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**MARA UNIVERSITY OF
TECHNOLOGY**

**LOGO RECOGNITION USING
ARTIFICIAL NEURAL NETWORK
(ANN)**

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DECLARATION

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

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ABSTRACT

This project is about logo recognition using Artificial Neural Network (ANN). In order to recognize the logo, a training phase using back propagation technique was implemented. Based on study of existing research, many image and pattern recognition has been done by using Artificial Neural Network and back propagation technique. Logo was scanned or captured through the Internet. There are five logo and each logo have four different size or from different source. Logo must firstly done process of pre-processing by using MatLab 6.5 in order to normalize the logo to a specific size and for noise removal. In addition, the edge detection for the logo also used MatLab 6.5 to get the logo parameter and transform the logo into binary representation. The binary representation was used for the input node of neural network for back propagation training algorithm. To ensure a good performance of logo recognition prototype, numbers of experiments are done by adjusting the parameters of back propagation training algorithm. Finally, this research found that Artificial Neural Network and back propagation algorithm is suitable for image and pattern recognition.

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