

ABSTRACT

Assessment salted egg color and appearance depend on the subject are considered, so the results are less accurate. Thus the need for systems based on digital image processing to assess objectively the quality of salted eggs. Used for feature extraction transformation LBP (Local Binary Pattern) and the method of SVM (Support Vector Machine) for classification of the quality of salted eggs into salted egg kind of poached or grilled and then classified into quality classes 1 or 2 quality .

In this thesis performed the preprocessing process consists of cropping and resizing operations, morphology, contrast enhancement, grayscale, filtering. To analyze the accuracy and computational time is done on the variant parameter gaussian kernel filter using 5x5 7x7 9x9 matrix, parameter variant LBP is the value of (P,R) (4,1) (8,1) (8,2) (16,2) and variant parameter SVM kernel (RBF, polynomial and linear) and test parameter types LBP.

The accuracy of the test results, change filter parameters gaussian kernel matrix does not affect accuracy. Variant values (P, R) is the best variant (8,1) with an accuracy rate of 76.67% on the test type and 80% in the test quality. Then the conclusion is also obtained the best SVM kernel variants are polynomial kernel, yield 73.13% accuracy on the test type and 81.88% on test quality and the best accuracy obtained on the type of LBP was 81.25% Uniform. And the computational time of the test results, the results obtained SVM kernel parameter changes do not affect the computation time. To change the filter gaussian kernel matrix parameters affect the computation time, the greater the faster matrix computation time. Changes in parameter values (P,R) also affects the computation time, the greater the P value the longer it takes the system.

Keywords : salted egg, digital image processing, feature extraction LBP, SVM.