

**Universiti Teknologi MARA**

**Travel Place Recommendation System Using  
K-Nearest Neighbors Algorithm**

**Nur Amirah Binti Shahidan**

**Thesis submitted in fulfilment of the requirement for  
Bachelor of Computer Science (Hons.)  
Faculty of Computer and Mathematical Sciences**

**February 2021**

## **ACKNOWLEDGEMENT**

Alhamdulillah, praises and thanks to Allah because of His Almighty and His utmost blessings, I was able to finish this research within the time duration given. Firstly, my special thanks goes to my supervisor, Ms. Nik Marsyahariani Binti Nik Daud for providing invaluable guidance throughout this research. Special appreciation also goes to my beloved parents Shahidan Bin Alshaari and Junita Binti Wahab. Last but not least, I would like to give my gratitude to my dearest friends that always help me.

## ABSTRACT

Nowadays, recommendation system is the most widely system people used. Recommendation system can help people to find the right items that match to their interest. Besides, recommendation system also popular in tourism industry. People are going to travel for many reasons. Sometimes, they are going to the destination that they are never been there. Traveller often confused about where they want to go since they are not familiar with the places. Because of that, traveller need something to recommend them some places they can go. Recommendation system can helps traveller when they are going to travel, reaching a new and unfamiliar places. The proposed system which is Travel Place Recommendation System using K-Nearest Neighbors can helps traveller to find they places they might be interested with. The Travel Place Recommendation System will calculate the similarity between user's rating and compare each of the user to recommend several travel places to user. The method has been proposed in the recommendation system is K-Nearest Neighbors algorithm. K-Nearest Neighbors algorithm is widely used among classification algorithm in recommendation system. It will generate the recommended places by comparing the K items with the neighbors. The result from the proposed system is recommendation system will display five recommended travel places to user. As a conclusion, Travel Place Recommendation System has been successfully developed by using the attributes of the system which is place rating. The algorithm used in the recommendation system has been evaluated by using MAE, MSE and RMSE to calculate the accuracy of the algorithm. However, Travel Place Recommendation System consists several limitation that need to improve to make the recommendation system become successful and attract more users.

## TABLE OF CONTENTS

<b>CONTENT</b>	<b>PAGE</b>
<b>SUPERVISOR APPROVAL</b>	<b>ii</b>
<b>STUDENT DECLARATION</b>	<b>iii</b>
<b>ACKNOWLEDGEMENT</b>	<b>iv</b>
<b>ABSTRACT</b>	<b>v</b>
<b>TABLE OF CONTENTS</b>	<b>vii</b>
<b>LIST OF FIGURES</b>	<b>ix</b>
<b>LIST OF TABLES</b>	<b>x</b>

### **CHAPTER ONE: INTRODUCTION**

1.1 Background of Study	1
1.2 Problem Statement	2
1.3 Objectives	3
1.4 Project Scope	3
1.5 Project Significance	3
1.6 Overview of Research Framework	4
1.7 Conclusion	5

### **CHAPTER TWO: LITERATURE REVIEW**

2.1 Introduction	6
2.2 Recommendation System	6
2.3 K-Nearest Neighbors	8
2.4 Travelling Recommendation System	10
2.5 Similar Works	11
2.6 The Implication of Literature Review	13
2.7 Conclusion	14

## **CHAPTER THREE: RESEARCH METHODOLOGY**

3.1 Introduction	15
3.2 Overview of Research Methodology Framework	15
3.3 Preliminary Phase	18
3.4 Design and Implementation Phase	19
3.4.1 Data Collection	19
3.4.2 System Architecture	20
3.4.3 Flowchart	21
3.4.4 User Design Interface	22
3.4.5 Pseudo code	23
3.5 Evaluation Phase	24
3.6 Conclusion	25

## **CHAPTER FOUR: RESULT AND FINDING**

4.1 Conceptual Framework	26
4.2 Program Code for Algorithm	27
4.3 Evaluation Results	28
4.4 Conclusion	30

## **CHAPTER FIVE: CONCLUSION AND RECOMMENDATION**

5.1 Summary of Project	31
5.2 Project Contribution	32
5.3 Project Limitation	32
5.4 Project Recommendation	33
5.5 Conclusion	33

<b>REFERENCES</b>	<b>35</b>
-------------------	-----------