

## **ABSTRACT**

*Face is one of important aspect of a person's appearance. Except for personal identifier, face is body part, that make someone take an interest from their opposite gender. But people often treat their facial skin not properly, even though there are many type of facial skin that need differently treatment.*

*In this research, the author builds a program that able to classify the type of facial skin. Firstly, system process the acquired image into preprocessing and feature extraction. After that, the image processed and classified. Gray Level Co-occurrence Matrix (GLCM) is the method that used for feature extraction and Support Vector Machine (SVM) method is used for classification.*

*On training section, there are 100 sample of image that taken from 5 parts of face (forehead, nose, chin, right cheek and left cheek). Then 20 image from each parts of face classified into dry skin and oily skin. The test using 9 men that classified into 3 dry facial skin, 3 oily facial skin and 3 combination facial skin. The test using the GLCM method which used feature extraction based on texture with two order of parameter (the energy and homogeneity), direction of  $45^\circ$ ,  $d = 1$  pixel, kernel polynomial, and Kernel Option = 9, so the author can obtain the best accuracy of 88.89% and 4 second for computational time.*

*Keyword : GLCM, SVM, Facial Skin, Classification, feature extraction*