

SMART DRIVER MONITORING SYSTEM

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Abstract

Now a days the road accidents percentage is growing exponentially. One of the main causes of the road accidents are human errors such as alcohol consumption, drowsiness, overspeed, distraction, lack of knowledge and inattention. To avoid that human error in the causes of road accidents we are implementing a project named Smart Driver Monitoring System. There are some existing methods to solve this problem like manually detecting alcohol by the traffic police, drowsiness video sensors, alcohol detection system. The drawbacks of existing methods are the traffic police have to check each and every person manually, so the time is wasted and some persons may skip the traffic police and only alarming system is included in the previous methods. In our project we solved the human errors in accidents such as alcohol consumption, overspeed of the driver by using the sensors and we sent a message to the traffic police mobile phone about the vehicle details and the location of the vehicle using GPS and GSM technologies and we checked the drowsiness of the driver and an alarm rang when the driver closed his eyes for 2 seconds and we added an emergency button which is very helpful in the emergency situations like break failure of the vehicle, loss of control of the vehicle or any fire accident occurs. So in that situations when the driver pressed the emergency button then immediately a message along with the location and an alert was sent to the traffic police as well as the monitoring department at bus stand as Emergency Detected.

Objectives

- To build a IOT based smart driver monitoring system
- To help the traffic police to monitor the driver.
- To reduce the rate of the accidents by monitoring the driver conditions

Scope

- Government Vehicles like buses.
- It is limited to vijawada Bus Depo.
- Drowsiness module is only for the people those who haven't specs.
- Limited to Network access areas.

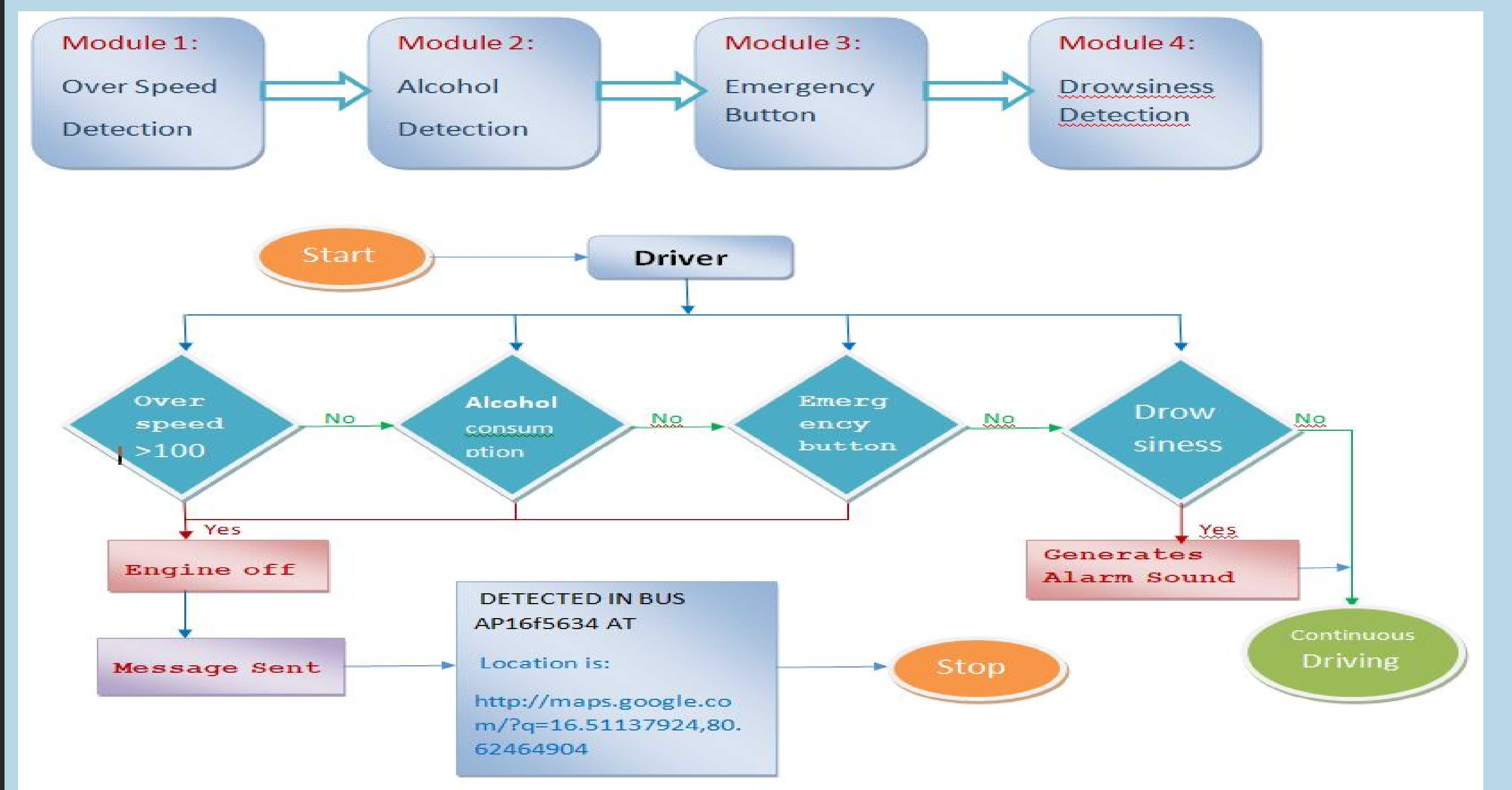
References

- [1] Miss.Monali D. More, Miss.Shivani L. Lamkane, Miss.Prajakta b. Jadhav, International Journal of Research in Engineering and Science (IJRES), Volume 9, Issue 3, 2021.
- [2] Hironori Wakana, Masuyoshi Yamada, IEEE sensors JOURNAL, VOL.19, 13 JAN 2020.

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Methodology and Proposed Diagram

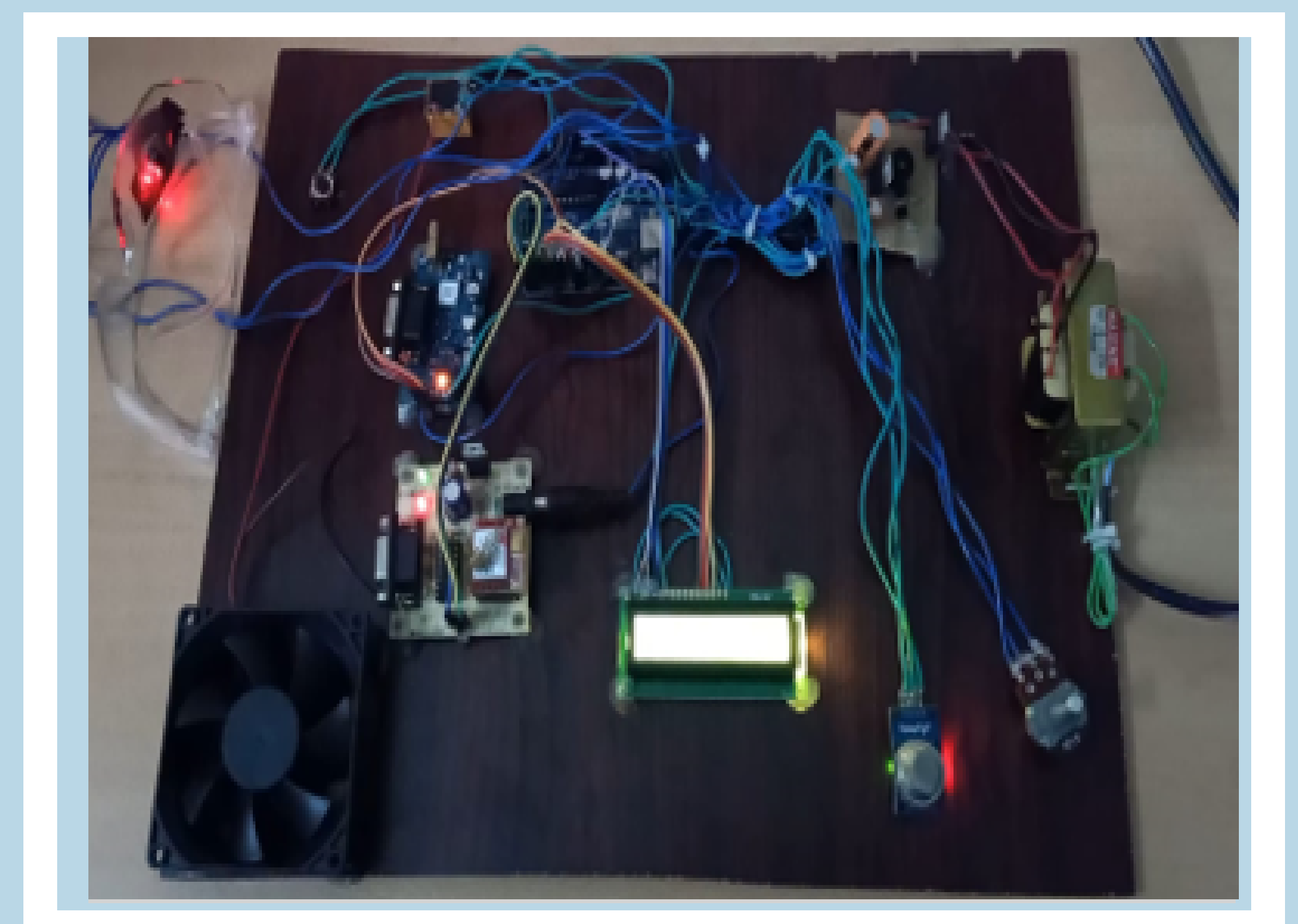


Outputs and Conclusion

Engine On



Engine Off



Alcohol Detection

alcohol DETECTED IN CAR
AP16f5634 AT Location is:
<http://maps.google.com/?q=16.51144027,80.62456512>

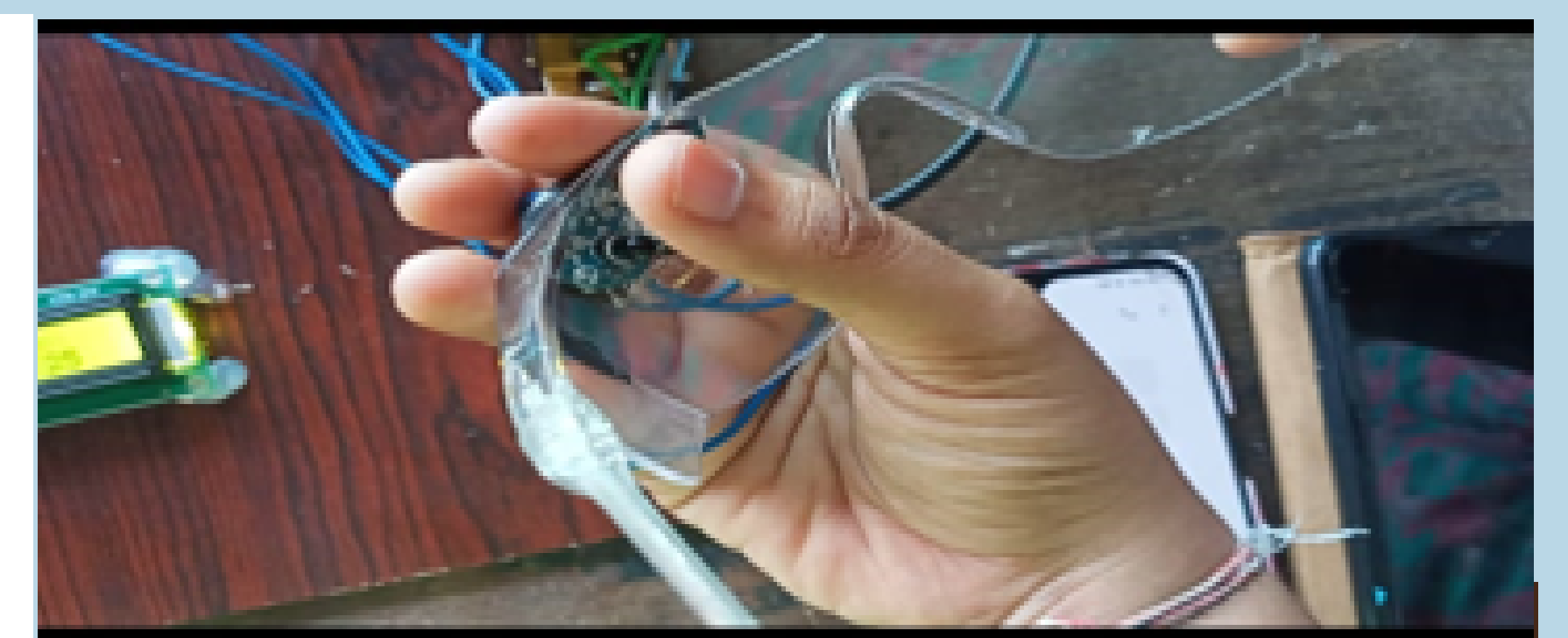
Emergency Detection

Emergency DETECTED IN BUS
AP16f5634 AT Location is:
<http://maps.google.com/?q=16.48525810,80.69163513>

Overspeed Detection

29 Mar, 3:20 pm
overspeed DETECTED IN CAR
AP16f5634 AT Location is:
<http://maps.google.com/?q=16.51142501,80.62461090>

Drowsiness Detection



CONCLUSION The hardware design will make sure that the driver is in proper condition to drive the vehicle. We have contributed only vehicles corresponding to public transport. If the driver is found in a drunken state, if he is drowsy, is over-speed and in an emergency state, it will be notified to the concerned people through GSM Network.

The model can be improved in the future by storing different parameters in the cloud and also by providing a dashboard to the user.