

**UNIVERSITI TEKNOLOGI MARA**

**MALAY CUISINE COOKING  
RECIPE RECOMMENDATION  
SYSTEM USING GENETIC  
ALGORITHM (GA)**

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**BACHELOR OF COMPUTER SCIENCES (Hons.)**

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**Malay Cuisine Cooking Recipe  
Recommendation System Using Genetic  
Algorithm (GA)**

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**Thesis submitted in fulfilment of the requirement  
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## **SUPERVISOR APPROVAL**

### **MALAY CUISINE COOKING RECIPE RECOMMENDATION SYSTEM USING GENETIC ALGORITHM (GA)**

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This thesis was prepared under the supervision of the project supervisor, Danial Kafi bin Ahmad and co-supervisor, Ahmad Firdaus bin Ahmad Fadzil. 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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JULY 24, 2017

## **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

Malaysia is popular with various types of dishes. There are a lot of dishes such as Malays, Chinese and Indian cuisines. Recipe is one of important medium in order to make the dishes. Nowadays, people are referring recipes on website, Facebook or asking other people. However, there are a few problems exists by using current system such as it is does not match with the available ingredients that user have. People need suggestion to help them in order to find recipes that suits with their preferences. Hence, recommendation system for food recipes preparation has been proposed to help people to find recipes. This recommendation system will help people by suggesting recipes that follow user preferences. Besides, there are various techniques that able to be implemented in recommendation system. For this recommendation system, Genetic Algorithm (GA) is used as a technique to find the optimal results. GA is an evolutionary technique. In addition, GA able to handle multiple solution searches and solve problems, more straightforward and more flexible because it is easier to transferred in any platform. This system met all of the objectives which are successfully recommends recipe based on ingredients, equipment and time for cooking. Besides, this system also successfully developed by using Genetic Algorithm technique and lastly, all the system function well. As a result, this system suggests recipes that match with user preferences since there are too many criterions that need to match with user wants. Lastly, this algorithm obtains convergence result and met the optimal solution.

Keywords: *Recommendation System; Genetic Algorithm; Optimization*