



# ACCIDENT AND ALCOHOL INDICATION AND SECURITY SYSTEM FOR A VEHICLE

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## ABSTRACT

The proposed system is an automotive system which have features like alcohol detection, accident detection and theft detection.

Currently alcohol detection and accident detection is a complete manual solution by police checking with breath analyser, highway police patrolling.

The proposed procedure is implantable in real-life scenario to the vehicles for the above tasks.

It gives immediate information to the respective persons as they can reach to nearby hospital in short span when severe injuries or aches occur and can also securely park the vehicles at a place.

## CONTACT

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## INTRODUCTION

The complete system which is designed in this project is taken under the consideration of immediate rescuing a person after an action is caused on simulating three kind of results, firstly buzzer sound which is associated with multiple contact numbers when an accident occurs and secondly checking the frequency or range of alcohol consumption of a driving person if exceeded can't accelerate the vehicle anymore and lastly getting their vehicle back in short period of time when theft breakdown is placed.

This project is all on exploring to new technology and making complex ways to get simpler and ensure making better ways for a common livelihood and a try for constructing new ideas from key Technologies.

Taking into consideration, as safety is the biggest factor, we will be knowing how the selected idea works and get the best possible results on taking care of oneself when they move out on a vehicle.

## METHODS AND MATERIALS

- The accident indication is one of the features in the proposed automotive system. Whenever the vehicle is collided there will be contact with bumper followed by push button switch and then the operation performs in the following manner.
- The next feature is detecting of Alcohol consumed by the persons in the vehicle. When particular limit (0.04 mg/l to 4 mg/l) of alcohol consumption exceed which, we mentioned in the code, the microcontroller identifies it and gives buzzer sound and send alert message to the registered contacts with the location of the vehicle.
- The next feature of the proposed system is alerting owner of the vehicle from theft breakage. This proposed feature works mainly on two commands VPOS (vehicle position) and LOCK..When a theft breakage happens, we need to give a command "STOP" to the system through SMS with registered mobile to remotely shutdown the engine of the vehicle..When we give "VPOS" command to the system it sends the exact location of the vehicle.

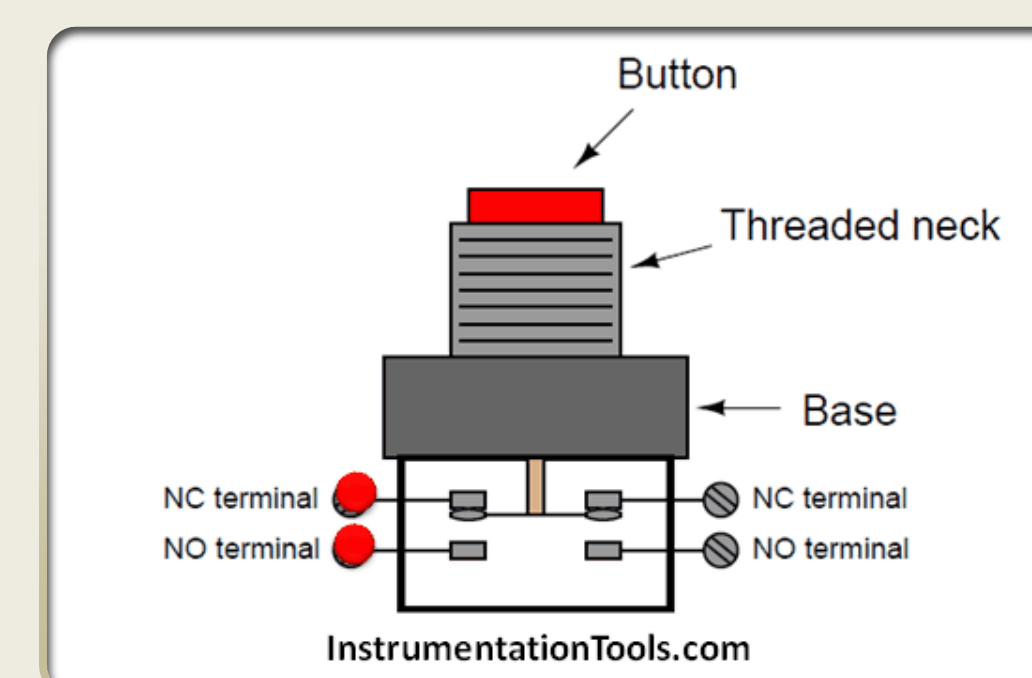


Figure 1. Detailing how switch works

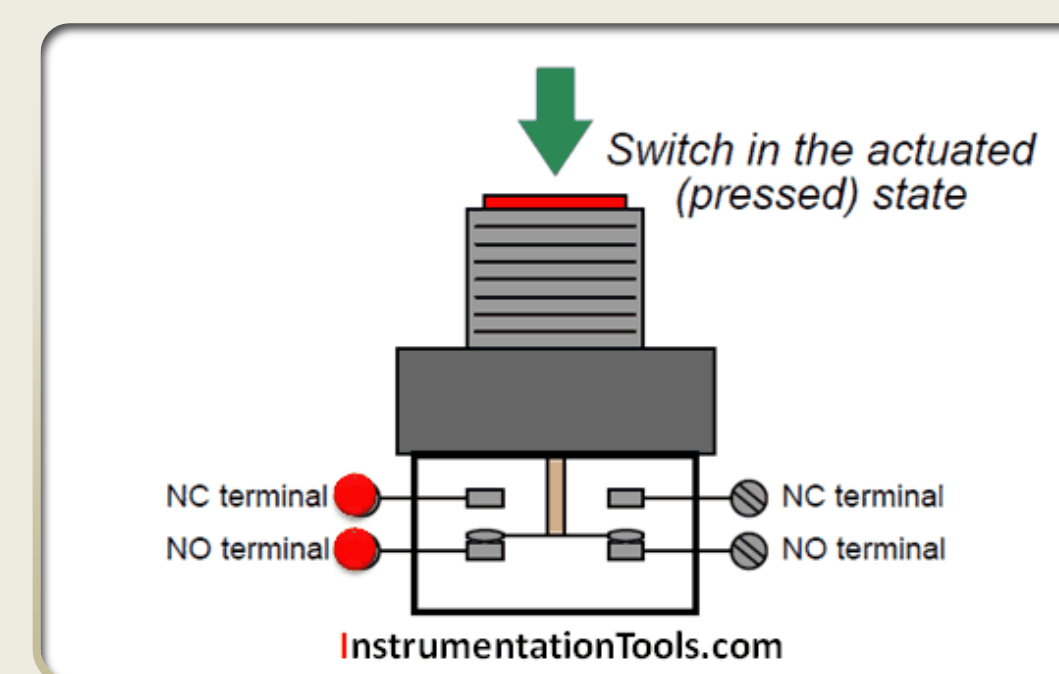


Figure 2. When switch is activated.



Figure 3. Gas Sensor



Figure 4. Practical representation of circuit

## RESULTS

- As discussed Accident Indication message, Alcohol indication message and theft security alert message is send to the mobile like in the format as shown below

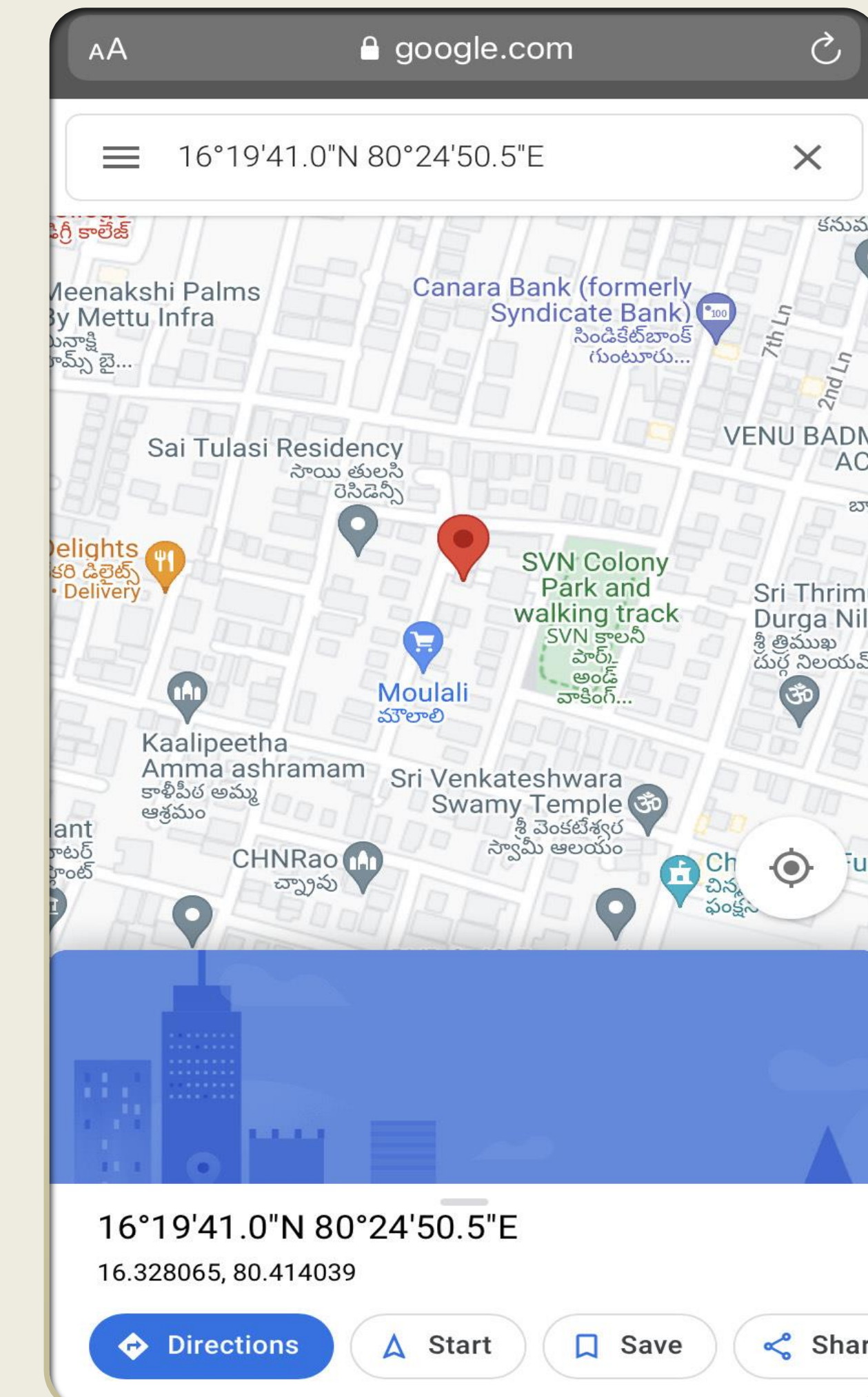
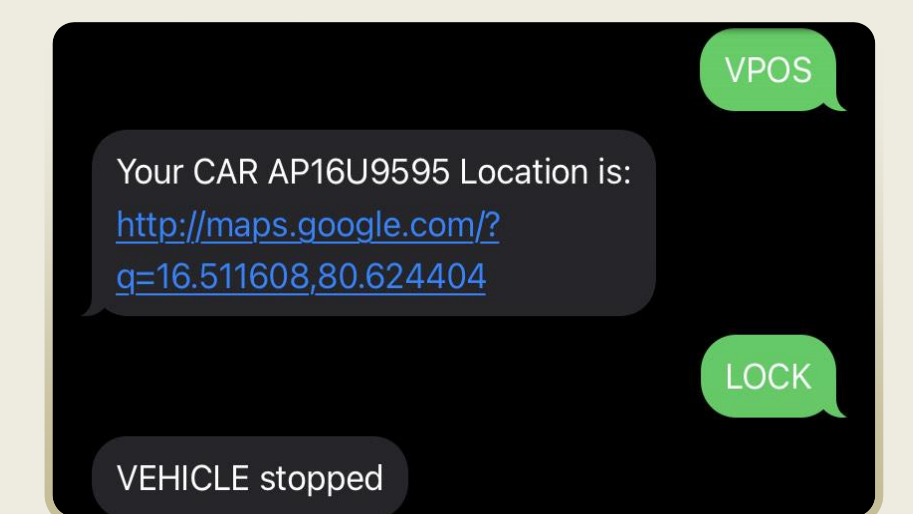
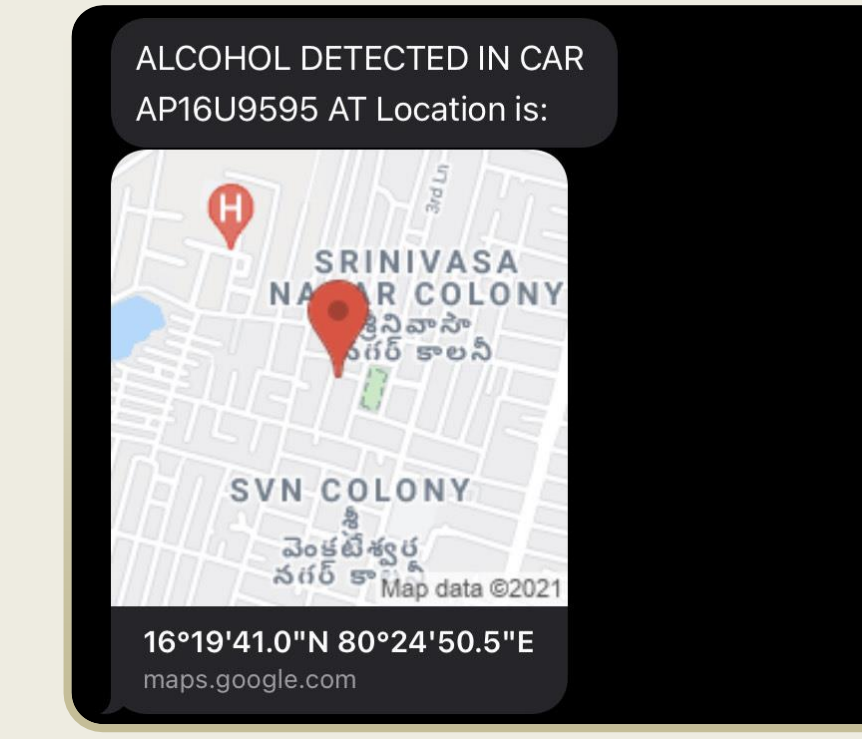
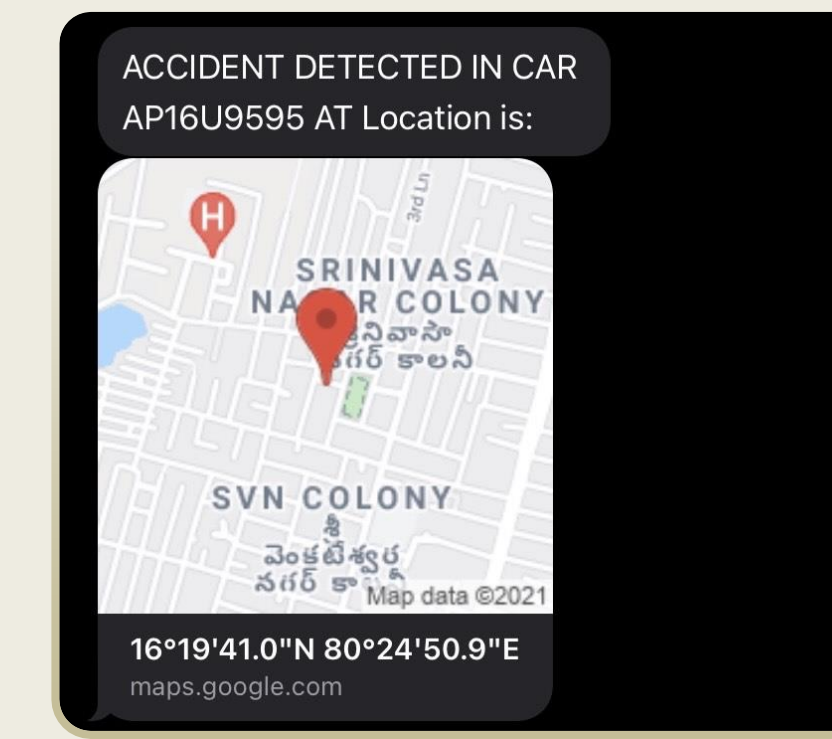


Fig. Navigation picturization IN received message

## DISCUSSION

Approximately 1.35 million people die each year as a result of road traffic crashes. Accordingly, the 2030 Agenda for Sustainable Development has set an ambitious target of halving the global number of deaths and injuries from road traffic crashes by 2020. Road traffic injuries cause considerable economic losses to individuals, their families, and to nations as a whole. The cornerstones of this approach are safe roads and roadsides, safe speeds, safe vehicles, and safe road users, all of which must be addressed in order to eliminate fatal crashes and reduce serious injuries.

## CONCLUSIONS

An automotive anti-drunk driving system and accident detection system with real-time monitoring is introduced. This thought solved the problem i.e., Accidents due to drunk & drive. The developed system starts the vehicle only when there is no alcohol taken by the driver. The vehicle automatically stops if the alcohol level is more than permissible level or when the vehicle met with an accident and subsequently raises alarm and sends SMS along with location on google maps. It also sends theft information to the respective persons with the location of the vehicle and stops the vehicle with a LOCK command.

## REFERENCES

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- Bhuta P, Desai K, Keni A. Alcohol Detection and Vehicle Controlling. International Journal of Engineering Trends and Applications. 2015; 2(2): 92-97.