ABSTRACT

Skin is the largest organ of the human body composer and covers most of the body surface. As the outermost organ of the human body makes it as the first receiver of touch or stimulation from the outside. Infection of the skin often occurs due to various factors, including climate, residential environment, unhealthy living habits, and allergies. Various types of infections on the skin make identification of skin diseases as an important stage of treatment.

In previous studies on the identification of types of skin diseases in the final work with title "Identification Of Skin Diseases Based On Combination Of Color Segmentation And Texture Analysis By Binary Large Object (BLOB) Detection Using Learning Vector Quantization-Artificial Neural Network", the accuracy obtained is only 41,42%. In this final project is designed an identification system that is expected to achieve better accuracy level based on second-order statistical texture analysis using Gray Level Co-occurrence Matrix (GLCM) method and K-Nearest Neighbor (K-NN) as the classifier.

From the test obtained the result of identification system accuracy of 55,26% with details for each type of skin disease is acne of 33,33%, chickenpox of 62,50%, measles of 58,33%, DKA of 61,11%, and normal skin 60%. Accuracy was obtained from 152 test images using GLCM feature extraction method at orientation angle 0° and distance 2 pixel with classification K-NN at k = 1. Texture feature used are contrast and correlation feature.

Keywords*: diseased skin image, statistical texture analysis, Gray Level Co-occurrence Matrix (GLCM), K-Nearest Neighbor (K-NN).*