

ABSTRACT

Identification of individual recognition that has been circulating today that are using a password and a card. Along with technological advances, both of them have too many weakness. Therefore, it is developing biometric technologies. One of them is finger knuckle recognition which is has a very good security level and very user friendly

This final project will be developed by combining biometric knuckles Local Binary Pattern (LBP) as an extraction algorithm and a Support Vector Machine (SVM) as an classification method. The Pattern of Finger Knuckle that will be tested is the index finger, middle finger and ring finger. The system is examined using Matlab 2009a as a helping tool. The results of the implementation of this system is how the system is able to detect patterns knuckles to identify individuals with a high degree of accuracy.

From the experiments that have been conducted using a total of 140 training images and 140 test images from 35 peoples, the level of accuracy obtained by using the Local Binary Pattern (LBP) Normal with $R=\{6, 7, 12, 13\}$ and $P=8$ as characteristic extraction and Support Vector Machine (SVM) One-Againts-All with Linier kernel as classification obtained the best accuracy of 100%.

Keywords : Pattern knuckles, Biometrics, Local Binary Pattern (LBP), Support Vector Machine (SVM)