness.

The quality of egg can be determined by analysis of egg white thickness. The value of albumen and weight of egg is fed into the mathematical formula and resulting the value of HU. In addition, the determine egg quality can also use a tool called micrometer HU. From this exposure. not everybody are encouraged to check the quality of eggs. Therefore, through this final project author tries to continue previous research about analysis of egg quality using image processing by making application based Android. In this final project, author using 2D Gabor Wavelet as fearutre extraction method and Learing Vector Quantization (LVQ) as classification.

In this final project, the class for egg quality consists of AA, A, and B. The amount of training data is 10 for each class, and the total test data of image egg are 48. From this research, it can be concluded that the best accuracy obtained when they system using orientation 45° , 8 frequency levels, 5 hidden layers, and 100 epochs. Based on the implementation and the testing, the greatest accuracy rate is 83,333 % and the average computation time is 0,8999 seconds for each image.

Keywords : Egg, 2D Gabor Wavelet, LVQ, Android