**UNIVERSITI TEKNOLOGI MARA**

# IMAGE RECOGNITION OF GREEN LEAFY VEGETABLES USING TENSOR FLOW

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## STUDENT DECLARATION

I certify that this thesis 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.

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# ABSTRACT

Image recognition is one of the most crucial fields of computer vision and processing of images. Classification of the food image is a special feature of an image recognition problem. Individuals are more aware of their health in modern times. Moreover, food is also an important part of community and identity. Through food, we can get to know a country and its people. In recent years it has become quite clear that many Malaysians do not familiar with and recognize traditional food especially green leafy vegetables. Nevertheless, it is also very regrettable that the younger generation will never really grasp the types of green leafy vegetables. One of the promising approaches to acknowledge the problems is using technology which is Tensorflow to assist individuals in recognizing the heritage in Malaysia especially on green leafy vegetables such as mustard green, cilantro, chives, green onion and soup leaves. To classify image recognition, the researcher used the convolutional neural network. CNN`s are a very effective class of neural networks that are highly effective in classifying images, detecting objects and other computer vision problems. The researcher categorizes a vegetables and non-vegetables dataset with 1125 photos, consisting of different types of vegetables and non-vegetables. Moreover, the recognition system will recognize the images using GUI and python command prompt. The result of the recognition of vegetables will be stored in the database and details of the recognition of vegetables will be shown on the website. Accuracy, precision and recall tests used to determine the accuracy of the system and will improve the user satisfaction when user used the green leafy vegetables image recognition prototype. Lastly, the accuracy obtained in this green leafy image recognition system is 98%.

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