### UNIVERSITI TEKNOLOGI MARA

# TELCO DATA PLAN RECOMMENDATION SYSTEM

NOR AINOL YAQIN BT MOHD FADZIL

**Bachelor of Computer Science (Honours) Faculty of Computer and Mathematical Sciences** 

January 2022

#### 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 the other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

.....

NOR AINOL YAQIN BINTI MOHD FADZIL

2018801726

28 JANUARY, 2022

#### **ABSTRACT**

The purpose that this recommendation system serves is to give data plan recommendation based on the user needs. Users need to find data plan features that meets their need and rate the data plan. Then, the system will give the recommendation based on the data plan that the user rated. This system developed by use the collaborative filtering method by combine user-based filtering and item-based filtering method. The similarity of data plan will be calculated using the recommendation engine and will be compared with another user. Then, the output will show the list of data plan that have the highest similarity. This recommendation system developed as web application. This system help user to save their time to find the suitable data plan for them. The software used to develop this system is XamppServer, phpMyAdmin, and Sublime Text.

## **TABLE OF CONTENTS**

CONTENT	PAGE
SUPERVISOR APPROVAL	II
STUDENT DECLARATION	III
ACKNOWLEDGEMENT	IV
ABSTRACT	V
TABLE OF CONTENTS	VI
LIST OF FIGURES	X
LIST OF TABLES	XII
LIST OF ABBREVIATIONS	XIII
CHAPTER ONE: INTRODUCTION	
1.1 Introduction	1
1.2 Problem Statement	1
1.3 Research Objectives	2
1.4 Research Scope	2
1.5 Research Significance	3
CHAPTER TWO: LITERATURE REVIEW	
2.1 Introduction	4
2.2 Overview of Telecommunication in Services	5
2.3 Overview of Recommendation System	7
2.4 Recommendation System	8
2.5 Recommendation Technique	9
2.5.1 Content-Based Filtering	9
2.5.2 Collaborative Filtering	10
2.5.3 Hybrid Filtering	11
2.5.3.1 Weighted Hybridization	12

2.5.3.2	Switching Hybridization	12
2.5.3.3	Cascade Hybridization	13
2.5.3.4	Mixed Hybridization	13
2.5.3.5	Feature-Combination	13
2.5.3.6	Feature-Augmentation	13
2.5.3.7	Meta-Level	13
2.5.4 Comp	parison Between Recommendation Technique	14
2.6 Similar App	plication or System	18
2.6.1 Touri	sm	18
2.6.1.1	Trivago	18
2.6.1.2	TripAdvisor	19
2.6.2 Enter	tainment	20
2.6.2.1	Netflix	20
2.6.2.2	Spotify	21
2.6.3 Comp	parison of Similar Recommendation Application	23
2.7 Related Wo	ork	25
2.8 Summary		29
CHAPTER THRE	EE: METHODOLOGY	
3.1 Introduction	n	30
3.2 Operational	l Framework	31
3.2.1 Plann	ning	31
3.2.2 Inform	mation Gathering	31
3.2.3 Imple	ementation	32
3.2.4 Resul	lt Analysis and Discussion	32
3.2.5 Docu	mentation	32
3.3 Methodolog	gy	33
3.3.1 Conce	eptualization	34
3.3.2 Deve	lopment Plan	34
3.3.3 Prepr	roduction	35
3.3.4 Produ	action	35
3.3.5 Postp	production	35