

Design and Development of an IoT Based System to Detect Drunk Drivers by Car Monitoring



A Thesis

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Abstract

Drowsy and drunk driving are the leading cause of accidents worldwide. The greatest strategy to avoid accidents caused by drowsy and drunk drivers is to detect them before they fall asleep and also test their alcohol level. To demonstrate the concept, this study created and develop an IoT-based system to detect the drunk driver and car monitoring utilizing an ESP-8266 microcontroller, an alcohol sensor, IR sensors, and a DC motor. The MQ-3 alcohol sensor is used by the system to continuously monitor the blood alcohol concentration (BAC) to detect the presence of liquor in a driver's exhale. If the sensors detect alcohol on the driver's breath, the ignition will not turn on. In this alcohol measure three steps which are high drunk mood, medium drunk mood, and normal mood. If the driver becomes intoxicated while driving, the sensor will detect alcohol on his breath and authority turn off the engine so that the driver can park the car side of the road. On the other side, the DTH sensor detects the Temperature and the Humidity of the driver. Also, an Air quality measurement was read by the use of MQ135 Air Quality Sensor. Any toxic gas will present inside the vehicle the Sensor will detect the gas. The whole system monitors through IoT via mobile application.

Table of Contents

	Page No.
Acknowledgment	i
Abstract	ii
Table of Contents	iii
List of Figures	vi
Notations	vii
Chapter 1	Introduction
	1-3
1.1 General	1
1.2 Problem Statement	2
1.3 Contribution Of The Project	3
1.4 Aim Of The Project	3
1.5 Objectives	3
Chapter 2	Literature Review
	4-10
2.1 Introduction	4
2.2 Back Ground	4
2.3 Conclusions	7
Chapter 3	Methodology
	8-21
3.1 Introduction	8
3.2 Hardware Setup	10
3.2.1 ESP-8266	10
3.2.1.1 Pin Configuration	11
3.2.1.2 Working System	12
3.2.2 MQ-3 Alcohol Sensor	12
3.2.2.1 Specifications Of Mq-3 Sensor	13
3.2.2.2 Working System	13

3.2.3 Power Supply	13
3.2.3.1 Working System	14
iii	
3.2.4 Motor	14
3.2.4.1 Specifications Of Motor	15
3.2.4.2 Working System	15
3.2.5 DHT Sensor	15
3.2.5.1 DHT11 Specifications	16
3.2.5.2 Working Principle	16
3.2.6 Single Channel Relay	17
3.2.6.1 Module Specifications	17
3.2.6.2 Working Principle	18
3.2.7 16*2 LCD Display	18
3.2.7.1 LCD Pin Diagram	19
3.2.8 I2C Module	19
3.2.9 MQ135 Air Quality Sensor	20
3.2.9.1 Specifications	20
3.2.10 Construction Design	21
Chapter 4	Hardware & Software Simulation 22-32
4.1 Introduction	22
4.2 Block Diagram	22
4.3 Hardware Design	23
4.3.1 Body Preparation	23
4.3.2 Hardware Setup	25
4.4 Software Simulation	25
4.4.1 Arduino IDE	26
4.4.2 Arduino Variable Declaration and Library Include	27
4.4.3 Void Setup Function	28
4.4.4 Void Loop Function	28
4.5 Internet of Things	29
4.6 Firebase	30
4.6.1 Using Firebase Features In Arduino	30

	Application	
	4.6.2 Authentication	30
	iv	
	4.6.3 Storage of Firebase, Insertion, Read/Write	31
	4.6.4 MIT App Inventor	31
	4.6.5 Basic App Development Performed	32
	In-App Inventor Compass	
Chapter 5	Conclusion	33-34
	5.1 Conclusion	33
	5.2 Societal and Environmental Impact	34
	5.3 Future Scopes	34
References		35
Appendix		37

List of Figures

Fig. 1.1	"Illustration of drunk driving"	1
Fig. 3.1	Methodology	9
Fig. 3.2	ESP-8266	11
Fig. 3.3	Pin diagram of ESP-8266	11
Fig. 3.4	Alcohol Sensor	12
Fig. 3.5	DC Adopter	13
Fig. 3.6	Connection Block Of MQ-3, ESP-8266, DHT	14
Fig. 3.7	DC Motor	15
Fig. 3.8	DHT Sensor	15
Fig. 3.9	Single-Channel Relay	17
Fig. 3.10	LCD Display	18
Fig. 3.11	LCD Display Pin mode	19
Fig. 3.12	I2C Module	19
Fig. 3.13	Air Quality Sensor	20
Fig. 3.14	Project Demonstration	21
Fig. 4.1	Block Diagram Of The Project	22
Fig. 4.2	Material Cutting	23
Fig. 4.3	Material Cutting	23
Fig. 4.4	Material Joining	24
Fig. 4.5	Final Joining	24
Fig. 4.6	Final Circuit And Hardware Setup	25
Fig. 4.7	Arduino IDE	26
Fig. 4.8	Arduino IDE screen Void Setup and Library Include	27
Fig. 4.9	Void Setup Function	28
Fig. 4.10	Void Loop Function	28
Fig. 4.11	Drag and drop code window	32

Notation

IoT - Internet of Things

LCD - Liquid Crystal Display

DHT Sensor - Digital Temperature and Humidity Sensor

SDL – Serial Data Pin

SCL – Serial Clock Pin