



Innovation Club
Sathyabama University



SOS Guardian Bike

Presented by Naga Sai



Introduction

Overview

"Welcome to our presentation on the Bike Emergency SOS System, where safety meets innovation."

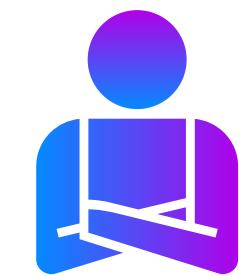
Our project is aimed to an innovative solution aimed at enhancing safety for bikers on the road. Every year, countless bikers face unexpected emergencies ranging from minor inconveniences like low fuel to critical situations demanding urgent assistance ,facing an accident. Recognizing this challenge, we embarked on a mission to develop a reliable and efficient means of communication for bikers during emergencies. Our project integrates an emergency communication system directly into bikes, ensuring rapid assistance in critical situations Join us as we dive into the world of innovation and safety on two wheels."

Problems



Problem 1

Bikers often face emergencies on the road, such as accidents or mechanical failures, where immediate communication with emergency services or contacts is crucial.



Problem 2

In remote areas or locations with poor network coverage, bikers may struggle to access help quickly, leading to delays in receiving assistance during emergencies.

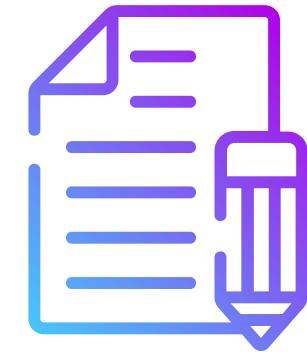


Problem 3

Without a reliable means of communication, bikers are left vulnerable to risks and uncertainties on the road, compromising their safety and well-being during critical situations.

Objectives

Develop a reliable emergency SOS system integrated into bikes to enhance the safety and security of bikers on the road. Enable bikers to quickly and easily communicate emergencies, such as accidents or breakdowns, to emergency services or designated contacts.



**Enhancing
Safety**



**Ensuring
Accessibility**



**Providing
Immediate
Communication**



KEY FEATURES

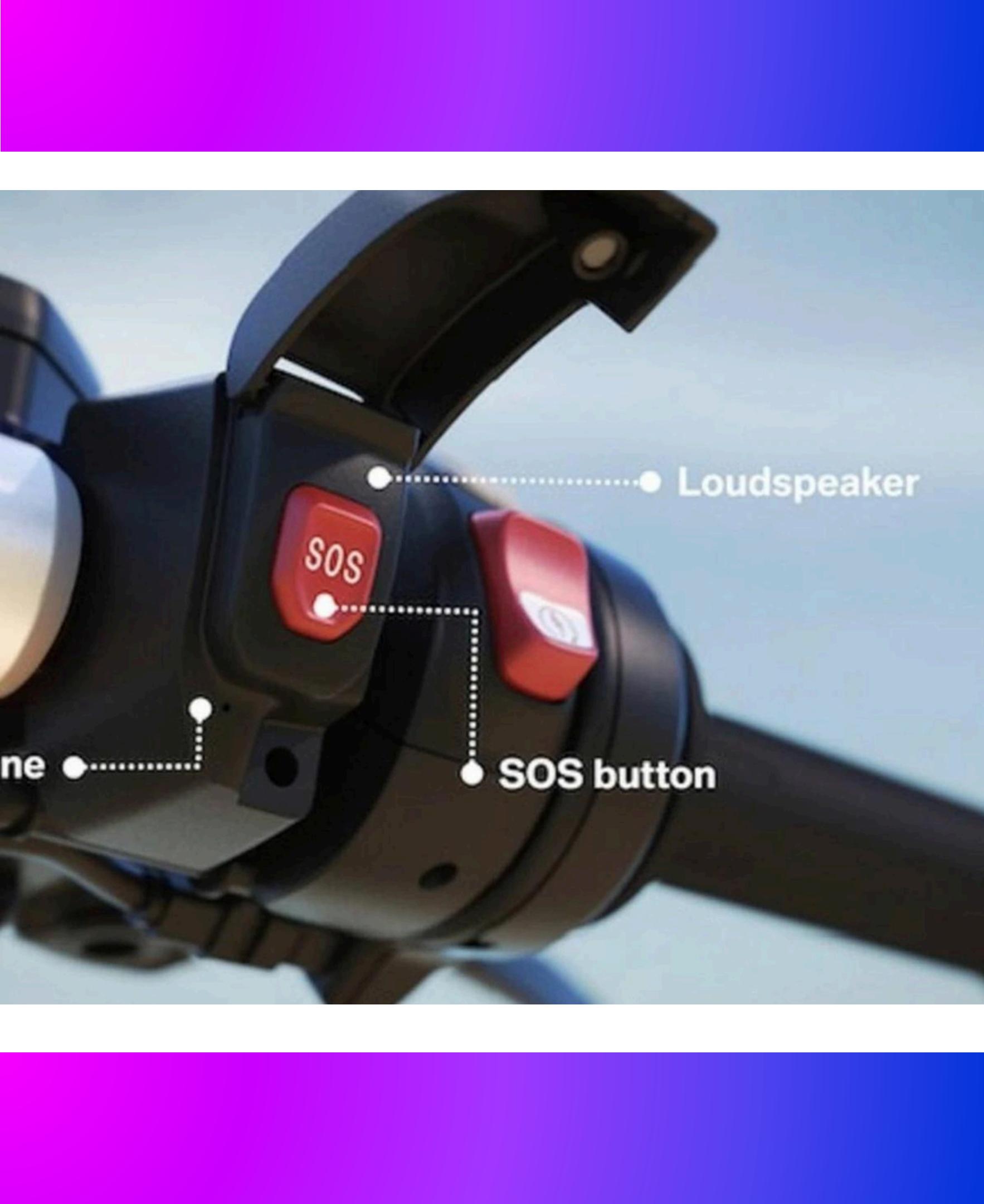
04

01

02

03

- **Multi-Level Alert System:** Implement a multi-level alert system triggered by the number of button presses, allowing bikers to convey different levels of urgency in emergencies.
- **Customizable Messages:** Enable bikers to send customizable messages along with the alert, providing essential information such as location, type of emergency, and any specific assistance required.
- **Real-Time Communication:** Facilitate real-time communication between bikers and emergency services or designated contacts via SMS alerts, ensuring swift response and assistance during emergencies.
- **Automatic GPS Coordinates:** Incorporate automatic GPS coordinates in the alert messages, allowing emergency responders to locate the biker's exact position, even in remote or unfamiliar areas.



IMPLEMENTATION

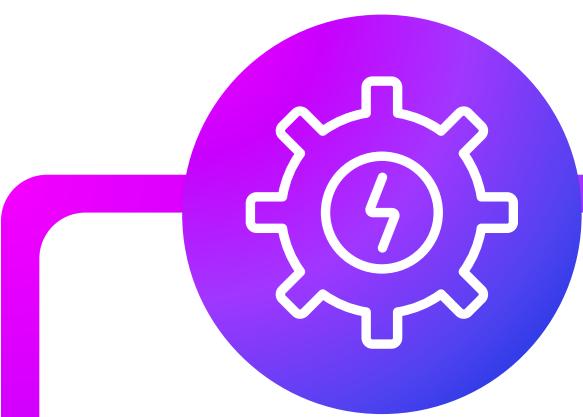
FIRST FACILITY

- If we press the push button once the first facility will be activated.
- This button is dedicated to sending messages to nearby fuel stations in the event of a fuel-related emergency.

SECOND FACILITY

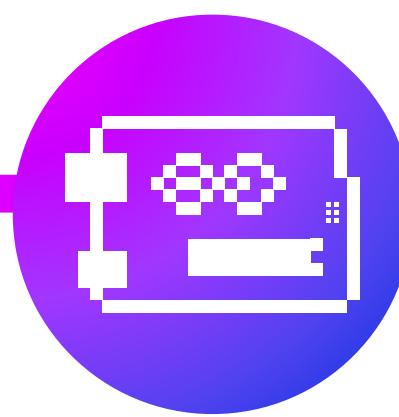
- If we press the push button twice the second facility will be activated.
- It allows bikers to notify their loved ones about their safety concerns or request assistance in case of any troublesome or problematic situation on the roads.

METHODOLOGY AND TECH STACKS



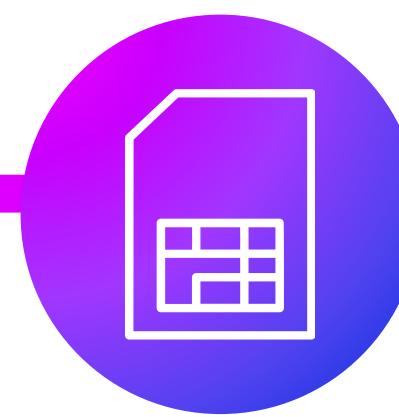
Software Serial Library

Utilizing the library for serial communication with the GSM module. Enabling the microcontroller to communicate with the GSM module via serial communication, facilitating SMS transmission.



Arduino Platform

Leveraging the Arduino platform for its versatility and ease of prototyping. Utilizing Arduino boards to interface with push buttons and control the GSM module for SMS communication.



GSM Module

Integrating GSM modules, such as SIM800 or SIM900, to enable SMS communication. Utilizing GSM modules to send emergency messages to fuel stations or loved ones, providing communication during emergencies.



Embedded C/C++ Programming

Employing embedded C/C++ programming languages for coding of microcontrollers. Writing firmware code to implement the log functionality of the SOS system button presses.

TEAM MEMBERS



A.Devi Naga Sai

ECE DEPARTMENT



**E.JEBA SUDHAN
MARIO**

MECHATRONICS
DEPARTMENT



**Peddinti Lakshmi
Manognya**

CSE DEPARTMENT



B . GireeshPatrudu

CSE DEPARTMENT

Q&A





Thank you