



**FACULTY OF ELECTRICAL ENGINEERING
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**SUBMISSION OF FINAL PROJECT REPORT OF FINAL YEAR PROJECT 2
(EEE 690)
B Eng (Hons) in Electrical Engineering**

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**PROJECT TITLE: SEPARATING AND COUNTING NUMBER OF
TOUCHING OBEJCT USING IMAGE SEGMENTATION
TECHNIQUE**

This is to certify that the above student has submitted the final project report to the project supervisor and all the necessary amendments has been made according to the recommendations.

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DATE OF SUBMISSION: 14th November 2008

SEPARATING AND COUNTING NUMBER OF TOUCHING OBJECT USING IMAGE SEGMENTATION TECHNIQUE

This thesis is presented in partial fulfillment for the award of the Bachelor of Electrical
Engineering (Honors) by

UNIVERSITY TECHNOLOGY OF MARA

MALAYSIA



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DECLARATION

I hereby declared that all the materials in this thesis are the result of my own work and all the materials, which are not results of my own work, have been clearly acknowledged in this thesis.

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ABSTRACT

Image segmentation is the fundamentals process in digital image processing. It is a process of partitioning a digital image into something more meaningful for easier analysis in practical application. Separating and counting number of touching object is one of the practical applications. The sample objects taken are oval, circle and rectangular. The image sample of each of the objects is captured on 3 different images. Those images would be an image of single object, multiple touching object and image consist both single and multiple touching objects. Each image will contain 7 quantities of objects. The images are first segmented using marker-controlled watershed segmentation technique. Then information pertaining to orientation and pixels in the segmented image is extracted and plotted in a graph. Next the range of the objects pixel is determined and finally the number of objects in an image can be counted. The results shows that using this algorithm can accurately separate and counting the number of touching object if correct parameter is applied.

Keywords

Marker-controlled watershed segmentation, oval, circle, rectangular, pixels, orientation