

**DEVELOPMENT OF THUMBPRINT RECOGNITION
SYSTEM BY USING MATLAB**

This Project report is presented in partial fulfillment for the award of the
Bachelor of Electrical Engineering (Honours)
MARA UNIVERSITY OF TECHNOLOGY



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ACKNOWLEDGEMENTS

In the name of ALLAH, the Beneficent and the Merciful, I would like to thank Him for giving me the strength and ability to complete this project.

Thanks are due to many people, without whom this report would never have seen the light of day. I would like to thank Puan Kamariah Ismail, my project supervisor, for the opportunity to work on such great project, her concerned and her valuable advices.

My appreciation also goes to Encik Seyed Muhammad Buhari and Cik Fauziyah Salehuddin for their time and helpful comments towards this project.

Not forgotten, thanks to both of my parent and family members for their continuous support and constant encouragement.

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CHAPTER 1

INTRODUCTION

As the new millennium was entered, security is always a concern in high-technology corporations and consequently, there is an increasing need for reliable concrete identification of people. Identification is used almost everything nowadays, from a school student card to a driver's license. These types of identification have served their purposes, but in a world of six billion people, they are slowly started to lose their appeal. This is where biometrics comes in, offering permanent identification free of any cards or id numbers. With technology on a constant high-rise, the need for accurate identification is very necessary. Identification can be used as a pass to power. Someone that is correctly identified, and therefore accepted, attains certain privileges. In the field of law enforcement, identification is used to weigh a person's guilt. One means of verifying identity is by employing a fingerprint identification system, which reads the thumbprint of an individual and compares it to the personnel records.

1.1 Biometrics

Humans have certain unique properties to them, things that vary from person to person. The study of these properties is called biometrics. Biometrics is the statistical measurement of biological characteristics, primarily for the purpose of identification. The term 'bio' is defined as living creature and the term 'metrics' can be defined as the ability to measure an object quantitatively. Some other characteristics that vary from person to person include voice patterns, facial features, iris patterns in the eye, hand geometry, typing patterns, DNA, and signatures. Some of these methods of identification are still in the process of being perfected, as they require very complex technology and pattern recognition to operate successfully. Popular biometrics encryption include fingerprint, palm print, iris, retina and facial feature recognitions.