



IOT BASED TWO SIDE SAFETY VEHICLES

TEAM BIT BY BIT

TEAM MEMBERS

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PROBLEM STATEMENT

- Pedestrian deaths account for around 30% of all deaths from road traffic crashes in India. In some large Indian cities the proportions of pedestrians killed is up to 60% of all road traffic deaths.
- One serious road accident in the country occurs every minute and 16 die on Indian roads every hour. Around 1214 road crashes occur every day in India.

SOLUTION / IDEA OVERVIEW

- As a solution to the above problem, we are developing an IOT system that can be implemented in vehicles to avoid the chances of accidents and damage caused by those accidents to pedestrians.
- It is also likely to prevent the vehicle to hit the other obstacles and In case of accidents due to rash driving if the vehicle tilts or if vehicles hit by other vehicles system
- immediately stops the wheels which prevents the further drift of the vehicle.
- If accident is caused, system notifies and sends the accident location to the emergency number.

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TECH STACK

Hardware components

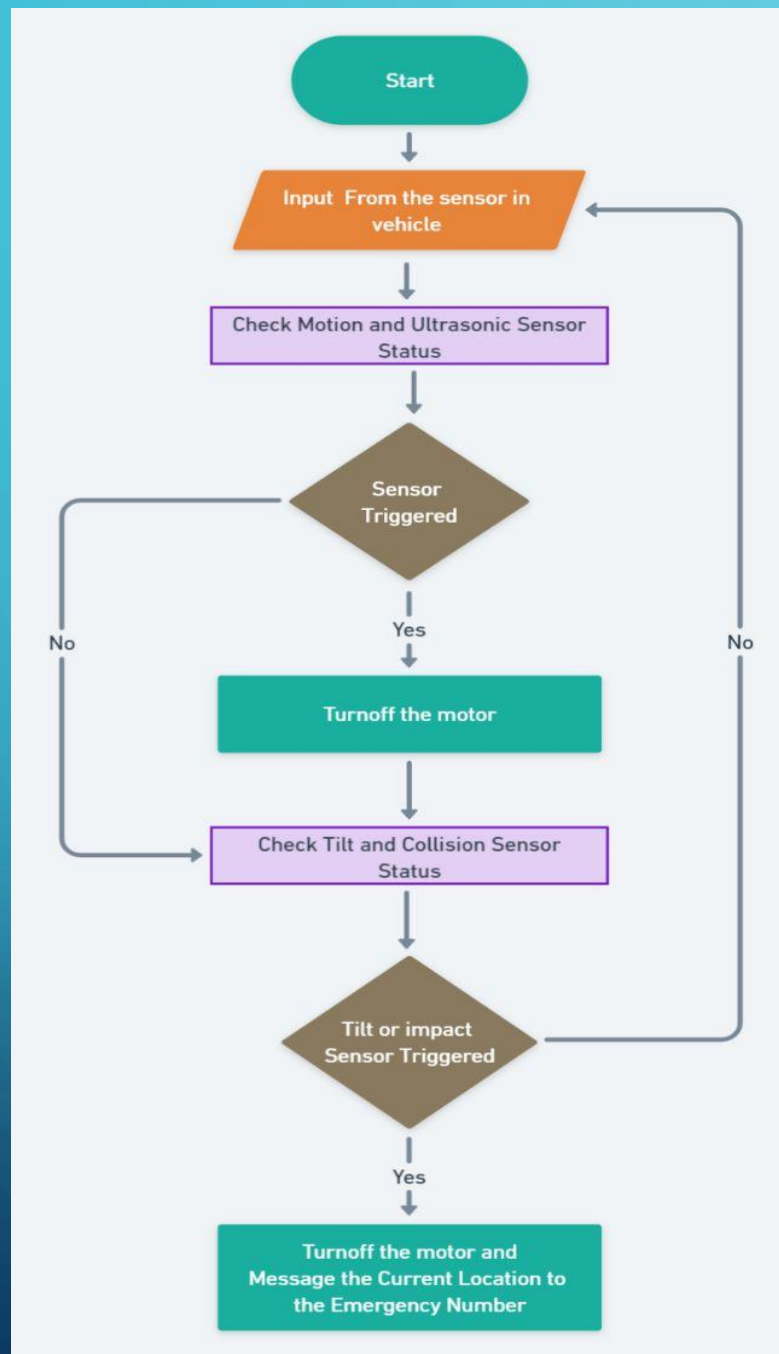
- TTGO TCALL SIM 800L (ESP32 + SIM module)
- PIR Motion Sensor
- Tilt Sensor
- Ultrasonic Sensor
- Impact switch
- Motor Driver/ Motor
- LCD Display
- Buzzer

Technologies

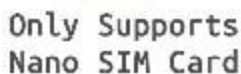
- *Internet of Things(IoT)*

Software Application

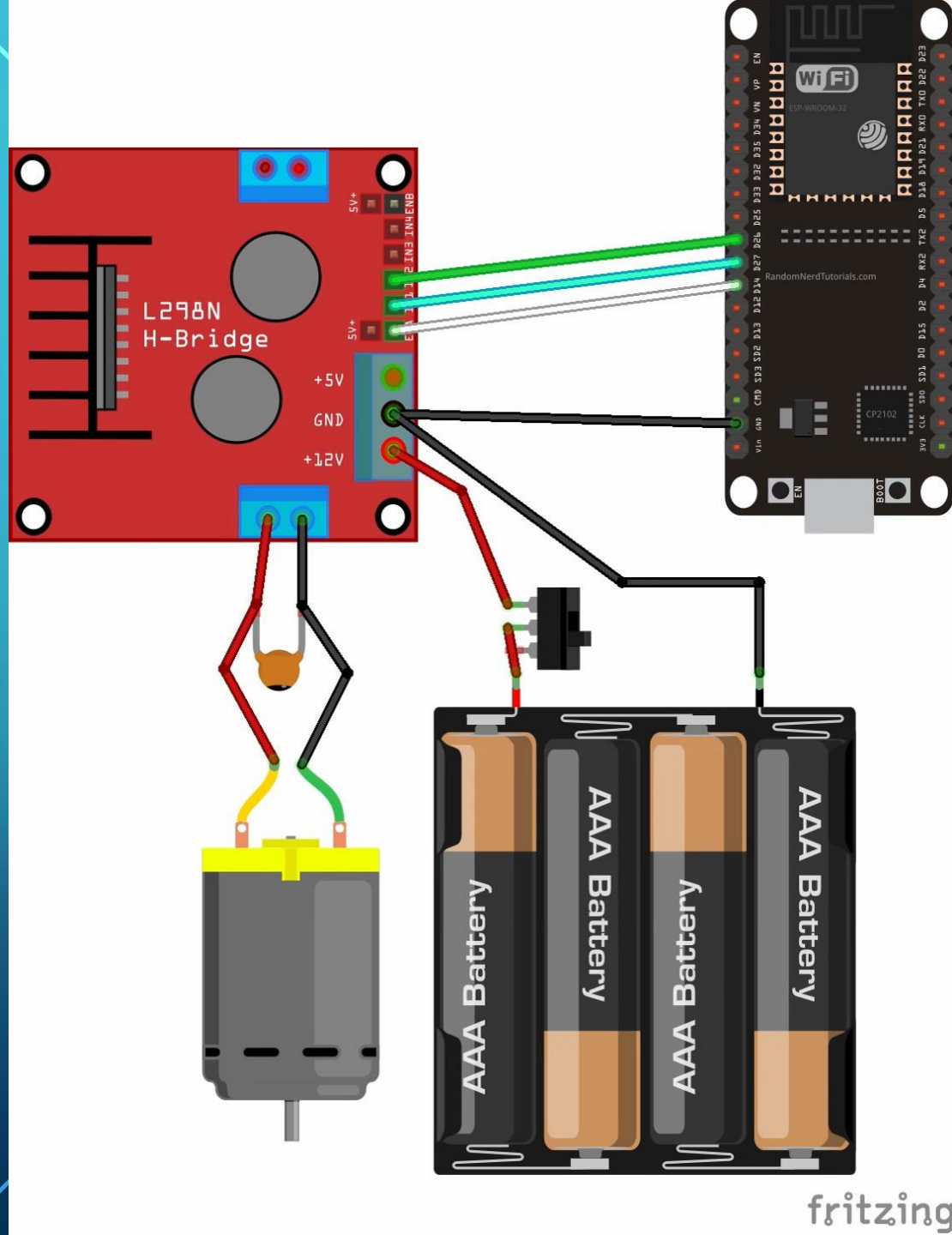
- Arduino IDE
- Embedded C/C++



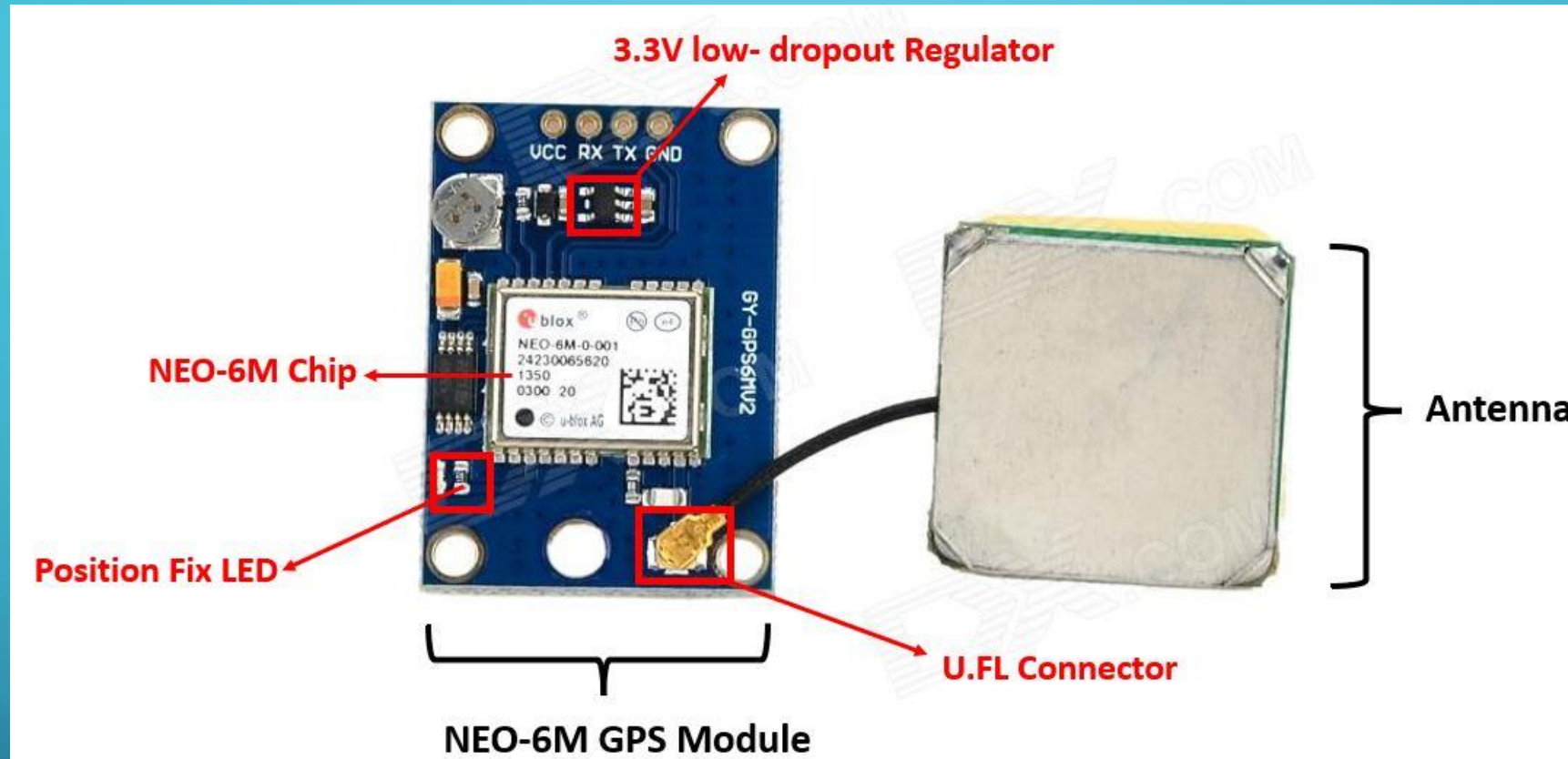
SYSTEM FLOW DIAGRAM



ESP32 SIM Card SIM800L T-Call V1.3



MOTOR WITH MOTOR DRIVER



NEO-6M GPS MODULE

The background is a blue gradient. In the corners, there are white line-art illustrations of circuit boards or neural networks, with lines connecting to small circles.

THANK YOU