Universiti Teknologi MARA

RESTAURANT RECOMMENDATION SYSTEM USING PARTICLE SWARM OPTIMIZATION

WAN FARAH SYAHIRAH BINTI WAN ISMAIL
2015279326

Thesis submitted in fulfillment of the requirements for
Bachelor of Computer Science (Hons.)
Faculty of Computer and Mathematical Sciences

July 2017

SUPERVISOR APPROVAL

RESTAURANT RECOMMENDATION SYSTEM USING PARTICLE SWARM OPTIMIZATION

By

WAN FARAH SYAHIRAH BINTI WAN ISMAIL

2015279326

This thesis was prepared under the supervision of the project supervisor, Sir Danial Kafi. 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

……

Sir Danial Kafi

Project Supervisor

JULY 24,2017

STUDENT DECLARATION

I certify that this thesis and the project to which it refers is the product of my own 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

……

WAN FARAH SYAHIRAH

2015279326

JULY 24 2017

ABSTRACT

Recommendation system plays an important role in today's society. As the technology are moving forward people are keener on relying on the automated decision making. Nowadays there are various recommendation systems available all over the world, as the food industry is always expanding the restaurants business are booming as well. It is getting harder to find places to eat as more restaurants are opening making it hard to choose when there are too many options, it can also be time consuming and not all restaurants are properly advertised. This leads to consulting to systems for faster recommendation of places to eat according to user preferences in order to save time and reduce the hassle. Hence, this is why this project is proposed. This project helps people to find places to eat, save time, and at the same time suggesting restaurants according to their preferences. Particle Swarm Optimization is an evolutionary technique that imitates a flock of birds looking for food, it is incorporated in this proposed system as it proven to be good in optimizing. In order to find the most optimal solution, the population of swarm will follow best particle and improve its candidate solution until convergence is reached. From the result conducted from this project, it sure does well in optimizing the best optimal solution even in various situations given. Even so, there are few limitations exist in this project. PSO is very time consuming when executed and the difficulty of accessing it at all times as it is a web-based system.

Keyword: *restaurant, recommendation system, optimization, particle swarm optimization.*

TABLE OF CONTENTS