Accident alert transmitter

A SDC (IoT) mini project report submitted in partial fulfillment of the requirement for the Award of the Degree of

BACHELOR OF ENGINEERING

in

Artificial Intelligence & Data Science

by

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Under the Guidance of

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Department of Computer Science and Engineering
Methodist College of Engineering and Technology,
King Koti, Abids, Hyderabad-500001.
2023-2024

METHODIST
College of Engineering & Technology
(Approved by AICTE, New-Delhi & Affiliated to Osmania University)
College Code : 1607

Dr. Prabhu G Benakop
B.E., M.E., Ph.D.
SM., IEEE, LMISTE, LMISOI
Principal

VISION

To produce ethical, socially conscious and innovative professionals who would contribute to sustainable technological development of the society.

MISSION

- To impart quality engineering education with latest technological developments and interdisciplinary skills to make students succeed in professional practice.
- To encourage research culture among faculty and students by establishing state of art laboratories and exposing them to modern industrial and organizational practices.
- To inculcate humane qualities like environmental consciousness, leadership, social values, professional ethics and engage in independent and lifelong learning for sustainable contribution to the society.

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Department of Computer Science & Engineering

VISION

To become a leader in providing Computer Science & Engineering education with emphasis on knowledge and innovation.

MISSION

- To offer flexible programs of study with collaborations to suit industry needs
- To provide quality education and training through novel pedagogical practices
- To expedite high performance of excellence in teaching, research and innovations.
- To impart moral, ethical valued education with social responsibility.

Head of the Department
Department of CSE
Methodist College of Engg & Tech
Abids, Hyderabad.

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Department of Computer Science & Engineering

PROGRAM OUTCOMES

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in

Program Specific Outcomes

At the end of 4 years, Compute Science and Engineering graduates at MCET will be able to:

PSO1: Apply the knowledge of Computer Science and Engineering in various domains like networking and data mining to manage projects in multidisciplinary environments.

PSO2: Develop software applications with open-ended programming environments.

PSO3: Design and develop solutions by following standard software engineering principles and implement by using suitable programming languages and platforms

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Department of Computer Science & Engineering

Program Educational Objectives

Graduates of Compute Science and Engineering at Methodist College of Engineering and Technology will be able to:

PEO1: Apply technical concepts, Analyze, Synthesize data to Design and create novel products and solutions for the real life problems.

PEO2: Apply the knowledge of Computer Science Engineering to pursue higher education with due consideration to environment and society.

PEO3: Promote collaborative learning and spirit of team work through multidisciplinary projects

PEO4: Engage in life-long learning and develop entrepreneurial skills.

Head of the Department
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Estd : 2008

King Koti, Abids, Hyderabad-500001,

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Skill Development Course IoT MINI PROJECT

(3PW354CS)

A.Y 2023-2024

This is to certify that this SDC(IoT) Mini project report entitled **"ACCIDENT ALERT TRANSMITTER",** being submitted *by*

V.V.S.CHAITANYA -160722747092

PARTHA SARADHI-160722747106

ZISHAN- 160722747128

CH.TEJA- 160722747109

submitted in partial fulfillment of the requirements for the degree of Bachelor of Engineering in Computer Science and Engineering, during the academic year 2023-2024, is a bonafide record of work carried out by them.

INTERNAL **EXTERNAL** **HOD**

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DECLARATION BY THE CANDIDATES

We,V.V.S.CHAITANYA,PARTHA,SARADHI, M.S.ZISHAN,CH.TEJA **students** of Methodist College of Engineering and Technology, pursuing Bachelor's degree in Computer Science and Engineering, hereby declare that SDC(IoT) Mini project report entitled "**ACCIDENT ALERT TRANSMITTER ",** carried out under the guidance of **Dr. G. Saritha** submitted in partial fulfillment of the requirements for the degree of Bachelor of Engineering in Computer Science. This work is carried out by us and the references have been taking from various digital resources for report preparation.

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CERTIFICATE BY THE SDC(IOT) LAB INCHARGE

This is to certify that this SDC (IoT) Mini project report entitled "**THE ACCIDENT ALERT TRANSMITTER",** being submitted *by*

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submitted in partial fulfillment of the requirements for the degree of Bachelor of Engineering in Computer Science and Engineering, during the academic year 2023-2024, is a bonafide record of work carried out by them.

Dr. G. Saritha
Associate Professor,
Dept. of CSE

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CERTIFICATE BY THE HEAD OF THE DEPARTMENT

This is to certify that this SDC (IoT) Mini project report entitled "**ACCIDENT ALERT TRANSMITTER** " *by*

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submitted in partial fulfillment of the requirements for the degree of Bachelor of Engineering in Computer Science and Engineering of the Osmania University, Hyderabad, during the academic year 2023-2024, is a bonafide record of work carried out by them.

Dr. P. Lavanya,
Professor &
Head of the Department

ACKNOWLEDGEMENT

We would like to express our sincere gratitude to our project guide **Dr.Saritha, Associate Professor,** for giving us the opportunity to work on this topic. It would never be possible for us to take this project to this level without his innovative ideas and his relentless support and encouragement. Who helped us by being an example of high vision and pushing towards greater limits of achievement.

Our sincere thanks to **Dr. P. Lavanya, Professor** and **Head of the Department of Computer Science and Engineering,** for her valuable guidance and encouragement which has played a major role in the completion of the project and for helping us by being an example of high vision and pushing towards greater limits of achievement.

We would like to express a deep sense of gratitude towards the **Dr. Prabhu G Benakop, Principal, Methodist College of Engineering and Technology,** for always being an inspiration and for always encouraging us in every possible way.

We would like to express a deep sense of gratitude towards the **Dr. Lakshmipathi Rao, Director, Methodist College of Engineering and Technology,** for always being an inspiration and for always encouraging us in every possible way.

We are indebted to the Department of Computer Science & Engineering and Methodist College of Engineering and Technology for providing us with all the required facility to carry our work in a congenial environment. We extend our gratitude to the CSE Department staff for providing us to the needful time to time whenever requested.

We would like to thank our parents for allowing us to realize our potential, all the support they have provided us over the years was the greatest gift anyone has ever given us and also for teaching us the value of hard work and education. Our parents have offered us with tremendous support and encouragement, thanks to our parents for all the moral support and the amazing opportunities they have given us over the years.

Your respective
Content about IOT
Including what you have learnt
from CISCO MODULES And the
Internet
For around
30-40 pages
NOTE: MUST NOT BE
COMMON

Your project starts here……
Follow the below sequence:

Table of Contents

Chapter 1: Introduction

Chapter 2: Overview of the project

Chapter 3: Algorithms and Flowchart

Chapter 4: Libraries used, Code along with outputs(Images of final product…)

Chapter 5: Conclusion and Future Scope

NOTE: Before starting your chapter 1 Include Abstract as well

After that insert your content ACCORDING TO THE ABOVE SEQUENCE

Mention page no

THIS SHOULD BE AROUND 10-15 PAGES

Accident alert transmitter using Arduino Uno

by the students of AI&DS -B, 3rd semister

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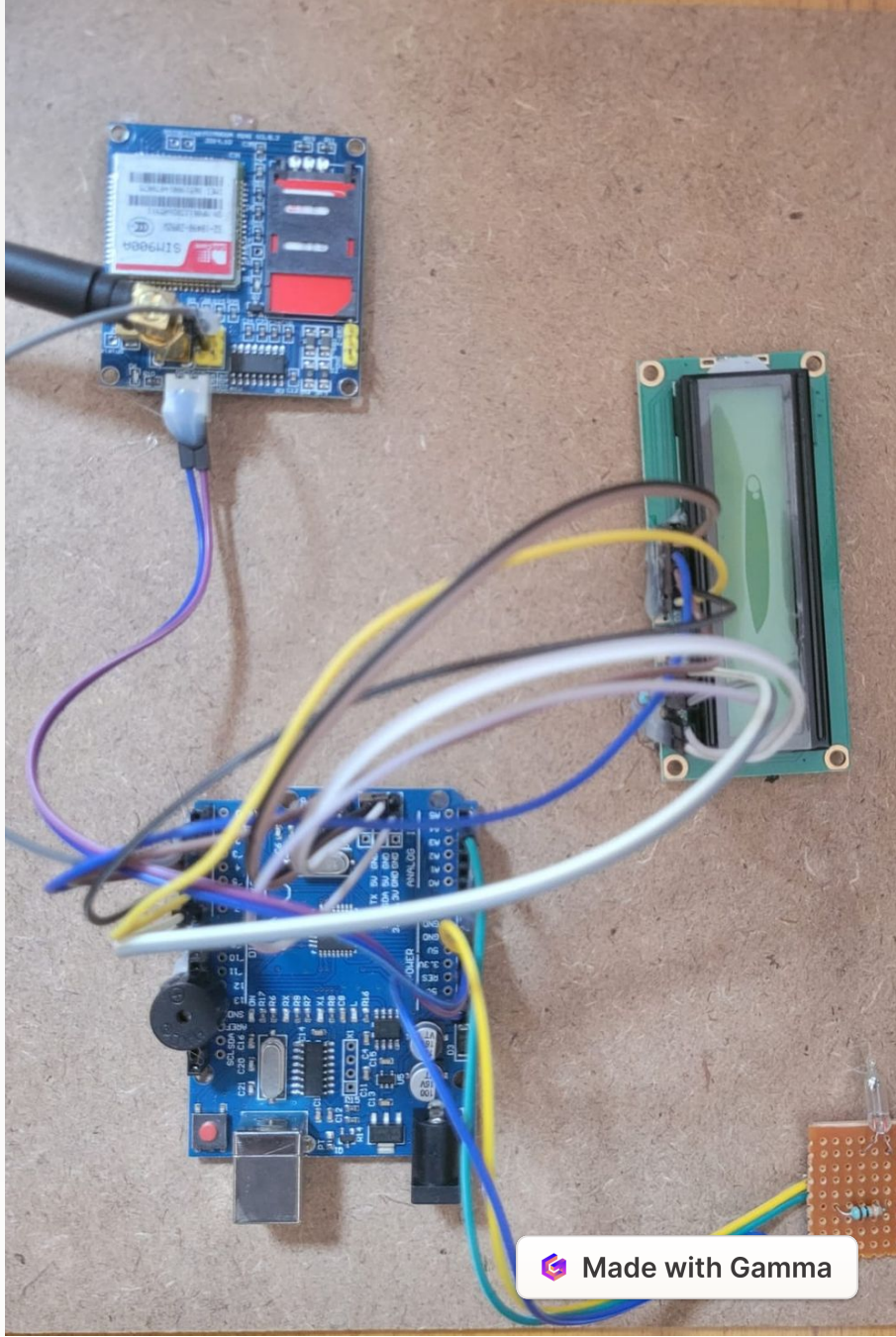

Introduction

Purpose of the Presentation

We aim to educate and raise awareness about the accident alert system using Arduino Uno.

Brief Overview

Learn about the key features and functionality of this innovative technology.

ABSTRACT:

An accident alert transmitter that can detect and alert about accidents using Sensors and IOT technology. The sensors continuously monitoring the motion of the vehicle. when the vehicle gets into an accident ground the sensor will identify that the vehicle is is been distrubed and an alert message will be sent to the attached device .

Components of the *Accident Alert Transmitter*

1 Arduino Uno Board

The core controller that enables data processing and interaction with other components.

2 GSM Module

Facilitates sending SMS alerts to predefined emergency contacts in case of accidents.

3 Accelerometer Sensor

Senses changes in acceleration to detect potential collisions or accidents.

4 Power Source

A reliable power supply to ensure continuous operation of the system.

5 Display

A small display attaches to arduino will display is the state is normal or accident

Working Principle of the Accident Alert System

1

Data Collection from Mercury Sensor

The system constantly monitors changes in acceleration to detect possible accidents.

2

Diaplay

if accident has occured the display will change from normal to accident

3

Sending SMS Alert via GSM Module

The system automatically sends instant SMS alerts to emergency contacts.

Benefits and Applications of the Accident Alert System

Enhanced Safety for Vehicle Occupants

Provides an additional layer of safety with quick and automated accident alerts.

Quick Response in Case of Accidents

Enables prompt response from emergency services, potentially saving lives.

Potential Integration with Emergency Services

The system can seamlessly connect with emergency services for a coordinated rescue operation.

Conclusion

Recap of the Accident Alert System

We have covered the components, working principles, benefits, challenges, and applications of the accident alert system using Arduino Uno.

Importance of Implementing Such Systems

Implementing these systems can significantly enhance road safety and expedite emergency response.

```
#include <LiquidCrystal.h>
#include <stdio.h>

#include <SoftwareSerial.h>
SoftwareSerial mySerial(8, 9);

LiquidCrystal lcd(7, 6, 5, 4, 3, 2);




#define buz 11


void setup()
{
  pinMode(buz,OUTPUT);
  pinMode(A0,INPUT);
  pinMode(A1,INPUT);
  pinMode(18,INPUT);
  pinMode(13,INPUT);
 Serial.begin(9600);

 mySerial.begin(9600);

  lcd.begin(16, 2);lcd.cursor();
  lcd.print("Accident Detection");
   lcd.setCursor(0,1);  lcd.print("    System     ");

  delay(2000);


    lcd.clear();
    lcd.setCursor(0,0);
     for(ii=0;ii<=6;ii++) lcd.write(finallat[ii]);

     lcd.setCursor(0,1);
     for(ii=0;ii<=7;ii++) lcd.write(finallong[ii]);

     delay(1500);
```

```
}


void loop()
{
 if(digitalRead(18)==LOW)
 {
                  digitalWrite(buz, HIGH);
      lcd.clear();lcd.print("Accident detected");
                  lcd.setCursor(0,1);lcd.print("                ");



    delay(40);
    Serial.println("AT+CMGF=1");    //To send SMS in Text Mode
    delay(1000);
    Serial.println("AT+CMGS=\"+918555986414\"\r"); // change to the phone
number you using
    delay(1000);
    Serial.println("Alert! Accident occurred\n");//the content of the
message
    delay(200);
              digitalWrite(buz, LOW);
                }

  else
  {
    digitalWrite(buz, LOW);

      lcd.setCursor(0, 0);
      lcd.print("Normal           ");
      lcd.setCursor(0, 1);
      lcd.print("                 ");
  }



}
```