



اَوْنُوْرَسِيْتِي تِكْنُوْلُوْجِي مَارَا
UNIVERSITI
TEKNOLOGI
MARA

FACULTY OF ELECTRICAL ENGINEERING

UNIVERSITI TEKNOLOGI MARA

TERENGGANU

IOT BASED PARKING SYSTEM USING ESP8266

NO.	NAME	STUDENT ID
1.	MUHAMMAD AFIQ IDHAM BIN PAZUKI	2017227158
2.	MUHAMAD FIRDAUS BIN MOHD ISKANDAR	2017227254

SUPERVISOR NAME:

PUAN NORHAYATI AHMAD

ACKNOWLEDGEMENT

First and foremost, we would like to thankful to Allah S.W.T, which have helped and guided us in completing our final year project. Without His blessing, none of this is possible.

Furthermore, we would also like to thanks to our beloved project supervisor, Miss Norhayati Binti Ahmad for all his patience, insightful comments, invaluable suggestions, helpful information, practical advice and unceasing ideas which have helped us tremendously at all times to complete our project.

Besides, we would like to take these opportunities to thanks of all guidance and assistance from lectures and friends for giving ideas and useful opinion for us to solve our problems and improve our project. Thank you to the technician for helped and guides us in PCB lab. We would also thank you to all the panels that grades and give a pleasant comment to fix our project become better.

Not to forget, the infinite gratitude to our parents for their support and motivations and prayers for our success to complete this project.

The support and encouragement from all the people above will always be a pleasant memory throughout our life. May God bless them.

EXTENDED ABSTRACT

IOT Based Parking System Using ESP 8622

Muhammad Afiq Idham Bin Pazuki, Muhammad Firdaus Bin Mohd Iskandar,
Norhayati Binti Ahmad
Faculty of Electrical Engineering
Universiti Teknologi MARA (UiTM)
Dungun, Terengganu, Malaysia

Afiqidham32@gmail.com, Daoh5711@gmail.com, norhayatiaz@gmail.com

Abstract: Nowadays congestion of traffic level increases with the increasing development of population rapidly. With respect to the amount of population, the utilization of personal vehicles also increased. Due to more use of cars the traffic congestion occurred on the road. Most of the people chooses personal vehicles than public transportation. It is very difficult and time consuming to find parking space in most metropolitan areas, commercial areas, especially during the rush hours. It is often costly in almost every big city in all over the world to find proper and secure parking space. The proposed project is a smart parking system that delivers information to people finding a parking space online. It overcomes unnecessary time consuming for finding the problem of parking space in parking areas. Hence, the website is provided by this project based system where users can view various parking areas and choose the space from available slots.

Keywords: Arduino, Esp8266, Blynk, Servo Motor, IR Sensor.

INTRODUCTION

Parking is the act of stopping and disengaging a vehicle and leaving it unoccupied. The recent growth in economy and due to the availability of low price cars in the market, an every average middle-class individual can afford a car, which is good thing, however the consequences of heavy traffic jams, pollution, less availability of roads and spot to drive the motor car. One of the important concerns, which is to be taken in accounting, is that problem of parking those vehicles. Though, if there is space for parking the vehicle but so much time is squandered in finding that exact parking slot resulting in more fuel intake and not also environment friendly. It will be great deal if in some way we find out that the parking itself can provide the precise vacant position of parking slot then it'll be helpful not limited to the drivers also for the environment. Therefore, many innovations are created to find solution. The detection of this parking system is using technology Arduino and sensor. It will detect the parking when it full.

METHODOLOGY

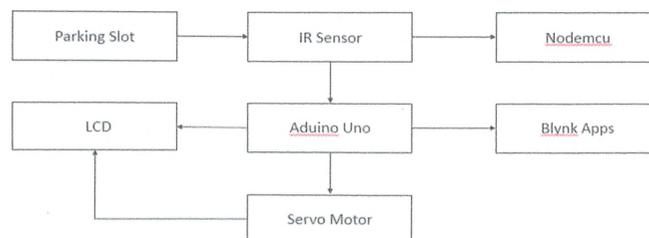


Figure 1: Block Diagram of Iot Based Parking System Using Esp8266

TABLE OF CONTENTS

TITLE	PAGE
DECLARATION	i
ACKNOWLEDGEMENTS	ii
EXTENDED ABSTRACT	iii – v
TABLE OF CONTENTS	vi – vii
LIST OF FIGURES	viii
LIST OF TABLES	ix
LIST OF ABBREVIATIONS	x
INTRODUCTION	
1.1 Background of Study	1
1.2 Problem Statement	2
1.3 Objectives	2
1.4 Scope of Study	3
LITERATURE REVIEW	
2.1 Previous Study	4-5
METHODOLOGY	
3.1 The Methodology Process	6
3.2 Flowchart of The Operation	7-8
3.3 Block Diagram	8
3.4 Project Simulation	9-10
3.5 PCB Board Development	
3.5.1 Printing the PCB Circuit	11
3.5.2 Measuring the Size of Dry Film	11
3.5.3 Laminating Process	12
3.5.4 UV Exposure Process	
3.5.5 Unwanted Copper Elimination	13-14
3.5.6 Removing Layer of Dry Film	14-15
3.5.7 Drilling Process	15
3.6 Hardware Implementation	16
3.6.1 Infrared Sensor	
3.6.2 Arduino Uno	17
3.6.3 LCD	18
3.6.4 Potentiometer	19
3.6.5 Servo Motor	19-20
3.6.6 Esp8266	20

RESULT AND DISCUSSION 4.1 Result 4.2 Discussion	
CONCLUSION AND RECOMMENDATIONS FOR FUTURE WORK 5.1 Conclusion 5.2 Recommendation	
REFERENCES	
APPENDICES	