ABSTRACT

Objective: The objective of this final assignment to created a system which can determine the pattern of rugae palatina and able to identify individuals from Rugae Palatine of each individual using a simple digital image processing

Method: The research method in this thesis is a description method, extracting characteristics using the Watershed method. While to classify pattern and classify individuals I used the KNN method.

Result and discussion: Results of accuracy for the identification of individuals on the system parameters to be used the image of the input is the original image without performing the process of resizing, it uses the best characteristics of 3 types for feature extraction process, and the value of k = 3 for the method KNN is 81.58% with computation time 1.4021 second. As for the identification of patterns with the same parameters the resulting accuracy of 58.53% with the highest accuracy per pattern by the curve of 89.7% with which the computing time 3.5582 second.

Conclusion: Based on implementation, test and analyze the system so we can conclude that this system can identify pattern of rugae palatina using a simple image processing with Watershed and KNN method.

Keywords : *Rugae Palatina, Wathershed, K-Nearest Neighbor*(K-NN).