Blind Point Detection Digital Safety and Entertainment Helmet based on IOT with Isolated Solar Charging Station

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Abstract

In this project, a digital helmet is designed by using smart technology. This project meets major factors of safety from road accidents. The blind point detection system was designed in this project which can detect any object nearby the riders. Arduino and the ultrasonic sensor are used here to detect any object. If any object comes in a specific range the buzzer will activate to alert the rider. The vibration sensor module will work when the helmet will hit by any hard object. After an accident, it can send the location to any emergency number that is fed by the rider by using Global System for Mobile Communication (GSM) and Global Positioning System (GPS) module. The Bluetooth module is used because when the rider cannot hold the mobile phone directly by using his hand, he can use the Bluetooth module. The IoT section is controlled by the mobile application, which can be controlled from anywhere. Automation systems work based on sensors. A solar-based charging system is also added to charge the battery.
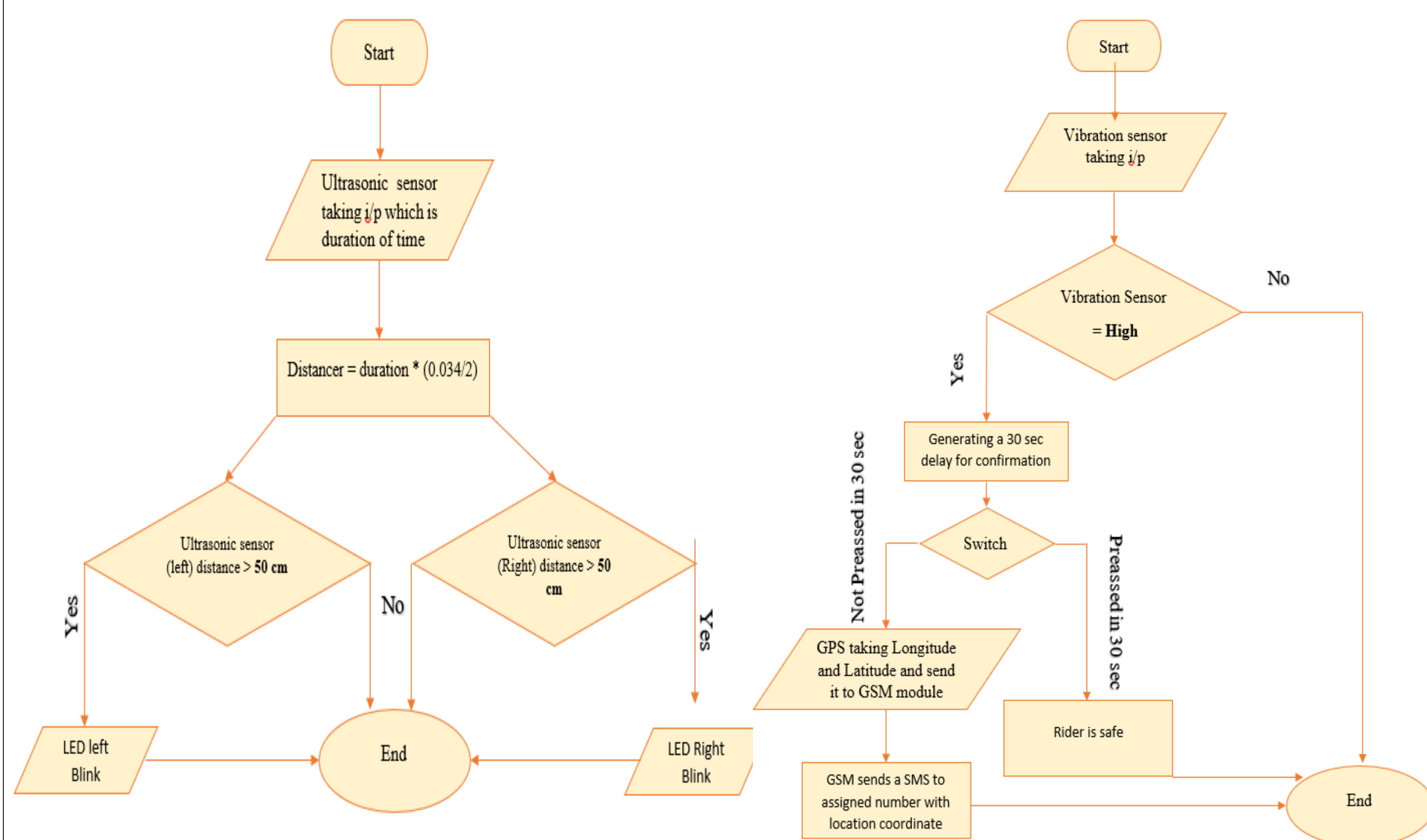
Methodology for Achieving Goal

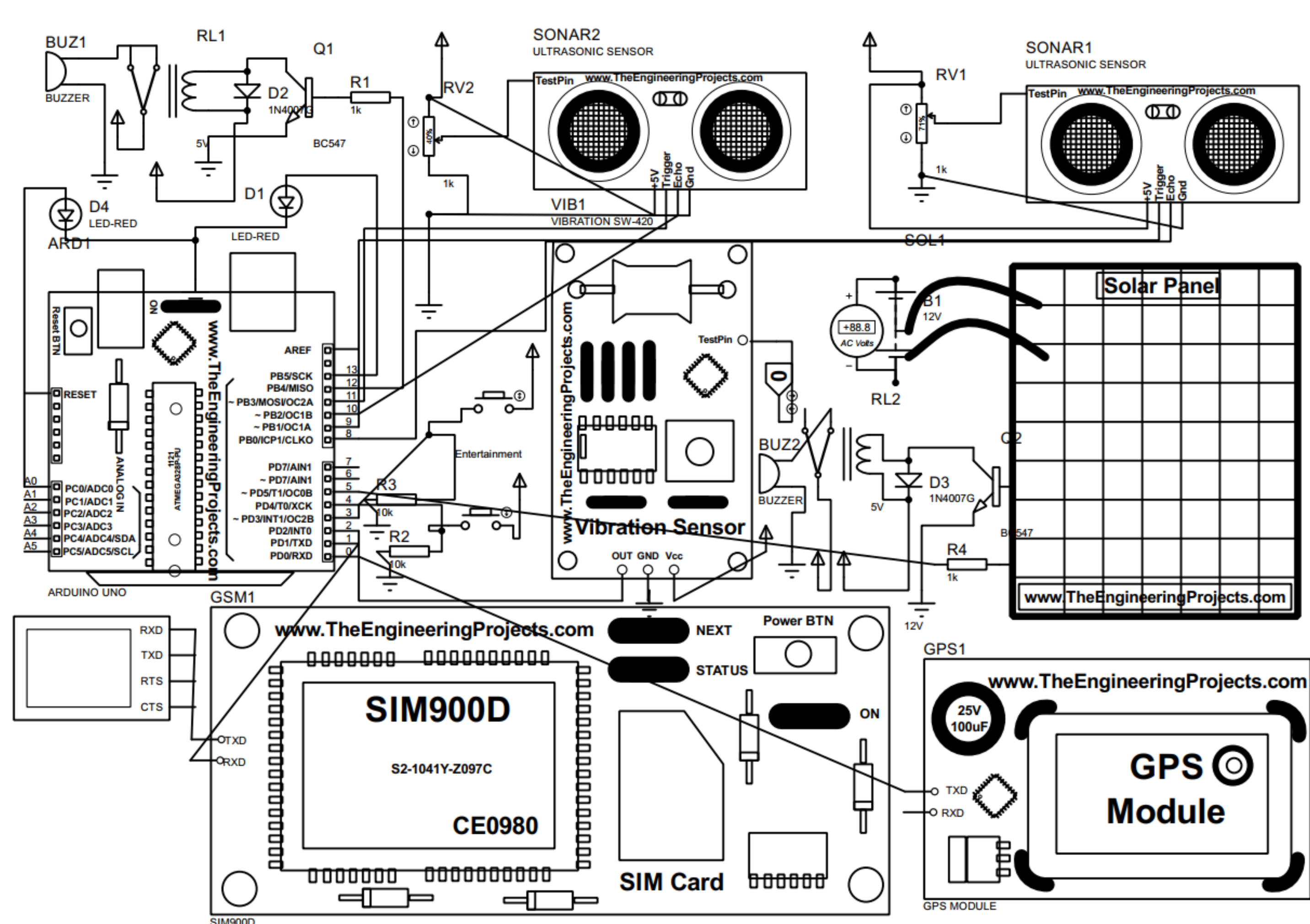Figure: Blind Point Detection

Figure: Accident Alarm system

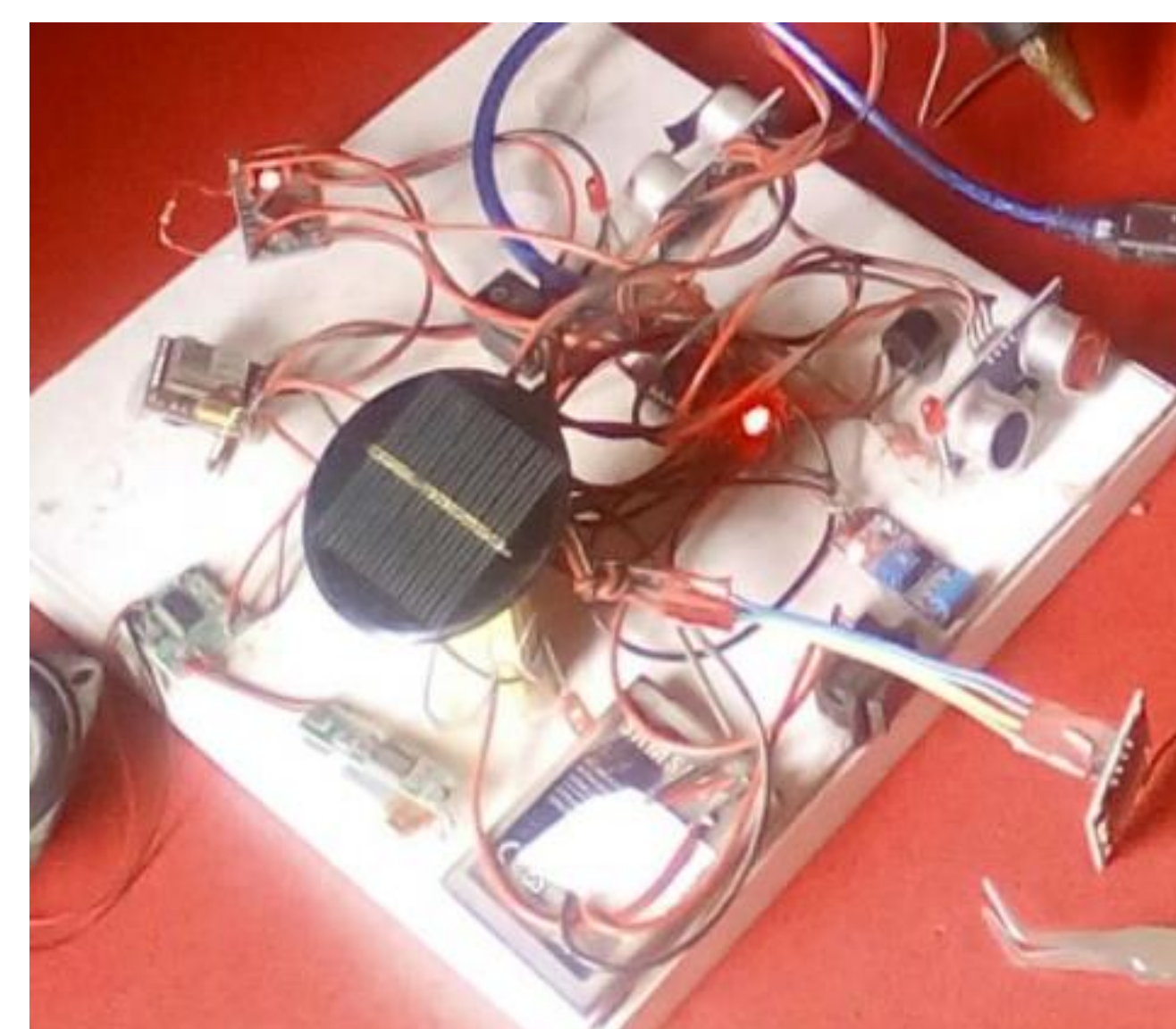Figure : Circuit Diagram

Designed Prototype & Result

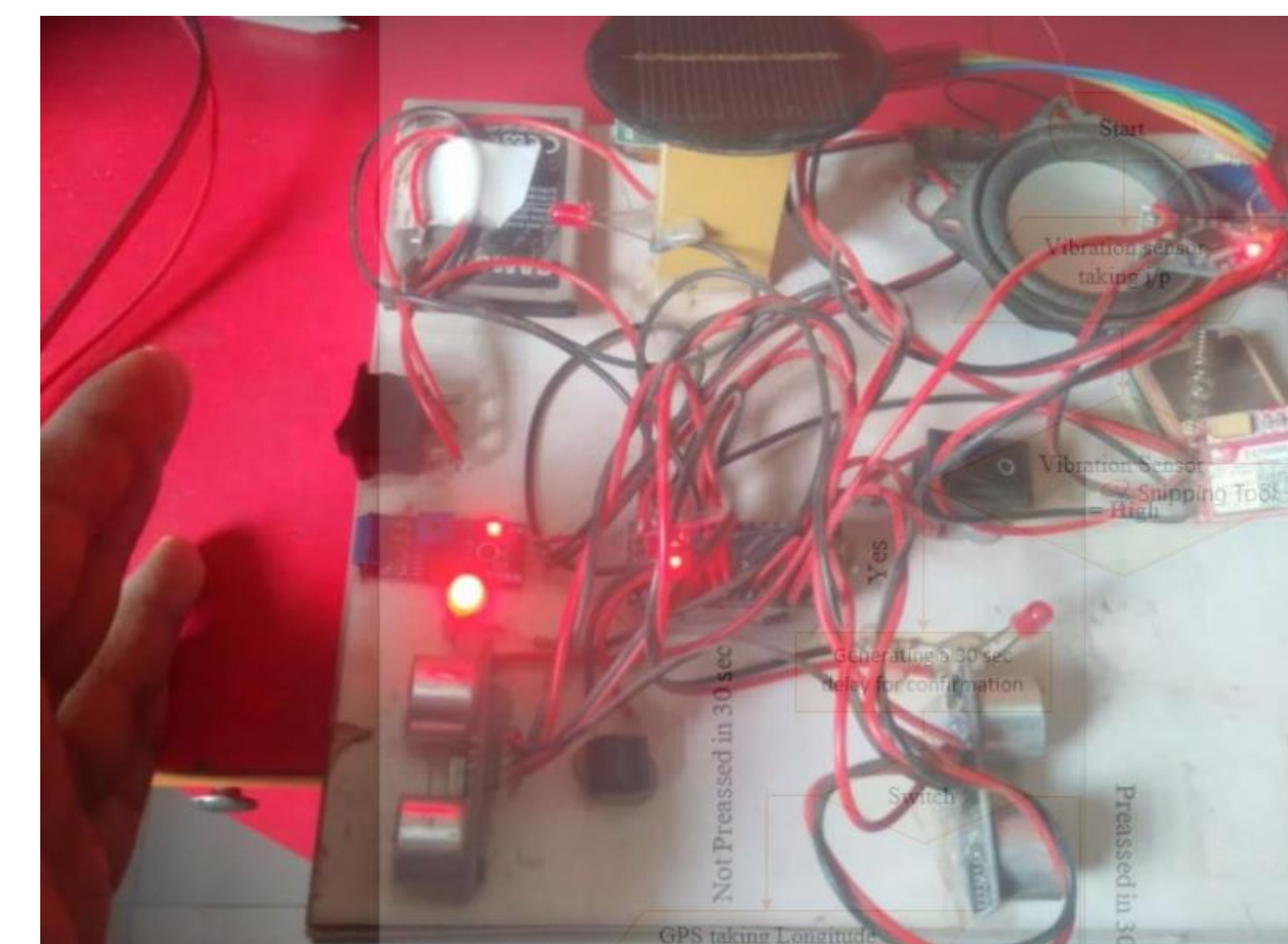Figure: Hardware for this project

Figure: Blind point detection system with left indicator
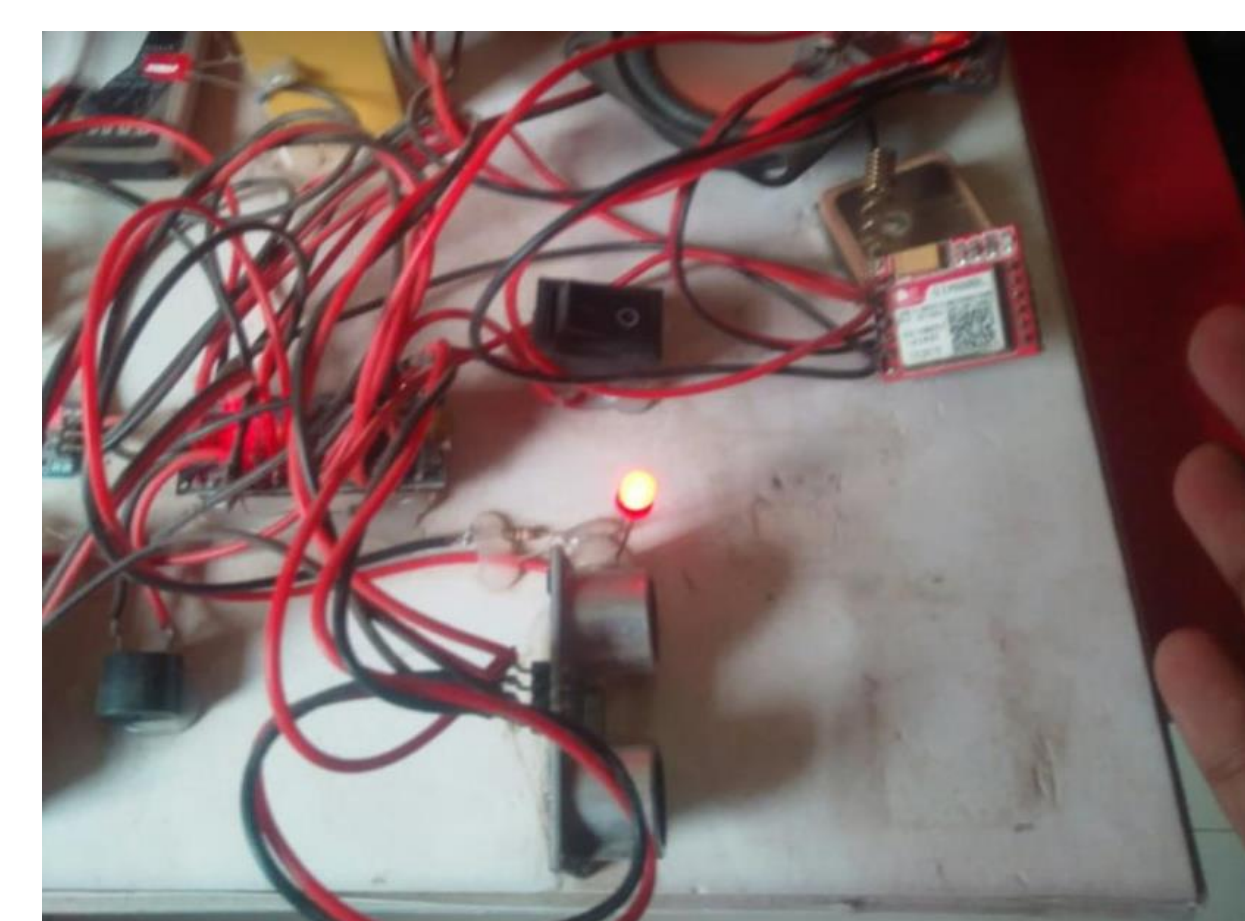

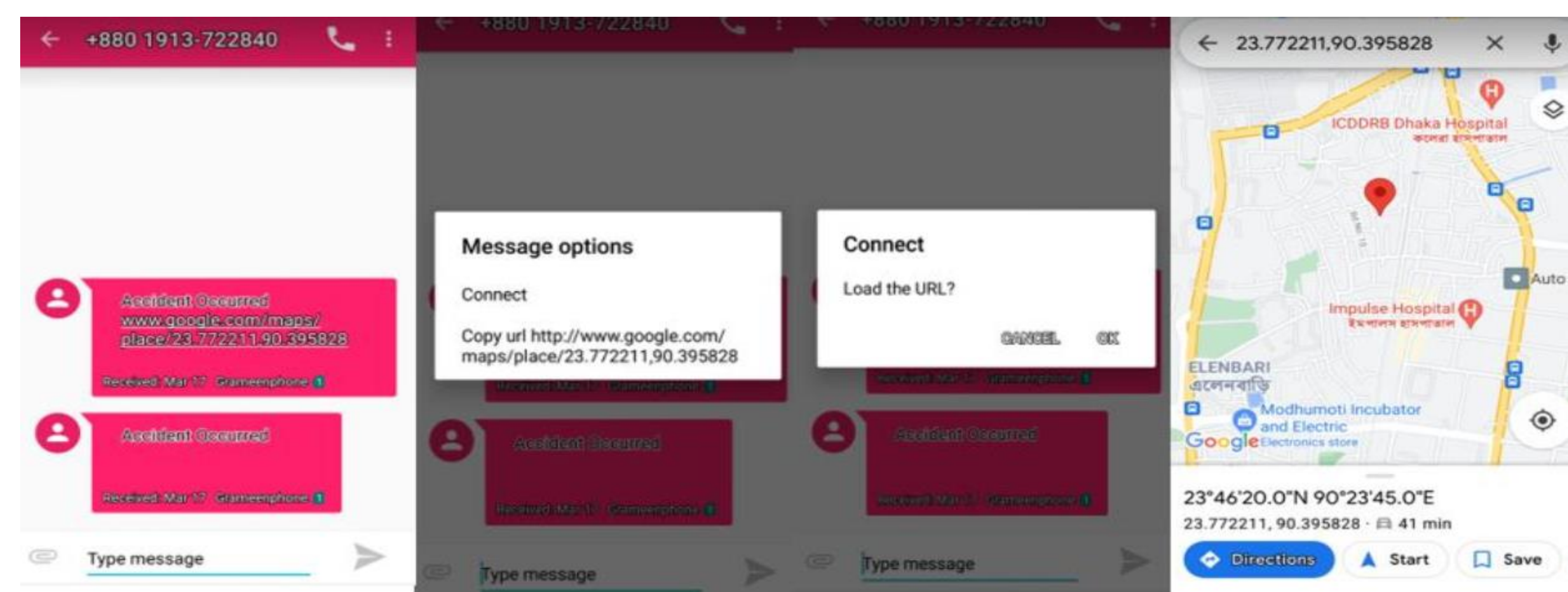Figure : Blind point detection system with Right indicator

Figure: Result for GPS & GSM module

Conclusion & Future Work

This project has been successfully completed. "Blind Point Detection Digital Safety and Entertainment Helmet based IOT with Isolated Solar Charging Station" this project is very important because it will reduce road accidents and give the gift of safe travel. Which will play an important role in the transportation system. With more interest and commercial financing, such smart devices may become commonplace in the electronics sector in the future.

Acknowledgement

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Key References

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