## Universiti Teknologi MARA

A Sentiment Analysis of Public Perception on Malaysia General Election using Naive Bayes

Nur Hidayah Athira Binti Sahrul Afendi

Thesis submitted in fulfillment of the requirement for Bachelor of Computer Science (Hons.)

College of Computing, Informatics and

Mathematics

FRBRUARY 2024

## **ACKNOWLEDGEMENT**

Alhamdulillah, praises and thanks 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, Ummu Fatihah Binti Mohd Bahrin for her guidance, comments and suggestion in preparing the proposal. Special appreciation also goes to my beloved parents Sahrul Afendi Bin Hassan Basri and Zuwariah Binti Kadir, for their unwavering support throughout the research process. Last but not least, I would like to give my gratitude to my dearest friend Nurul Amira Binti Amirah, Nur Fatihah Hatini Binti Mat Sam, Nur Syahirah Binti Jaafar, and Nurul Izzah Bintit Mohd Rahiman for their uncasing encouragement and guidance through this venture.

## **ABSTRACT**

Twitter has been prominently used during the electoral campaigns. Twitter helps the politicians to spread and share their political agenda. Through Twitter, every information is accessible to anyone and anybody around the world in keeping up with the information and opinion about the general election that happening in Malaysia. This study aims to analyze the public perception on Malaysia general election via Twitter. This study employed a Naïve Bayes Classification to get the data whether it is positive, or negative. Specifically, Naive Bayes used for sentiment analysis for the English tweets. Top trending hashtags were used to fetch tweets resulting in 11816 tweets. The method used by using Apify to collect the data and save it into CSV file.

## TABLE OF CONTENT

CONTENT	PAGE
SUPERVISOR APPROVAL	i
STUDENT DECLARATION	ii
ACKNOWLEDGEMENT	iii
TABLE OF CONTENT	v
LIST OF FIGURES	viii
LIST OF TABLES	ix
LIST OF ABBREVIATIONS	x
CHAPTER 1	1
INTRODUCTION	1
1.1 Background of Study	1
1.2 Problem Statement	2
1.3 Objectives	3
1.4 Project Scope	4
1.5 Project Significance	4
1.6 Overview of the Research	5
1.7 Conclusion	7
CHAPTER 2	8
INTRODUCTION	8
2.1 Data Mining	8
2.1.1 Implication Data Mining in Various Area	9
2.1.2 Supervised and Unsupervised Learning Data Mining	10
2.2 Sentiment Analysis	11
2.2.1 Sentiment Analysis in General Election	12
2.2.2 Prediction Public Perception on Malaysia General Election	13
2.2.3 Issues with Public Perception on Malaysia General Election	13

2.2.4 Benefits of Public Perception on Malaysia General Election	15
2.3 Naive Bayes Algorithm	16
2.3.1 NB and How Does it Works	16
2.3.2 Pseudocodes of NB Algorithm	17
2.3.3 Flowchart of NB Algorithm	18
2.4 Implementation NB Algorithm in Various Problem	18
2.5 Similar Works	23
2.6 The Implication of Literature Review	28
2.7 Conclusion	29
CHAPTER 3	30
INTRODUCTION	30
3.1 Overview of Research Methodology	30
3.2.1 Detailed of Research Framework	30
3.3 Preliminary Phase	33
3.3.1 Literature study	34
3.3.2 Data Collection	34
3.4 Design Phase	37
3.4.1 Data preparation	37
3.4.2 System Architecture	40
3.4.3 Flowchart	41
3.4.4 User Interface Design	42
3.4.5 Pseudocode of Selected Algorithm	43
3.5 Model Testing and Evaluation	45
3.6 Documentation	46
3.7 Conclusion	46
CHAPTER 4	48
INTRODUCTION	48
4.1 Conceptual Framework	48
4.2 Program Codes for Algorithm	49
4.2.1 Simple Searching and Sorting Algorithm	49