UNIVERSITI TEKNOLOGI MARA

# MOBILE APPLICATION FOR RESTAURANT RECOMMENDATION USING GEOFENCING TECHNIQUE

NUR MAIZURAH BINTI NOR AFENDI

# BACHELOR OF COMPUTER SCIENCE (HONS) FACULTY OF COMPUTER AND MATHEMATICAL SCIENCES

**JULY 2020** 

#### SUPERVISOR APPROVAL

#### MOBILE APPLICATION FOR RESTAURANT RECOMMENDATION USING GEOFENCING TECHNIQUE

By

#### NUR MAIZURAH BINTI NOR AFENDI 2017412168

This thesis was prepared under the supervision of the project supervisor, Dr. Jamaluddin Bin Hj. Jasmis. 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.).

Approved by

Journal

Dr. Jamaluddin Bin Hj. Jasmis Project Supervisor

JULY 9, 2020

### STUDENT'S DECLARATION

I certify that this report 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.

NUR MAIZURAH BINTI NOR AFENDI 2017412168

JULY 10, 2020

#### ABSTRACT

Since a lot of people are working in this century, eating outside has become an essential element as people don't have enough time to prepare food or even going back home to eat during a certain time. Furthermore, a lot of people are also enjoying eating outside and many tourists also like to explore the culture and the food of the country while going to restaurants. But there are many problems faced while finding the perfect restaurant, as an example, most people especially people in a foreign area, find it hard to know where to go to eat. Furthermore, finding a restaurant is hard as a lot of aspects needed to be considered such as the cuisine provided, the restaurant environment, the budget and the location of the restaurant. Thus, the objective of this system is to design a recommendation system based on the customer's current location and preferences such as their budgets, cuisine provided, and the environment of a restaurant that they desired and to test the functionality of the system. In this system, the geofencing technique is applied to find a nearby restaurant based on the customer's location. The rule-based technique is also used to filter the restaurant based on customer's preferences. Customer can find their desired restaurant and order food using this application. To complete this project, the waterfall model is used as the methodology. The functionality testing for the application shows that the application works appropriately and have achieved the project objective. For future recommendation, this application can add a few features to enhance customer's experiences such as give customers the ability to book a table at a restaurant, GPS navigation from the customer's location to the restaurant they desired, and delivery option for each restaurant.

## TABLE OF CONTENT

CONTENT	PAGE
SUPERVISOR APPROVAL	i
STUDENT'S DECLARATION	ii
AKNOWLEDGEMENT	iii
ABSTRACT	iv
TABLE OF CONTENT	v
LIST OF FIGURES	viii
LIST OF TABLES	i
CHAPTER 1: INTRODUCTION	
1.1 Background of Study	1
1.2 Problem Statement	2
1.3 Project Objectives	3
1.4 Project Scope	3
1.5 Significance of the Study	4
1.5.1 Users	4
1.5.2 Researcher and Academician	4
1.6 Chapter 1 Summary	4
CHAPTER 2: LITERATURE REVIEW	
2.1 Food	5
2.2 Restaurant	6
2.3 Location-based Service	6
2.3.1 Geolocation	7
2.4 Recommendation System	12
2.4.1 Content-Based Filtering	12
2.4.2 Collaborative-Based Filtering	13
2.4.3 Rule-Based Filtering	14
2.4.4 Comparison of Recommendation Technique	15
2.5 Mobile application	16