

ABSTRACT

Fingerprint classification is one of many biometric methods that's already popular in this day and can be seen on various gadgets like smartphones and laptops, that used to be a protection for users so that the system can be used by the authorized people only. Fingerprint is also used for ID card printing so fingerprint owner identity can be saved in a database, that used for identifying someone who might be involved in a crime or to identify someone that had an accident, so make the identification difficult. The quality of a fingerprint image is affected by the fingerprint identification process. For image quality on 12*12 blocks there were 1 or 2 ridges, 16*16 blocks there were 2 or 3 ridges, 24*24 blocks there were 3 or 4 ridges, from that result we can conclude that more good the image quality will make more ridges can be read by the system and make the accuracy increased. There is some method to do fingerprint classification like *pattern*, *minutiae*, *wavelet* and much more. This final task will use fingerprint identification *minutiae* method, method feature extraction *Crossing Number* and *Correlation matching*. From the result in this experiment based on image resolution, window size, and *minimum distance*, the result is mean percentage of *FAR* smallest 25% and biggest 85%, percentage *FRR* smallest 0% and biggest 50%, percentage Matching Score smallest 47,95% and biggest 63,80%, with run time program smallest 8,20 s and biggest 20,24 s.

Keywords: fingerprint classification, minutiae, crossing number, extraction, matching, spurious