

# IDENTIFICATION OF THE NOSE BY SIDE LOOK FEATURES AND DATABASE BASED DIGITAL IMAGE PROCESSING USING KNN METHOD

## ABSTRACT

Self-recognition system is a system to recognize a person's identity. The system will search and match a person's identity with a reference database that has been prepared in advance through the registration process. Identity recognition are conducted using conventional methods (traditional system) are grouped into 2, which is something that is known (something you know what), such as the use of PINs and passwords and have something (something what you have), such as the use of cards and keys. But this method has disadvantages, the system developed to deal with biometrics. Biometrika has two differentiator characteristics, namely physiological or physical characteristics (physiological / physical characteristic) and behavioral characteristics (behavioral characteristic).

Characteristics discussed in the present study is the image of the nose. This is because the the nose samples is permanent, that is the human nose in any condition will not change the size or shape. the nose image decision using digital cameras to capture the form of the nose side view, are right or left side. Assuming that the left side with the right side is symmetris, than only one side is shown.

When pre-processing techniques will be used grayscale, median filter, image adjustment and black white, it aims to get the image to be processed in feature extraction stage. Each and every feature of the nose that has been extracted features are stored in the database. At the time of the testing process, it will put the same image of an indidual's nose and see if the system will recognice it or not. The identification process the image using the algorithm K-NN. Of this study obtained accuracy values is **56.742 %** to 9 people a sample, wherein each image of the sample taken 3 practice.

*keywords: Biometric, Pre-Processing, Grayscale, Median Filter, Image Adjustment, K-NN*