

# **Smoke Sensing Smart Light**

S.R.W.Wellala                      MAHDSE211F-006

B.G.Y.S.Jayawardana MAHDSE211F-018

K.K.R.Dilki                      MAHDSE211F-029

## **DECLARATION**

We certify that this project does not incorporate without acknowledgement, any material previously submitted for a Higher National Diploma in any institution and to the best of our knowledge and belief it does not contain any material previously published or written by another person or ourselves except where due reference is made in the text. We also hereby give consent for our project report, if accepted, to be made available for photocopying and for interlibrary loans, and for the title and summary to be made available to outside organizations.

## **ABSTRACT**

A Smoke Sensing Smart Light is a fire protection device that automatically detects smoke/gases and gives us warning to be aware of it, with some protection system to handle the situation. Many fires accident occurs in our surrounding due to absence of human in the right place at the right time. That is the importance of the project, it can minimize such accidents. Thus, it got immense importance in our practical life.

## **ACKNOWLEDGEMENT**

We would like to take this opportunity to express our profound sense of gratitude and respect to all those who helped us throughout the duration of this project. NIBM has been the source of inspiration for us. We acknowledge the effort of those who have contributed significantly to our project.

We feel privileged to offer our sincere thanks and deep sense of gratitude to lecturer of Mr.Ishara Dissanayake as project guide, for expressing his confidence in us by letting us work on a project of this magnitude and using the latest technologies and providing his support, help and encouragement in implementing this project.

As well as we are thankful to our family members, friends and NIBM staff for their contributions, and to all others known and unknown person who helped us in this duration. We take this opportunity to thanks everyone to give support throughout our project.

## Table of Contents

<b>DECLARATION .....</b>	<b>2</b>
<b>ABSTRACT .....</b>	<b>3</b>
<b>ACKNOWLEDGEMENT .....</b>	<b>4</b>
<b>INTRODUCTION .....</b>	<b>6</b>
<b>MATERIALS AND METHODS .....</b>	<b>7</b>
<b>Hardware Diagram.....</b>	<b>7</b>
<b>Coding .....</b>	<b>7</b>
<b>RESULTS.....</b>	<b>8</b>
<b>DISCUSSIONS.....</b>	<b>9</b>
<b>REFERENCES .....</b>	<b>10</b>
<b>APPENDICES.....</b>	<b>11</b>

# **INTRODUCTION**

The concept of smart light is well known and widely used. But smart lights can be further improved beyond their traditional task. There have been many incidents like explosions and fire due to LPG gas leakage. Such incidents can cause dangerous effects if the leakage is not detected at an early stage.

The smoke-sensing smart light is an improved smart light that will help in determining gas leakage in the surrounding in advance and initiate sirens as well as update a real-time database which can be accessed via a mobile application.

There have been many incidents like explosions and fires due to LPG gas leakage. Such incident can cause dangerous effects if the leakage is not detected at an early stage. IOT based LPG leakage detection system is a project which will help in determining gas leakage in surrounding and initiate a warning as well as send real time data to web.

## **MATERIALS AND METHODS**

**Hardware Diagram**

**Coding**

## RESULTS



## **DISCUSSIONS**

Though Smoke Sensing Smart Light system is quite a simple project, but it has immense importance and necessity in our practical life. We programmed this device that is implemented on the NodeMCU (ESP8266) and the value of the concentration of the smoke is given high so that normal smoking gas will not be the reason of the device alarm.

We can also add some further improvement in this project. We are planning to use gasoline lighter without servo directly with the Arduino for more reliable and fast response. And also, we want to add a Relay module here for sending sms to the owner when smoke is sensing. It will be beneficial when no one at home or at a vacant place.

## REFERENCES

## **APPENDICES**