

ABSTRACT

This final project is about how to identify types of acne using computers, in which there has been an application to identify them. The most disorders that can attack human's skin is acne. Acne can be caused by many factors, such as climate, unstable hormonal balance, unhealthy habits, genetic factor and bacteria.

In this final project, we made an application to identify the type of acne through acne's image based on color segmentation by Block Overlapping, texture analysis by Binary Large Object (BLOB), and detection using Learning Vector Quantization - Artificial Neural Network. The way to analyze system performance is to compare the truth of the output data and the input data in identifying the types of acne.

From the results of testing were obtained the accuracy for each type of acne is blackhead by 55%, conglobata by 66,67%, cyst and nodul by 44%, fulminans by 60%, normal by 80%, papula by 60%, pustula by 53,33% and whitehead by 30%. Accuracy was obtained from 135 test images that each size of image has 640x480 pixel, size of Block Overlapping 80x80, overlap 0%, hidden layer 100, and epoch 500. Average computing time in identifying the type of acne is during 8,304 seconds.

Keywords : *the image of acne, color segmentation with Block Overlapping, texture analysis with BLOB detection, Learning Vector Quantization-Artificial Neural Network.*