

## Trailblazing for Transit

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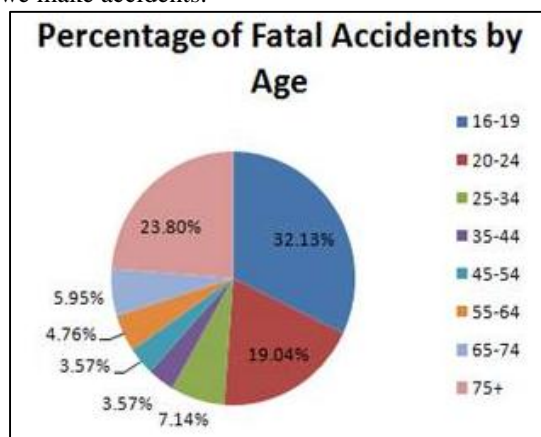
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**Abstract**— The search of being smart is overwhelming all over the nation. If the requirement is high, why not the automobiles being smart? The main motto of our paper towards vehicles being smart is due to, lack in people. The major cause for collision between automobiles were unqualified drivers (license less), drunken drive and, sudden medical issues. To overcome this, we are here with a wonderful solution were to Update the vehicle and groom its smartness”. Traditional and ancient methods of igniting the engine will be by just the insertion of a key. Here, we integrated our ideas where starting a vehicle with the help of key, RF license card (which holds the license number, user details and their finger print). On the handlebars or steering wheels, we place sensor to measure the pulse rate and his/her thumb print by which we can approximately detect the person is drunk and match the finger print with the license respectively. With the use of controller, we check that all the condition satisfies and then allow the vehicle to ignite. GPS facility can be installed for personal vehicles for tracking in case of theft. For public transit we employ IOT to update the information about the driver along with the time of departure which can be used for the authorities to monitor them at ease. The implementation of this will set the roads free from tasting bloods. Women security stands as a big threat, for emergency purpose a person can access any vehicle by ignoring these conditions, use of a button but once it is used GPS starts tracking the vehicle and intimation will be sent to the police.  
**Key words:** RF License Card and Reader, Biometric Sensor, Pulse Rating Sensor, Controller (CC3200), IoT, Heart Beat Monitoring

### I. INTRODUCTION

Everyone has a dream to go on wheels rather to walk for switching places. People having a good financial atmosphere have the guts and tendency to buy a car or a two-wheeler or sometimes even other vehicles that run in most of crude oils. Buying them is only their goal and the way to use it never bothers. It is a usual practice that once when the item is bought, we don't know the value of it likewise we buy car and we make accidents.



### II. SOLUTION

When we were travelling by road, our eyes were blood red. We saw a live accident and it was because of a minor person who is not fit for driving, has been driving his car. In the present, we don't have any automation to stop a driver who is minor, drunk, ill & much more. Thinking wise, it is the basic responsibility of an individual, not to cause hard time for the public as well as to self. This comes to the conclusion of the problems, which causes accidents to happen, they are license less drivers (not fit for driving), drunken drive, and sudden medical issues. We found many problems and the above was the major one. Hence finding the way to solve it was a quite big task.

Introducing many engineering components into the vehicles made easy, not to make black lanes wet with human red liquid. They were, first making LC. Was that a easy task? A quite a bit, An LC will contain all the necessary details like name, address, guardian number, name of the driving school, mobile number and finally FINGERPRINT. All the 10 fingers are scanned and LC has saved those. How to check with this? Keeping a BS will scan the fingerprint of the driver and if the prints in LC and BS are matched then he is free for driving. So, the police are stress free to check the license of the driver as once the vehicle is rolling on his wheels then obviously the driver is licensed.

One of the major causes is sudden medical issues, what can be done? Placing HBM in steering wheels or tying the HBM watch on his/her wrist will continuously check the rate of beats. If the driver is medically unfit then he is not able to drive his vehicle and so red blood outside the body.

In case of emergency, there is an emergency button especially for women drivers to start the vehicle in case chasing of the thieves or some other emergency we have a danger button under the seat so that if pressed the location is been shared to nearby police station to track easily. And multiple use of this is been blocked and if pressed unnecessarily then the required amount of fine should be paid.

Thus, the accident free roads are being invented by the team and soon we can set the roads not to taste the blood and only the taste of black rubber tires.

#### A. Other Recommendations

We have not included in this basic idea of anti-accenting and this will give an update using GSM facility to the blood relations sitting in home waiting for their loved one's returning home. Sending messages to them, if the driver is not fit enough.

Everywhere we have a caution board and the quotes will be "Speed Thrills but Kills" but our nostalgic quote will be "Don't spend your mother's milk, for free, to the road as blood".

### III. COMPONENTS

We are in need of various components and Evolution modules. The Evolution module is the boards like CC3200, GPS and GSM, buzzer, Smart card reader. We also use sensors like Pulse monitoring sensor, Fingerprint (biometric) sensor. We have integrated various components, EVMs and sensors into a single product to lead only black roads and not the red paint.

#### A. GPS

We are using this GPS module to track the vehicle in case of emergency as said earlier. In case the force applied on the red emergency button, then the information about the vehicle will be sent to the nearby police station.

#### B. License Card (LC)

The card, where we are going to integrate all the necessary information into a single card using appropriate software.

#### C. LC reader

This reader reads or identifies the LC inserted into the reader and the details programmed are displayed to the viewer.

#### D. Finger Print Sensor

By the word sensor, it is symbolized to sense the finger print and passes to the controller.

#### E. Heartbeat monitoring sensor

This sensor measures the pulse rate of the person and passes to the controller.

#### F. Controller[CC3200]

The use of controller is to check whether the given information in LC and as well as the initial checking information gets matched with each other.

#### G. Wi-Fi module:

This is present inbuilt in the controller which is used to update the information about the chauffeur and the time of arrival and departure in case of public transit.

### IV. LITERATURE SURVEY

#### A. Introduction to Fingerprint sensor<sup>[1]</sup>

The biometric which we used was Optical R\_305 module, which has red flashes, which is used to scan the prints of the finger. The beauty about this module is, it can store up to 264 fingerprints without any external memory.

#### B. Basics about the usage of pulse<sup>[2]</sup>

It was clear from AHA [American Heart Association] that, pulses ranging from 50-110 are said to be in normal condition. The terms, Bradycardic, below 50, said to be sleepy and giddy and Tachycardic, above 110, are in unconscious state.

#### C. Controller skills<sup>[3]</sup>

The controller which was used here was CC3200, which has an inbuilt Wi-Fi module with micro USB slots. The platform to code our system was ENEGRIA which is not an open source. Integrating the hardware components and coding them with basics has been learned.

#### D. Global Positioning System<sup>[4]</sup>

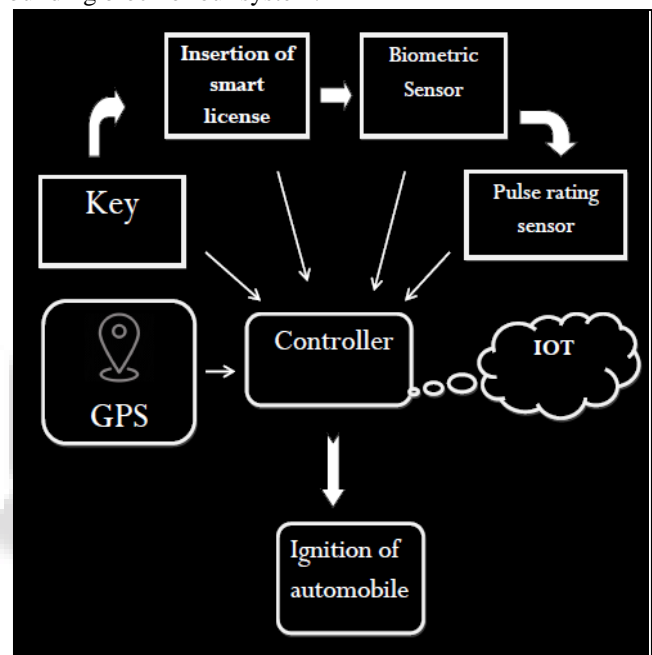
Latitude and longitude values can be easily taken from the GPS module, but to locate that in the map is the main challenge. Usage of API and making a public launch, is done, which is the attractive part of the work.

#### E. Internet of Things<sup>[5]</sup>

Easy way to use Internet of things is just by saying IOT, but to collect the data, even the false one and uploading it in the platform and making it visible only to the authorizers for future use was a big task. Saving all the data to retrieve it later is also inculcated in this work.

### V. BLOCK DIAGRAM

The below block diagram represents the basic functional building block of our system.



From the block diagram, it is clear that, the output is to ignite the vehicle with respects to various inputs. As usual, insertion of key feeds power to the electronics present inside the vehicle. The main part, being the controller controls each and every component. Insertion of smart license block gives us an idea about the contactless cards which is provided by the respective company. That has to be scanned, and the details present in the card are fed to the controller. The controller cares with the fingerprint details present in the card and on live. On live fingerprint and the cards fingerprint is to be matched. This is again done by the same controller. Next, counting of pulses starts. Having some calculations and taking the mean and average, the controller says that the person driving is allowed or not. On authorization, the controller gives the start to the engines of the vehicle.

#### Note:

The above block diagram is only for the true case. If there were some false data, then the controller will not allow the vehicle to start.

Apart from this, even if there was a good flow of the process or some blockage or misuse, signals from the GPS and signals into the IOT platform will not be stopped.

## VI. CONCLUSION

As we have all the rights and are very careful in people's life, we have taken a remedy to completely avoid accidents and thus setting a hassle-free journey from point to point. Thus these integrations helps the society as well as the owners of car and leading the world a collision less and not letting the roads to taste various blood groups.

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