

Universiti Teknologi MARA

**Handwriting based on Feature Extraction of
Hough Transform**

NOR HANIM BINTI MOKHTAR

**The submitted in fulfillment of the requirements for
Bachelor Of Computer Science (Hons)
Faculty of Computer and Mathematical Sciences**

29 JANUARY 2016

SUPERVISOR'S APPROVAL

HANDWRITING BASED ON FEATURE EXTRACTION OF HOUGH TRANSFORM

By

NOR HANIM BINTI MOKHTAR

2013917473

This report was prepared under the supervision of the project supervisor, Puan Normah Binti Mohd Rawi. It was submitted to the Faculty of Computer and Mathematical Sciences and was accepted in partial fulfillment of the requirements for the degree of Bachelor of Computer Science (Hons).

Approved by

.....

Puan Normah Binti Mohd Rawi

Thesis Supervisor

JANUARY 29,2016

STUDENT DECLARATION

I certify that this report and the project to which it refers is the product of my own work and that any idea or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

.....

NOR HANIM BINTI MOKHTAR

2013917473

JANUARY 29, 2016

ACKNOWLEDGENT

Alhamdulillah, praised and thanks to Allah because of His Almighty and His utmost blessings, I was able to finish this research within the time duration given.

I would like to give the biggest thanks to my final year project Madam Normah Binti Mohd Rawi for all her advice, idea, guidance and supervision that has been given to me throughout the progress. I sincerely appreciate all her thoughts, advices, explanation and encouragement in helping to complete this project and report.

A special gratitude I give to our final year project lecturer, Mr. Mohammed Imran Mohammed Ariff for his suggestions and attention to us. Besides that, special thanks to Mrs. Zalikha Zulkifli that contribute stimulating the ideas and giving a full support for me to complete this project.

Last but not least, special thanks go to my beloved family and my dearest friends especially my parent that always encourage and push me to finish this project.

ABSTRACT

Handwriting is the expressing of language, just like speech and it also leaves a lasting trace. Some people call handwriting as the 'Language by the Hand'. Besides that, to get similar handwriting is so difficult because everyone have different handwriting. Handwriting can be classified such as margin, slant, and size of the handwriting. The aim for this project is to extract the structure of handwriting using HT technique. The FEHT application, HT method has been applied due to the no research reported by applying this technique for Malay and English handwriting feature extraction. Besides that, this technique is used to detect the circle and line on handwriting image. This technique has been implementing on the original and rotate image in order to evaluate its performance. From the study, the result shows that the HT technique is not very suitable to be implemented to extract the structure of handwriting. The future work for this project are applying different method of feature extraction to extract the structure of handwriting, analyze HT technique based on noise removal and extend the methodology until the classification and recognition stage.