Alcoholic sensor to side step drunken driving road accidents

PoojaDeep M.
poojadeepm.14cs@saividya.ac.in
Sai Vidya Institute of Technology, Bengaluru, Karnataka

Varshini B. N.
varshinibn.14cs@saividya.ac.in
Sai Vidya Institute of Technology, Bengaluru, Karnataka

Syed Salman S
syedsalmans.12cs@saividya.ac.in
Sai Vidya Institute of Technology, Bengaluru, Karnataka

Safir Ahmed M.
safirahmedm.15cs@saividya.ac.in
Sai Vidya Institute of Technology, Bengaluru, Karnataka

ABSTRACT

As for the survey done on the drunken and driving accidents are becoming more day by day. To overcome this issue we can initialize the alcoholic sensor and seat belt sensor to the vehicles. If we place an alcoholic sensor in the vehicles that sensors will identify the percentage of alcohol containing in the body and allow the engine to gets starts if the percentage of alcohol is more than the limit ignition will be blocked by the sensor. To sidestep the drunken driving accidents our proposed work may be useful to society. This system is integrating on the alcohol sensor, seat belt sensor with a microcontroller, relay switch and battery. The alcohol sensor used in our project is MQ-3 which detect the presence of alcohol content in human breath. Vehicle ignition system gets power from the battery through a relay switch. The ignition system will operate based on the level of Blood Alcohol Content (BAC) in human breath detected by the alcohol sensor and if the seat belt is not used then the sensor will not allow microcontroller supply power to spark plug.

Keywords— *BAC (Blood Alcohol Content)*

1. INTRODUCTION

Now a day's accidents are increases due to inadequate driving. To avoid this accident by using advanced technology. The main goal of our work is to slide step to drunken and drive accident. The below fig1 block diagram explains the automatic vehicle engine ignition system based on the alcohol detector (MQ-3) sensor and seat belt buzzer, really motor drivers are the major prerequisites for the system construction. The alcohol detector sensor will be attached to a microcontroller. The input for the microcontroller is identified by the alcohol detector sensor through the breath of the person. The next scenario of our work shows the levels of alcohol measured by the sensor and compared with set in limits. If the set limit of consumption of alcohol is less the system actively relay the vehicles. The system will lock the engine at the same time will automatically give a buzzer. By this, we can slide step accidents by checking the driving people on the roads software program for the system developed in embedded c.
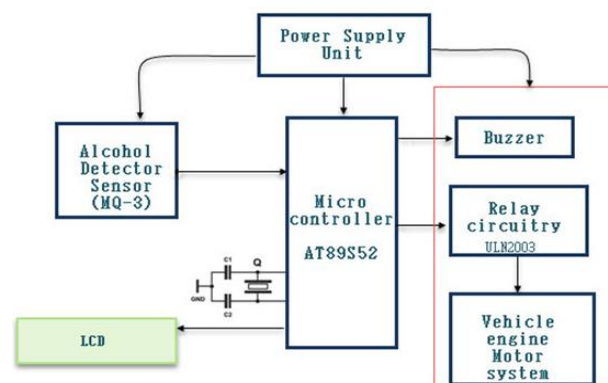

Fig. 1: Model of the system

2. RELATED WORK

S.P. Bhumkar et.al [8] researched in this paper"Mishap shirking and discovery on parkways" In this procedure, the weakness will be recognized right away, what's more, customary devices the occasions driver and outsider. The new weakness discovery

algorithms and strategies utilizing eye squint, liquor, sway, gas, and so forth sensors. Through look into displayed in this paper. K. Srijayathi et.al [9] investigated in, "Usage of the Driver Languor Identification Framework" In this paper includes controlling mishap because of obviousness through Eye squint. Here one eye squint sensor is fixed on vehicle dashboard in front of the driver, on the off chance that driver misfortunes cognizance, at that point it alarms the driver through bell to keep the vehicle from a mishap.

Abhi R. Varma et.al [10]proposed "Mishap Anticipation Utilizing Eye Flickering and Head Development" Eye based control will be the eventual fate of a wide range of gadget control, in this manner making the activity so agreeable and a lot simpler with less human nearness. A few hazard activities can be effectively performed with this kind of use and further research and concentrate on these zones will make another pattern of associating with machines. Consequently, a framework to monitor weakness by recognizing eye flicker and head development was created utilizing self-created algorithms.

S.P. Bhumkar et.al [11] proposed "Insightful Vehicle Framework for Mishap Counteractive action Utilizing ARM-7" In this system the exhaustion will be distinguished right away furthermore, ordinary devices the occasions driver and outsider.

3. PROPOSED WORK
In our present scenario's explains that how our work had been modified for implementation. As we see in figure 2 there are some of the materials used in implementation of our work such that capacitor, relay, alcoholic sensor seat belt buzzer .in our work mainly used is alcoholic sensor and seat belt buzzer, wherein alcoholic sensor can be known as suitable for distinguishing liquor focus on your breath, much the same as our normal breathalyzer. Meanwhile seat belt buzzer come in to picture as alarm notification with glowing red light.
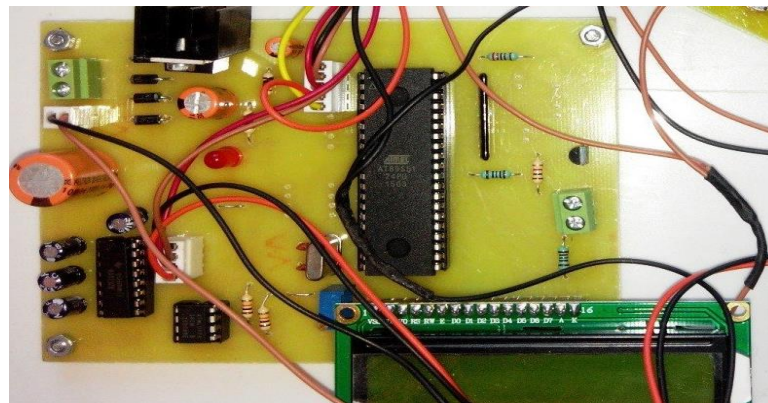

Fig. 2: Module design

4. WORKFLOW OF PROPOSED SYSTEM
In our work shows that when drunken person tries to start vehicles the MQ3 sensor will senses the alcohol content in the person, seat beat buzzer notify to person and it sends the signal to the microcontroller then it will not allow the ignition spark plug if any of the conditions fail then the vehicles do not get starts.
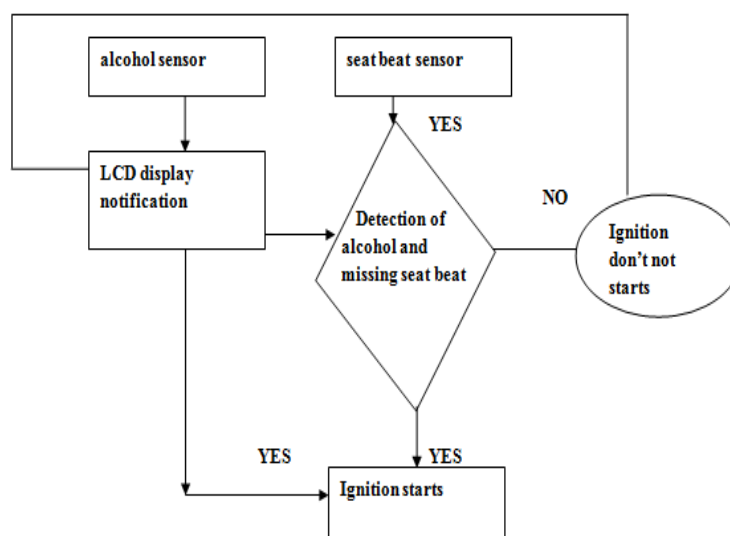

Fig. 3: Flow Diagram

5. RESULT AND DISCUSSION
The proposed work done is tested, by placing model in to the vehicles as soon as person gets in to the vehicles by taking his breath alcoholic sensor to detect the percentage of the blood alcohol content in his body and if seat belt in use then it starts buzzer sound then both sensor sends the message to microcontroller to ignition of spark plug. If the two senor condition identify and BAC is more and seat belt missing, if any of this condition is in failure then vehicles do not start Figure below shows the test process.

Fig. 4: Seat Belt Buzzer Sound Notification   **Fig. 5: Sensing Breath To Detect The BAC**

6. CONCLUSION

Thus finally we conclude that alcoholic sensor and seat belt buzzer are more efficient to prevent many accidents. Which as been proposed for embedded means of alcohol sensor and seat belt notification buzzer. This is the most safety element and useful for the people who consume more alcohol were not able to drive a vehicle in a risky situation will help to avoid road accident. Safety belt as a security include diminishes odds of significant wounds or even death toll in a mishap, thus to ensure that individuals wear a safety belt; driver assistive wellbeing framework has been proposed.

7. REFERENCES

[1] M. Rajesh Kumar, A novel method of vehicle accident protection and early precaution system, International Journal of Innovative Research in Computer and Communication Engineering, 2(1), 2014.

[2] R. Manoj Kumar and R. Senthil, Effective control of accidents using routing and tracking System with an integrated network of sensors, International Journal of Advancements in Research & Technology, 2(4), 2013: 69.

[3] Nithin K. Kurian and D. Rishikesh, Real-time based drivers safeguard system by analyzing human physiological signals, International Journal of Engineering Trends and Technology, 4(1), 2013.

[4] Ashish Bodanwar, Rahul Mudpalliwar, Vikrant Pawar, Kaustubh Gaikwad, Drowsy driving detection system, International Journal of Engineering and Advanced Technology, 2(4), 2013.

[5] HonglieLeng and Yingzi Lin, Design & experimental study of CNT sensor for measuring alcohol content with short response delay, IEEE Sensor Journal, 201: 1091-1097.

[6] Shivam S. Shinde and Aditi V. Lawate, Intelligent automobile accident avoidance system, International Journal of Scientific & Engineering Research, 4(10), 2013.

[7] K.P. Prashanth, KishenPadiyar, P.H. Naveen Kumar and K.Santhosh Kumar, Road Accident Avoiding System using Drunken Sensing Technique, International Journal of Engineering Research & Technology, 3(10), 2014:818-823.

[8] S.P. Bhumkar, V.V. Deotare, R.V. Babar "Accident avoidance and detection on highways" Volume3, 2012.

[9] K. Srijayathi, M. Vedachary "Implementation of the Driver Drowsiness Detection System" Volume 2, September 2013.

[10] Abhi. R. Varma, Seema.V. Arote, Chetna Bharti "Accident prevention using eye blink and head movement" 2012.

[11] D. B. Rane, Gaikwad Pooja Rajesh Devkate, Rashmi Rajendra "Accident avoidance using eye blink detection" pp: 1880-1887, 2015.