

Universiti Teknologi MARA

**Snake Species Identification Using Image Processing
Technique**

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Computer Science (Hons.)
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SUPERVISOR APPROVAL

SNAKE SPECIES IDENTIFICATION USING IMAGE PROCESSING TECHNIQUE

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This thesis was prepared under the supervision of the project supervisor, Madam Zainab Binti Othman. It was submitted to the Faculty of Computer and Mathematical Sciences and was accepted in partial fulfilment of the requirements for the degree of Bachelor of Computer Science (Hons.).

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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 acknowledge in accordance with the standard referring practices of the discipline.

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ABSTRACT

The purpose of this project is to develop the application of classifying the snake species. The classification was conducted by using Inception-V3, a trained model of Convolutional Neural Network (CNN) by retraining the model with two (2) species of snake which are Reticulated Python from non-venomous snake species and Malayan Pit Viper from venomous species. This project was guided by using a Modified Waterfall methodology that consist of five (5) phases which are Planning, Analysis, Design, Development and Testing. This application was built using Android Studio where a retraining model process done on using Anaconda Command. The model that has been chosen can be applied to mobile application as it will be easy to be used by all users. This application has been tested with 20 images of snake. The result of the testing shows 90% accuracy rate and all the testing images were classified correctly and successfully. The perception survey also has been evaluated by giving list of questionnaires among authorize person who are directly involve with snake such as Angkatan Pertahanan Malaysia (APM) and Bomba. The questionnaire of the survey form is based on I/S Success Model. The purpose of this survey is to get authorize person perceptions toward the application where 69.60% of 15 authorize person agree that the application produce a correct result as the information quality of the application has the highest mean value. For the future, more species of snake should be added, and user will be able to save and share the result.

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