

Universiti Teknologi MARA

Auti Buddy

Autism Helper Mobile Application for Emotion

Tengku Nurazah Danisha Binti Tengku Badlishah

**Thesis submitted in fulfilment of the requirements for
Bachelor of Science(Hons.) Data Communications and
Networking**

Faculty of Computer and Mathematical Sciences

July 2020

ACKNOWLEDGEMENT

Firstly, I would like to thank God for letting me having this opportunity to embark on my degree and for completing this long and challenging journey successfully. All praises to Allah S.W.T I was able to complete this project and connected with many people, lecturers, friends and other researchers.

Furthermore, special thanks to my supervisor Dr. Siti Arpah binti Ahmad for the guidance, comments or critics and advising me throughout this project and encouraging me to focusing and completing this project. Her willingness to motivate and inspired me greatly to work harder in finishing this project until the end and willing to answer my question regarding this project although we are in Covid-19 crisis.

Besides that, I would like to thank both of my parents for encouraging and understanding me completing this project.

Finally, an honourable mentions goes to my friends that has given me all the support from various aspects such as positive advises and recommendations through this journey.

ABSTRACT

In this modern era, technologies and mobile devices potentially have the enhancement in learning and education field. Learning based on computer or mobile has provided people the conveniency out of it and with the fast development of mobile technology has allowed people to do anything quickly by using mobile devices. Children with autism spectrum disorder has always had problem to express their emotion and recognize it at the same time. It causes parents to be in confusion to understand their feelings. Parents allowing their children to use mobile phone has become normal these days with the purpose for their learning whether with certains application or YouTube. Meanwhile, for Android user the application learning for Autism are limited and some of the application are not available anymore. To overcome these issue, the Auti Buddy mobile application was introduced to assist parents and their children to build there social skills and recognize what kind of emotion they are having. The system is built for Android. This mobile application will provide many benefits to both parents and their autistic children by allowing their children to learn emotion with voice, learn emotion with quiz to enhance their thinking and video learning based on emotions learning. It is easily accessible with smartphones and portable to the users.

TABLE OF CONTENTS

CONTENT	PAGE
SUPERVISOR APPROVAL	i
STUDENT DECLARATION	ii
ACKNOWLEDGEMENT	iii
ABSTRACT	iv
TABLE OF CONTENTS	v
LIST OF FIGURE	ix
LIST OF TABLE	xi
CHAPTER 1 : INTRODUCTION	
1.1 Background of study	1
1.2 Problem Statement	2
1.3 Project Aims	3
1.4 Project Objectives	3
1.5 Project Scope	3
1.6 Project Significance	4
1.7 Summary	4
CHAPTER 2 : LITERATURE REVIEW	
2.1 Introduction to Autism Spectrum Disorder	
2.1.1 Autism's Background	
2.1.1.1 The history of Autism Spectrum Disorder	5
2.1.1.2 Types of Autism Spectrum Disorder	7

Auti Buddy (Autism Helper Mobile Application for Emotion)

Chapter 1

Introduction

This chapter provides the project background, problem, aims and objectives, scopes and the significance of the project that has led to this research.

1.1 Background of Study

Application for children with Autism Spectrum Disorder (ASD) can be utilize as a very educating platform and be quite helpful and favourable for their learning and also help them to develop their social development. At the present time, as in now, mobile technology has increased rapidly and has its influence almost every industry and domain. In any way, mobile apps have given parents multiple approaches to teaching a child who develops at a different pace than his peers (Van Weert, 2005).

Auti-Buddy is a system that is build to provide a platform for those who are diagnosed with ASD specifically. By building this system is to assist, even in the smallest of ways. “Auti” in Auti-Buddy is for Autism and for the word Buddy used to refer it can be a help for them like a friend. This application provide a few features, to assist kids with ASD how to express their emotions and feelings since they have difficulty to recognize emotions and facial expressions. It will shows illustrations to show what different emotions and feelings look like.

Moreover, through this system, they can learn to develop their social skills expressing what they want such as their preferences to the food and drink they like, any other things like clothes or many more with the colour they favour or showing what kind of activies that they feel interested to do. By using this Auti-Buddy (Autism Helper Mobile Application for Emotion and Expression), it must be with the guidance of their parents beforehand. Parents