



FINAL YEAR PROJECT REPORT

DEVELOPMENT OF WIRELESS CONTROL OF SIGNALS AND CAMERA BASED CONGESTION AVOIDANCE SYSTEM

**In fulfillment of the requirement
For degree of
BEE (Electronics)**

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Abstract

The transportation system project is based on controlling the traffic lights wirelessly. Currently traffic lights are being controlled manually by traffic police and there is no feedback system of faulty lights. If some light become faulty and is not timely detected, then there is a chance of traffic jam, can cause problems to ambulances or emergency vehicles, and creates panic among people. Secondly, we can now change the traffic signal lights wirelessly from base station depending upon the need of traffic flow.

We developed a wireless traffic controller through which we can check, monitor and control a traffic signal remotely. A Camera is placed on the signal to get live streaming video in the base station over the internet. Different detection algorithms like Haarcascade and blob analysis is applied on the collected datasets while different libraries of deep learning like Tensor Flow, Darknet, Caffe, are applied in respect of the classification of the vehicles in seven different categories like bus, van, rickshaw, hashback, sedan etc. This detection and classification information is fundamental for transportation Tasks.

Table of Contents

DECLARATION	iii
APPROVAL FOR SUBMISSION	iv
ACKNOWLEDGEMENTS	v
ABSTRACT	vi
TABLE OF CONTENTS	vii
LIST OF FIGURES	x
LIST OF TABLES	xii

CHAPTER

1	INTRODUCTION	
1.1	Background	2
1.2	Statement of Problem	3
1.3	Proposed Solution	3
2	LITERATURE REVIEW	4
2.1	State of the Art Systems	4
2.1.1	The information technology and innovation (ITIF)	4
2.1.2	DG energy and transport	4
2.1.3	Transportation and engineering planning	4
2.1.4	The U.S department of transportation	5
2.2	Deep learning libraries for Vehicle Classification	6
2.2.1	Tensor flow	7
2.2.2	Darknet	7
2.2.3	Digit	8

2.2.4	Torch	9
2.2.5	Caffe	9
3	DESIGN AND METHODOLOGY	10
3.1.	Hardware Design	10
3.1.1.	Identifying hardware and software for the project	10
3.1.2.	Block Diagram	11
3.1.3.	Flow chart	12
3.1.4.	Hardware circuits	13
3.1.5.	Description of Arduino mega	15
3.1.6.	Description of Arduino UNO	17
3.1.7.	Description of GSM Module sim900A	20
3.1.8.	Liquid Crystal Display	22
3.1.9.	4*4 Keypad MATRIX	24
3.1.10.	IP Camera	25
3.1.11.	Description of Relay	26
3.1.12.	Power supply	27
3.1.13.	Potentiometer.	28
3.1.14.	Diode (1N4001)	29
3.1.15.	Transistor (2N2222)	30
3.2.	Software Design	31
3.2.1.	Object Detection	31
3.2.1.1.	Blob detection using openCv	31
3.2.1.2.	Haar cascade	32
3.2.2.	Vehicle Classification	34
3.2.2.1.	Tensor Flow	34
3.2.2.2.	Darknet	35

4	IMPLEMENTATION	36
4.1	Hardware Section	36
4.1.1	Development of Relay circuit and light routine program	36
4.1.2	Development of Manual Control Box	36
4.1.3	Development of Wireless controller	36
4.1.4	Hardware implementation	39
4.2	Software Section	40
4.2.1	Object Detection	40
4.2.1.1	Blob Detection Using OPENCV	40
4.2.1.2	HAARCASCADE	41
4.2.2	Vehicle Classification	44
4.2.2.1	Tensor Flow	44
4.2.2.2	Darknet	46
5	RESULTS AND DISCUSSIONS	48
5.1	Hardware results	48
5.2	Software results	49
5.2.1	Blob Detection Results	49
5.2.2	Haar cascade Results	50
5.2.3	Tensor Flow Results	51
5.2.4	Darknet Results	54
6	CONCLUSION AND RECOMMENDATIONS	55
	REFERENCES	56
	APPENDICES	57