

# PROJECT HAI

( HELMET-BASED  
ACCIDENT INDICATOR )

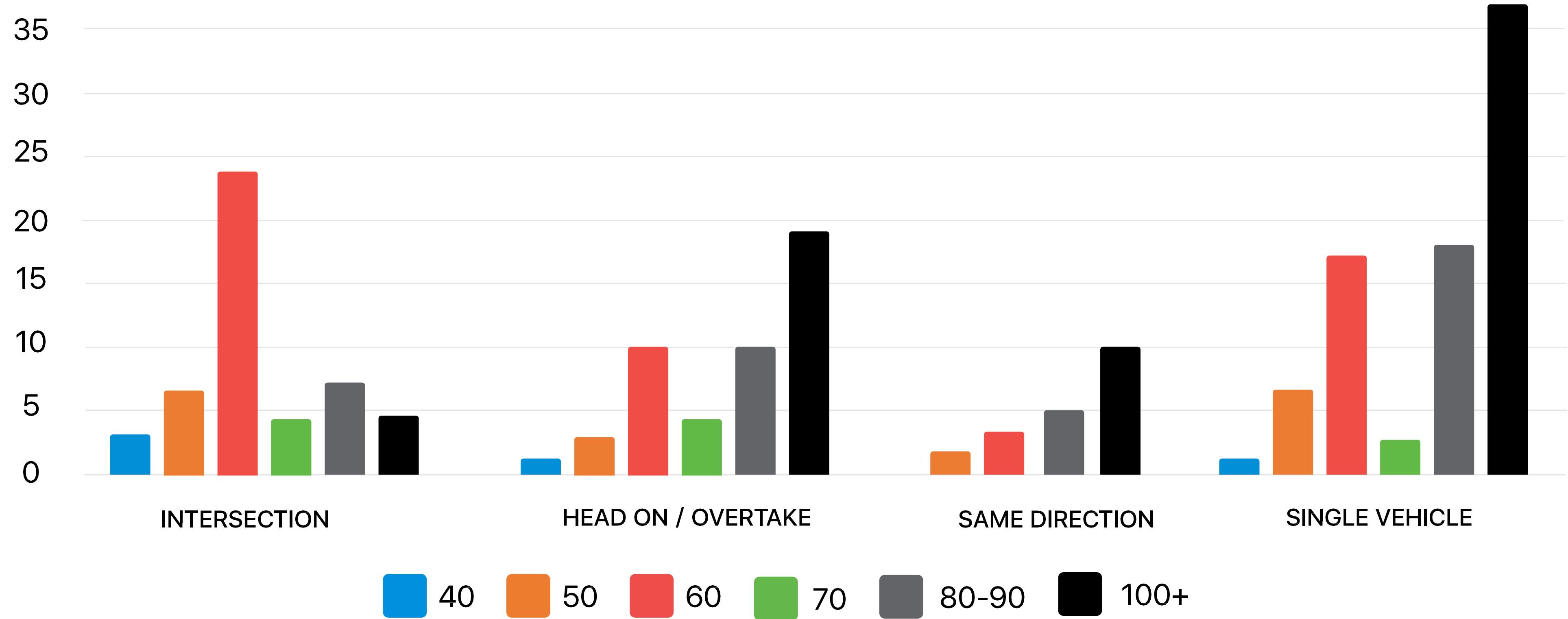


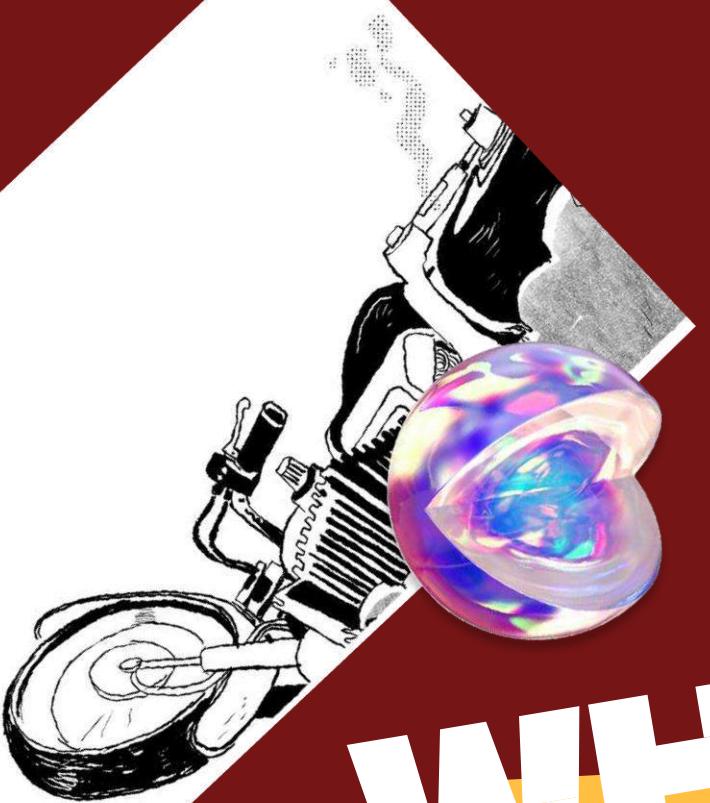
# **ABSTRACT**

ACCORDING TO RESEARCH, MOTORBIKES ARE RESPONSIBLE FOR THE MAJORITY OF ACCIDENTS. IN ORDER TO ADDRESS THIS PROBLEM, A SENSORY SYSTEM HAS BEEN DESIGNED THAT INCORPORATES GPS, ACCELEROMETERS, AND WIRELESS COMMUNICATION CAPABILITIES. THE SYSTEM IS INTEGRATED INTO A HELMET WORN BY THE USER AND CAN DETECT POTENTIAL ACCIDENTS. IF AN ACCIDENT IS DETECTED, THE SYSTEM IMMEDIATELY ALERTS THE USER AND SENDS AN AUTOMATED MESSAGE TO EMERGENCY SERVICES AND THE USER'S DESIGNATED EMERGENCY CONTACTS. ADDITIONALLY, THE SYSTEM CAN PROVIDE REAL-TIME NOTIFICATIONS TO USERS ABOUT APPROACHING ACCIDENT-PRONE ZONES, SERVING AS A PREVENTIVE MEASURE. OVERALL, THIS PROPOSED SYSTEM HAS THE POTENTIAL TO SIGNIFICANTLY REDUCE RESPONSE TIME, IMPROVE EMERGENCY SERVICES, AND ULTIMATELY SAVE LIVES. THE USE OF MODERN TECHNOLOGIES SUCH AS MACHINE LEARNING ALGORITHMS TRAINED ON HISTORICAL DATA PROMISES TO ENHANCE THE EFFECTIVENESS OF THIS SYSTEM.

# MOTORCYCLE DEATH 2021-2022

## CRASH TYPES AND SPEED ZONE





# WHERE PROBLEMS FACED ENDS



**IN AN INNOVATIVE**



**WE HAVE THE  
SOLUTION**

**WAY!!!!!!**

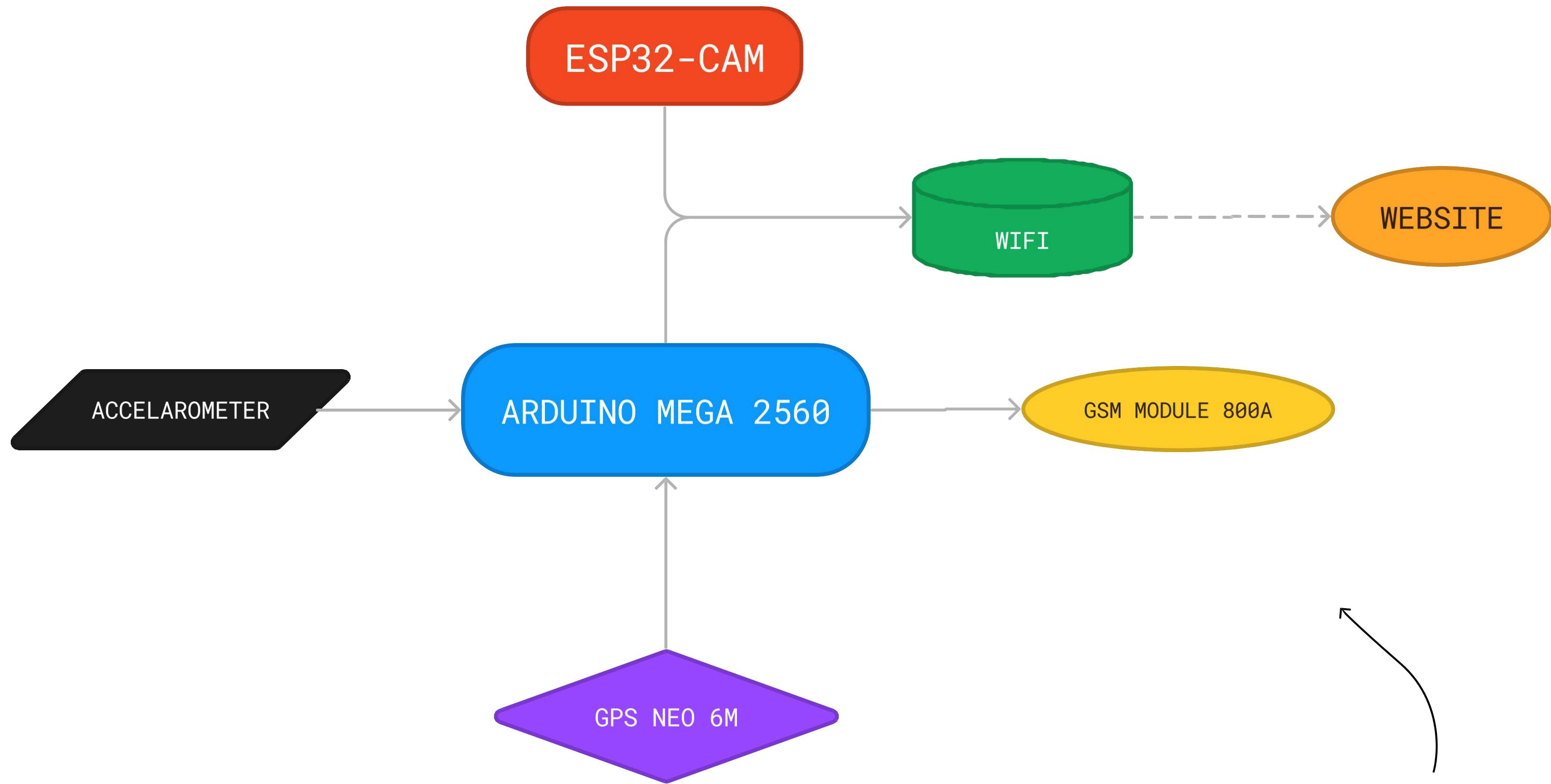
**NOT SO COMPLICATED**

The Sensory System Inside The Helmet During An Accident Reached A Certain Frequency Forms A Connection With The App And Hits Up With A Message ,Call And Your Current GPS Location To The Emergency Contacts And Message To The Nearest Police Station



The Camera Which Records Your Activity  
Manually For Safety Purposes And  
Provides Insurance Company's Process  
Execution Faster

( VISUALIZED PROTOTYPE )



SENSORY SYSTEM FLOWCHART

ACCELEROMETER SENSES THE MOTION CHANGE AND TRANSFERS THE SIGNAL TO ARDUINO . THE ARDUINO CONTACTS THE GSM TO SEND THE PARTICULARS AND THROUGH GSM THE GPS IS ACCESSED AND THROUGH ANTENNA THE GPS LOCATION IS PASSED

GSM MODULE 800A

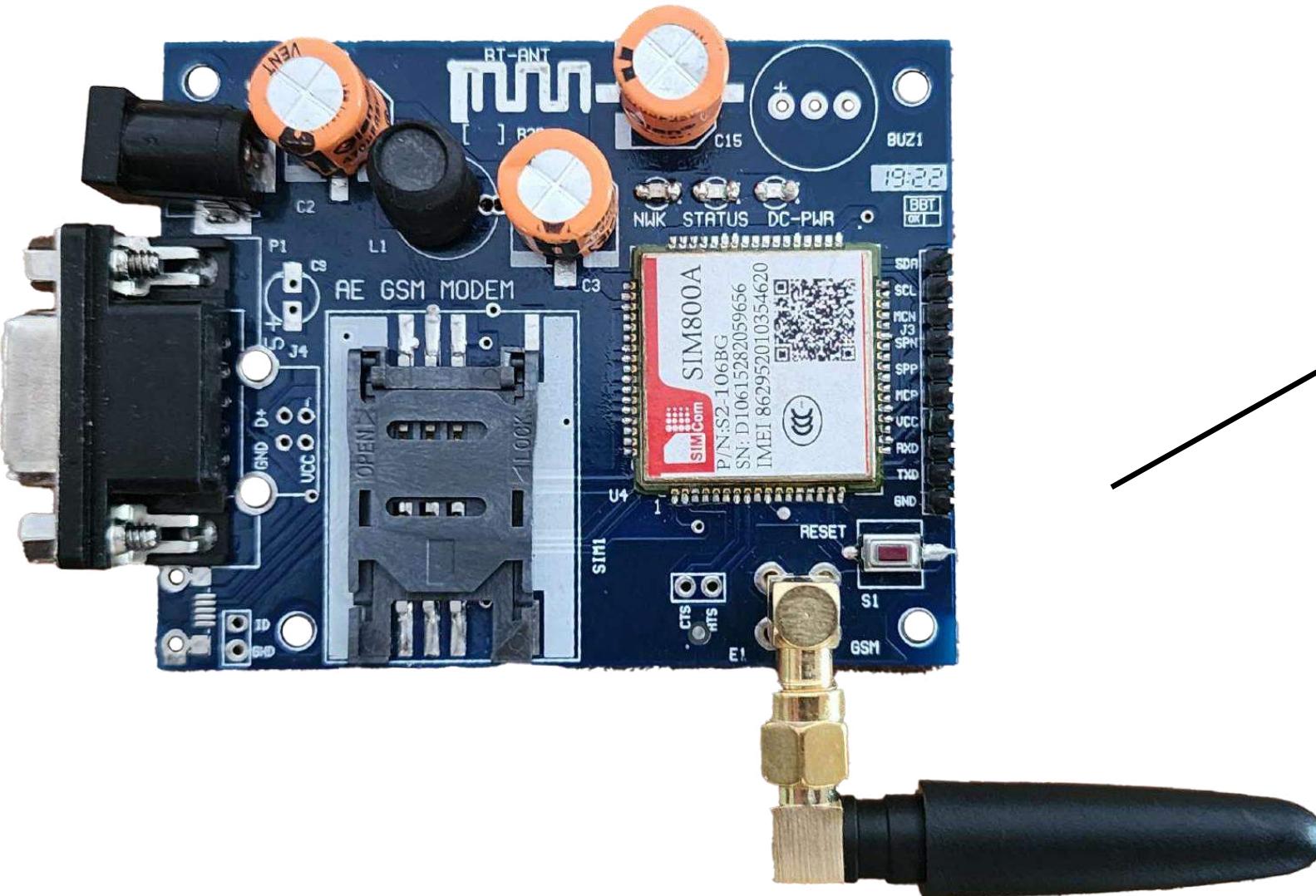
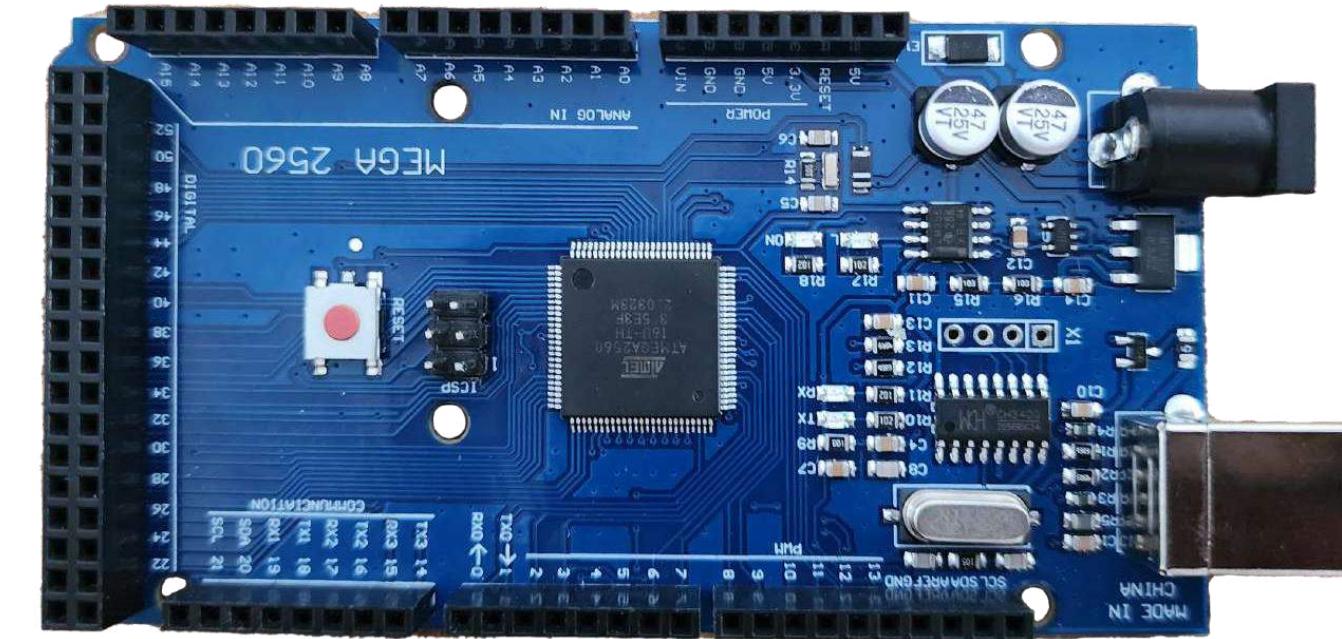
GPS NEO 6M

ARDUINO MEGA 2560

THE SENSORY SYSTEM

## ARDUINO MEGA 2560

The Arduino Mega2560 Has A Number Of Facilities For Communicating With A Computer, Another Arduino, Or Other Microcontrollers. The ATmega2560 Provides Four Hardware UARTs For TTL (5V) Serial Communication.



## GSM MODULE 800A

GSM Module SIM800A Is A Cellular Module That Operates On The 2G (GSM/GPRS) Network. It Supports Cellular Network Communication And Includes Features Such As Voice Calls, SMS Messaging, And Data Transfer.



## ESP32 - CAM MODULE

It Integrates An Esp32, A Single 2.4 GHz Wi-Fi-And-Bluetooth SoC (System On A Chip) Designed By Espressif Systems, And An OV2640 Camera From OmniVision



## ACCELEROMETER SENSOR ADXL545

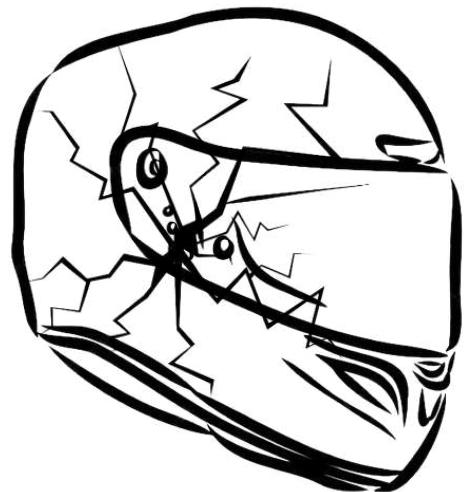
The ADXL335 Is A Small, Thin, Low Power, Complete 3-Axis Accelerometer With Signal Conditioned Voltage Outputs. The Product Measures Acceleration With A Minimum Full-Scale Range Of  $\pm 3$  G.



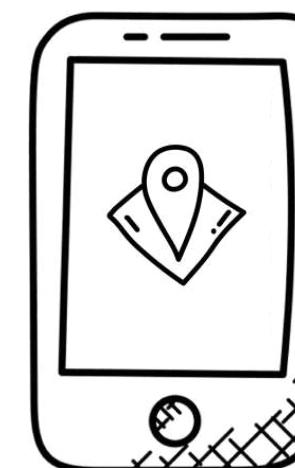
## GPS NEO 6M

The Neo 6m GPS Module With 56 Channels For Precise Position Updates At 10Hz And Seamless Integration With Arduino For Accurate GPS Data

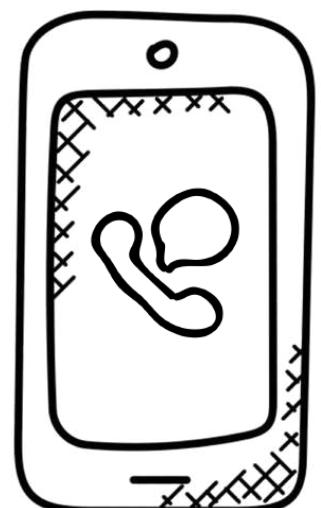
# WORKING PROCESS



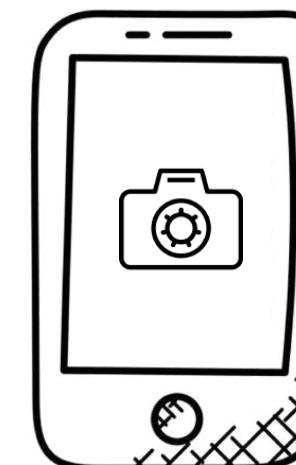
ACCIDENT OCCURS



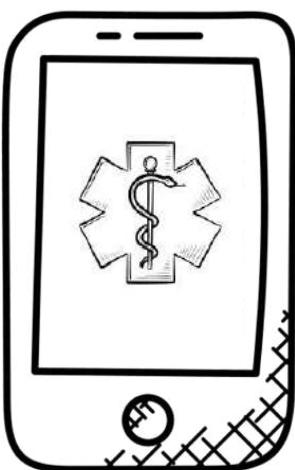
A MESSAGE WITH  
THE PERSON'S  
GPS COORDINATES  
IS SENT



THE EMERGENCY  
CONTACTS WILL RECEIVE  
A CALL

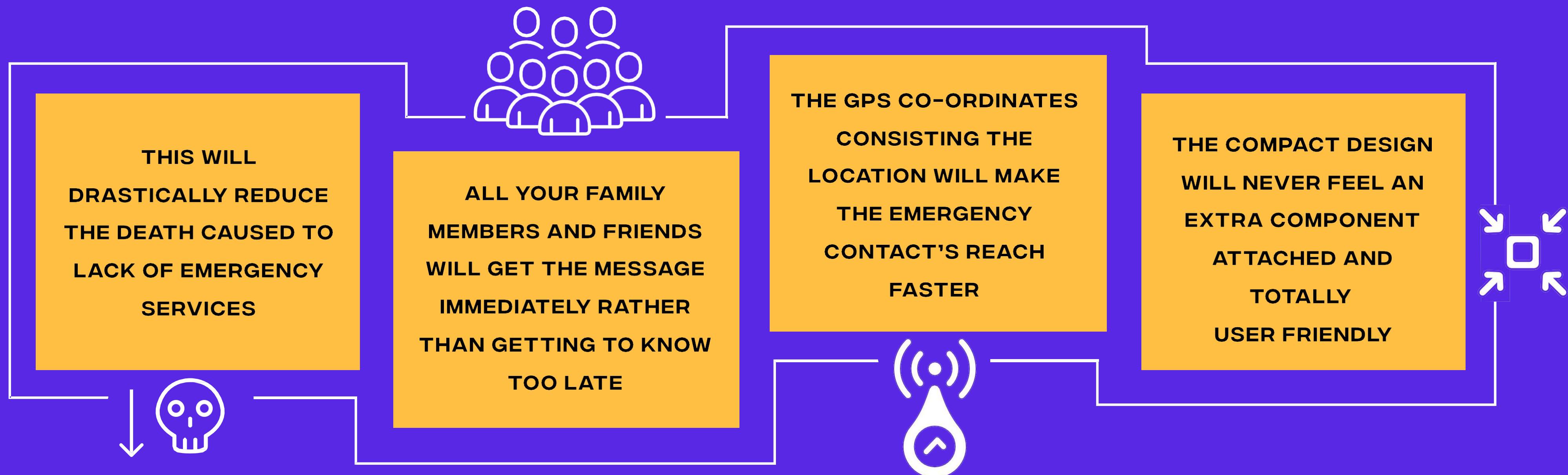


A VIDEOGRAPH OF THE  
INCIDENT IS SENT TO THE  
PARTICULAR WEBSITE



GPS COORDINATES  
WILL BE SENT TO  
AMBULANCE

# ADVANTAGES



# SPECIAL FEATURES

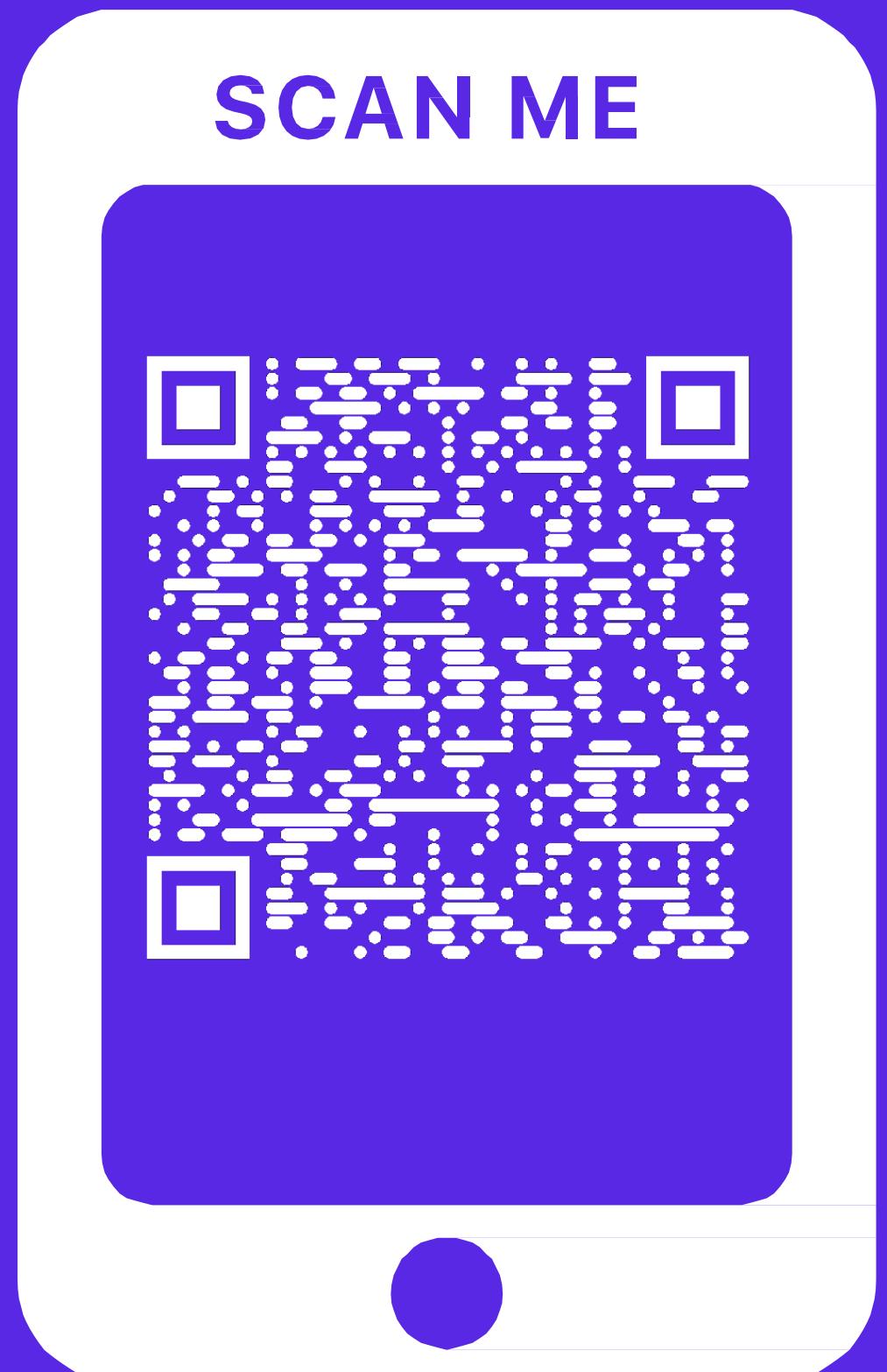
## CAMERA



THE PURPOSE IS TO LET THE 3RD PERSON WHO APPROACHES THE ACCIDENT SCENE AND IF THERE IS SEVERE BLOOD LOSS AND THEY CAN ACCESS THE QR CODE TO ACCESS THE PERSONAL INFORMATION AND EMERGENCY CONTACTS AND HE CAN START ARRANGING FOR THE BLOOD DONOR INSTANTLY

# QR CODE

THE PURPOSE IS TO LET THE 3RD PERSON WHO APPROACHES THE ACCIDENT SCENE AND IF THERE IS SEVERE BLOOD LOSS AND THEY CAN ACCESS THE QR CODE TO ACCESS THE PERSONAL INFORMATION AND EMERGENCY CONTACTS AND HE CAN START ARRANGING FOR THE BLOOD DONOR INSTANTLY



HELP

This is my location

<https://www.google.com/maps/place/Karpagam+College+of+Engineering/@10.8801009,77.0197935,17z/data=!3m1!4b1!4m6!3m5!1s0x3ba84ffc9b3ea755:0xda7508a90583d22f!8m2!3d10.8801009!4d77.0223684!16s%2Fm%2F03m6r9n?entry=ttu>



Karpagam College of Engineering

★★★★☆ · College

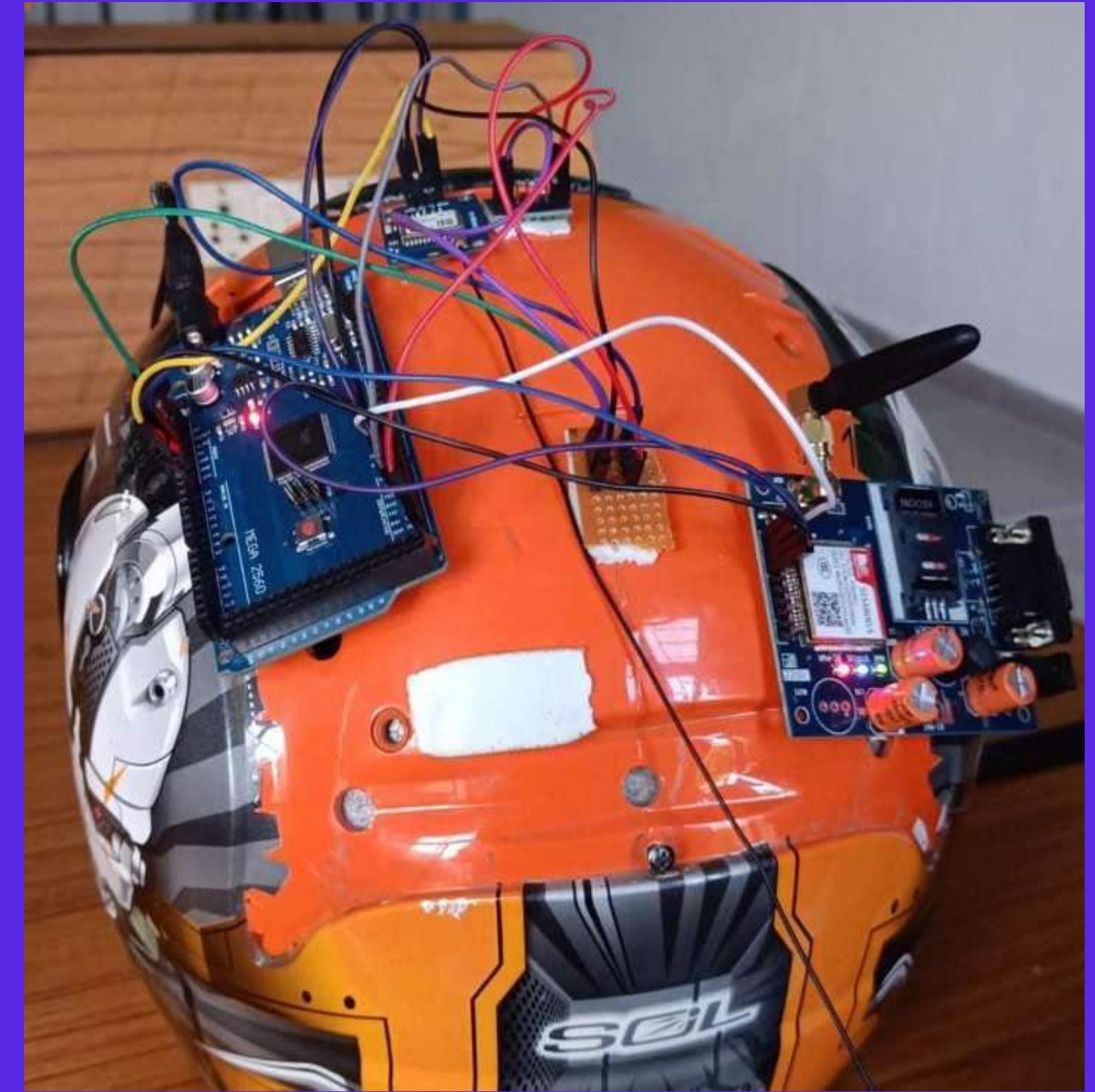
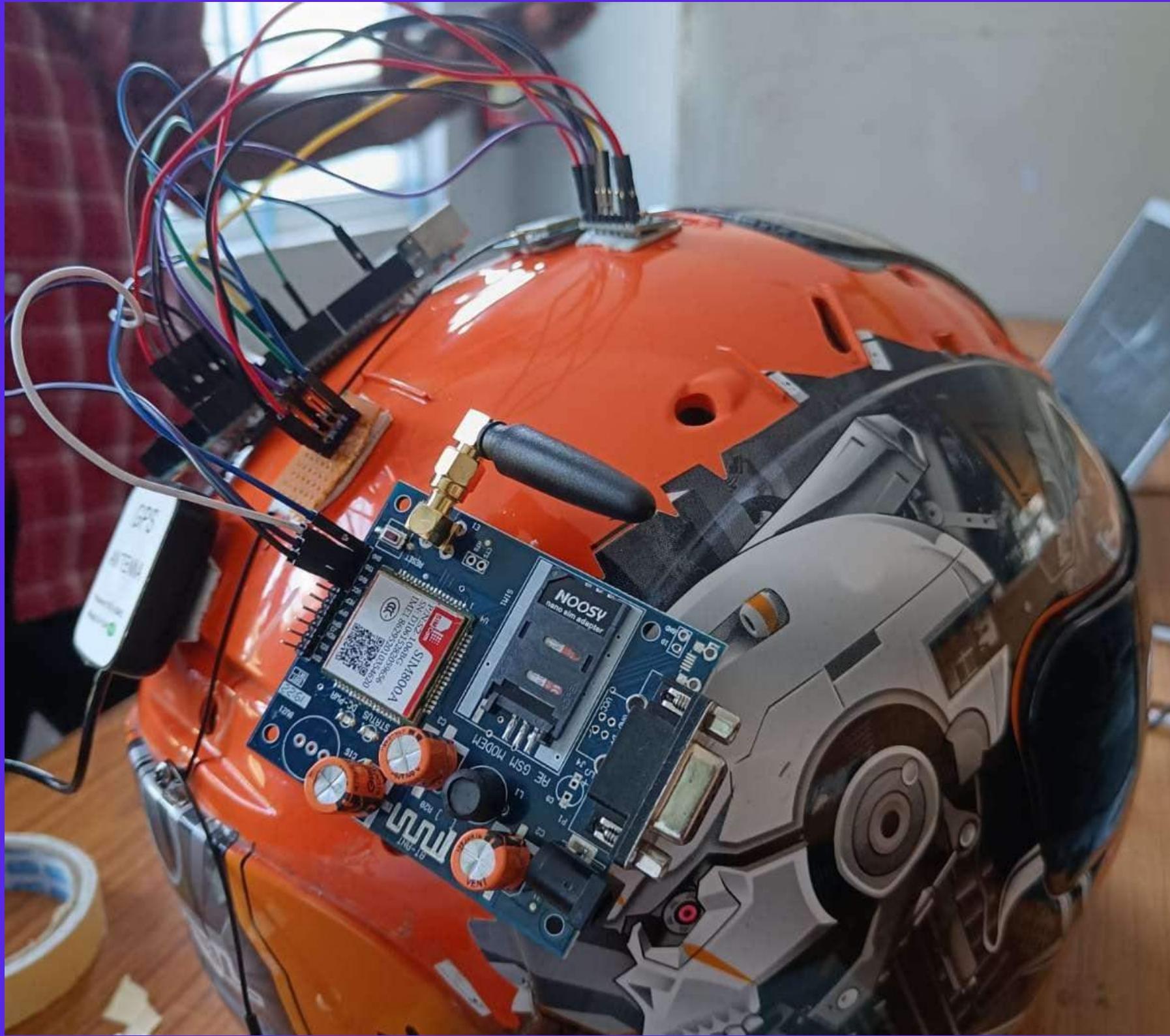
[www.google.com](http://www.google.com)

+916379866577



Send message

# PROTOTYPE MODEL ( LIVE )





**IN CONCLUSION, HELMET DETECTION INDICATORS HAVE THE POTENTIAL TO SIGNIFICANTLY ENHANCE SAFETY BY PROMOTING HELMET USAGE IN VARIOUS SETTINGS. BY COMBINING TECHNOLOGICAL ADVANCEMENTS WITH COMPREHENSIVE SAFETY STRATEGIES, WE CAN STRIVE TOWARDS A FUTURE WITH REDUCED HEAD INJURIES AND A GREATER EMPHASIS ON PERSONAL WELL-BEING.**

SPECIAL THANKS

DR M JAIGANESH

VIJAIANAND P

PRESENTED BY

RAGHUL K B

VIGNESH U

SUJAN PRABU K B

SRIRAGAV G