

HEALTH MONITORING SYSTEM IN MOVING VEHICLES

B Guru Kiran¹, Chaitra Nayak J², C Venkata Vamsi³

^{1,2,3}School of ECE, Reva University, (India)

ABSTRACT:

In this structure we will use sensors to evaluate the Health condition of the driver. Notwithstanding whether he/she is feeling the squeeze and moreover any chances in the heartbeat. By and by multi day's most of the setbacks are going on in light of tiredness, redirection, or horrendous point of view drivers. To reduce this we are showing Health watching structure for the drivers on the moving vehicle. People are putting more vitality in their cars, grow more discerning and included with watching their very own prosperity, cars may transform into an especially consistent place to screen scratch prosperity and wellbeing pointers. In this system we screen most indispensable urgent parameters of the driver will give his prosperity condition, and a sensible assessment of the known restorative condition. Nevertheless, recognizing any assortment in the fundamental signs or the known restorative condition (BP, diabetes) will help in making the right therapeutic move, for instance, taking the arrangement, instructing the thought provider, disturbing the relative or stopping the auto (normally or with intervention). To decrease these mishaps the vehicle business has experienced an upheaval in the ongoing past and autos are basically higher end microchips on haggles on In-auto wellbeing and health checking will turn into the key differentiator. It is vital not to be abandoned in this race to offer the client the best "medicinal gadget" auto.

Keywords: Automatic Brakes, Body temperature, ECG sensors, Health monitoring, Heart rat.

I. INTRODUCTION:

The primary driver of Road mishaps are: Over speeding, Distractions to driver, drunken driving under impact of liquor.

In this way, we present a gadget which can screen the driver wellbeing in the moving auto which empowers for the protected drive. The improvement of in-vehicle observing framework can diminish the mishaps which happen because of the deadly mistakes done by drivers while driving vehicles. It is exceptionally useful for the elderly drivers to check their wellbeing conditions in auto itself while going to work or before going for work. An auto coordinated therapeutic sensor framework could be equipped for recognizing such basic conditions and start proper estimates going from drive intercessions to crisis administrations.

In these day's kin with perpetual ailments rising, individuals everything being equal and from all wage bunches are adopting a more involved strategy to wellbeing and health. A larger number of individuals presently visit online wellbeing locales than go to the doctor's office, making wellbeing and health the most famous movement on the web after email and general inquiries.

As indicated by an examination led by Pew Research:

-
- 93 percent said they search out online wellbeing data since it's advantageous – they need to get data all alone timetable, not the doctor's.
 - 83 percent said this is on the grounds that they can get more data from the Web than they can get from their own doctor.
-

In India, according to A National Crime Records Bureau (NCRB) report uncovered that consistently, in excess of 135,000 car accident related passing happen in India. About, 150,000 individuals kick the bucket each year in street mishaps in an immense nation like India. A report uncovers that consistently in the nation is confronting a genuine street mishap and like clockwork a man bites the dust in a street mischance.

In the United Kingdom, the time spent going via auto midpoints 383 hours for every individual every year, or around 38 minutes per day. In the United States, the across the nation normal drive time approximates to 24 minutes out of every day.

In the United States, the across the country normal drive time approximates to 24 minutes, with Americans spending over 100 hours a year driving to work. In the United Kingdom, the time spent going via auto midpoints 383 hours for each individual every year, or around 38 minutes per day.

II. LITERATURE SURVEY:

2.1 ArunSahayadhas [1]proposed a system Detecting Driver Drowsiness of a driver, Based onthe drowsiness of a driver and behavior of thedriver like eye blinking or facial expression and also by using ECG sensor depends on the hearth rate. It is too difficult by using the facial expression, so we have made it by using IR sensor so that we can easily detect whether he/she is sleeping or not.

2.2 Heart Beat sensor:

Emotiv EPOC is a 14-channel device that requires the application of saline solution on the user's head to increase the quality of the EEG signal recorded. In this we check the patient's wellbeing condition by observing the heart beat. The heart beat is observed with the heartbeat rate of the body. The high force light sensor detects the extension and compression of the heart with the assistance of the nerves. That shaft will transmit the flag to the recipient also the minuet change in the beat is seen as the heart beat. On the off chance that there is any adjustment in the beats at that point it is seen as the adjustment in the heart and after that the controller will get an aggravated heartbeat check which demonstrates the blame or breakdown of the heart.

- 2.3 International Conference on Smart Electronic Systems – 2016 [2], they proposed a system to detect the body temperature of the drivers by using lm35 temperature sensor, Scanadu scout is a sensor used to detect the temperature and heart rate of the human by placing this device near forehead within 10 seconds.
- 2.4 Real Time Car Driver's Condition Monitoring System Heung-Sub Shin [3], in this paper, auto driver's condition observing framework is composed by utilizing ECG and PPG sensors to get physiological flags on the guiding wheel to beat the impediments of existing estimation techniques. Estimated ECG and PPG signals is transmitted to base station by means of individual zone organize for putting away, dissecting, and showing the data with the weakness and sluggishness condition.

III. WHY AND HOW TO SCREEN THE DRIVER?

3.1. For what reason to screen the driver?

The primary reason of happening the mischances is the drivers. Because of the sleepiness (tiredness), diversion, awful perspective. The regulating of human factors needs control, recording and checking of the most basic essential parameters of the driver.

3.2. How to screen?

Observing of the crucial parameters might be done rudely or non-rudely. It is of awesome significance to take note of that in-auto wellbeing observing might be generally select in arrangements than obligatory. At no time of time, solace of the driver ought to be imperiled and that would improve non meddling observing a possibility for in-auto wellbeing checking.

3.3. WE MONITOR THE HEALTH OF THE DRIVER BY USING BELOW SENSORS:

3.3.1. Body temperature:

Utilizing IR sensors it is conceivable to gauge body temperature in a non-contact way. In light of the temperature estimated lack of hydration level might be assessed in view of the separation navigated, vitality spent while in the driver's seat.

3.3.2. Hearth rate:

Breath rate, which is a critical fundamental sign, may likewise be observed either utilizing ECG/EPIC sensors or utilizing accelerometers.

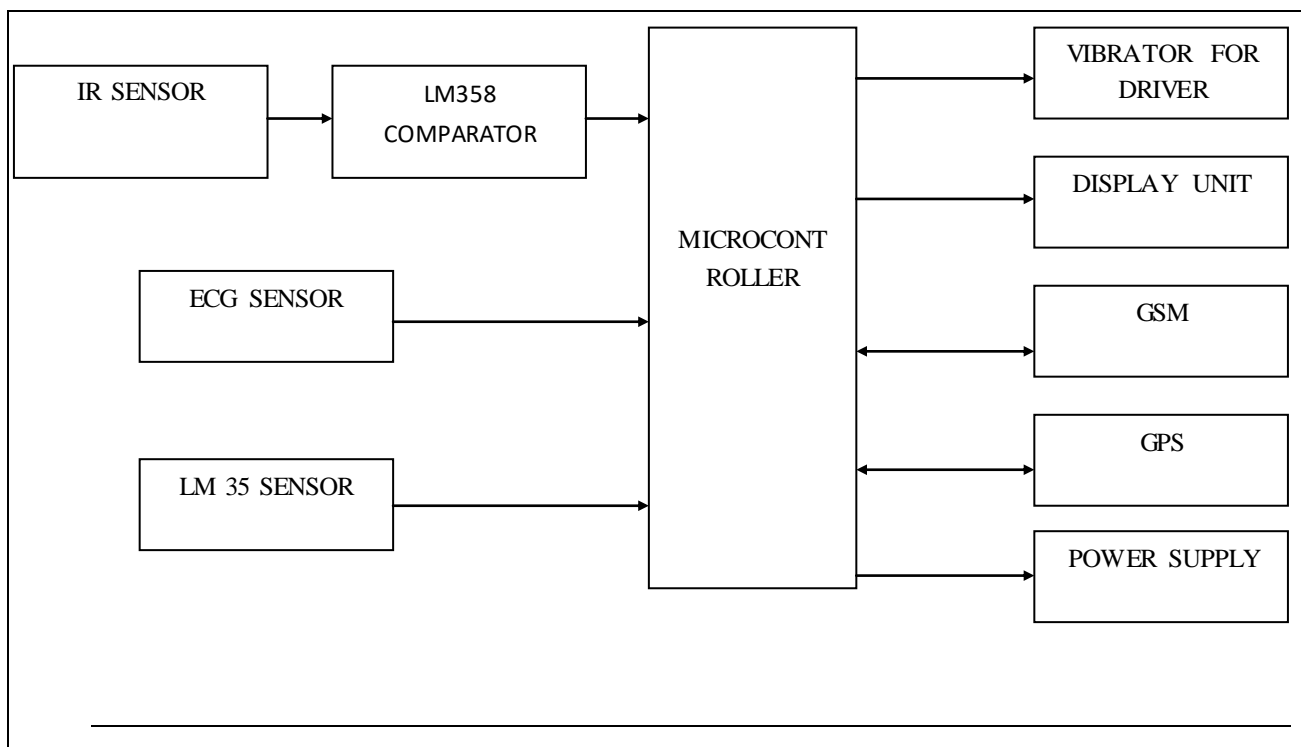
3.3.3. Checking the tiredness of driver:

An infrared camera is introduced, which maps the human face to recognize whether the driver is drowsing off to rest or observing far from the street. It could likewise be made to apply brakes or alarm the driver through speakers or vibration.

3.4. Promote improvements:

Motion acknowledgment, lessens driver diversion and upgrades wellbeing.

We can additionally give the sensors close entryways which opens naturally when we move our legs alongside the entryway sensor.

IV. BLOCK DIAGRAM:**Fig 4.1:** Block diagram of health monitoring system**V. CONCLUSION:**

We proposed wellbeing observing framework in moving vehicle principally to diminish the a large portion of the mischances which are happening by wellbeing state of the drivers, byutilizing this framework we can keep up the wellbeing state of the elderly drivers, An auto coordinated therapeutic sensor framework could be equipped for distinguishing such basic conditions and start suitable estimates going from drive mediations (e.g. wellbeing auto pilot) to crisis administrations (e.g. auto to auto or auto to crisis correspondence administrations, qualified rescue vehicle call).

VI. REFERENCES:

- [1] Detecting Driver Drowsiness Based on Sensors (2012) Authors: Arun Sahayadhas *, Kenneth Sundaraj and Murugappan A rehab.
- [2]International Conference on Smart Electronic Systems – 2016 KLE Society’s Dr M S Sheshgiri College of Engineering & Technology, Belagavi International Journal of Technology and Science, ISSN (Online) 2350-1111, 2350-1103 Volume 9, Issue 2, 2016 pp. 38 - 40
- [3] Real Time Car Driver’s Condition Monitoring System [3] Heung-Sub Shin*, Sang-Joong Jung*, Jong-Jin Kim and Wan-Young Chung Department of Electronic Engineering Pukyong National University Busan 608-737, South Korea
- [4]Journal on “In Car Wellness” by TATA.

[5]M.SHARATH, M.SUDHAKAR IEEE paper on “Vehicle Health Monitoring System Using CAN”

[6]Heung-Sub Shin, Sang-Joong Jung, Jong-Jin Kim and Wan-Young Chung.IEEE paper on “Real Time Car Driver’s Condition Monitoring System”

[7]Jurgen R., McGraw-Hill “Automotive Electronics Handbook” 1995.

[5]Riley, R. Q., SAE “Alternative Cars in the 21st Century” 1994.

[6]<http://www.caranddriver.com/features/can-your-car-be-hacked-feature>
