# Artificial Intelligence for Audio control , safety In Automobile

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**Abstract—** *The Artificial intelligence is a booming technology in today's world. Artificial Intelligence (AI) is the study of how to make computers (machines) do things which, at the moment, people do better. There are many applications of the artificial intelligence. The Artificial intelligence is currently used in betterment of interactive gaming, Virtual Reality. The use of artificial intelligence in the field of automobile might have a huge impact on society.  Currently Self-parking, automatic emergency braking, adaptive cruise control, and lane keeping are the field in which automobile artificial intelligence is achieved.It incorporates various technologies such as Blue Eye Technology, psychological parameter sensor, speed detector and motion sensor. These sensors analyze driver's mentality and can act accordingly to reduce stress to the driver. The sensor can also takes a track of external people behavior too to control the  speed, stability  of the car.*

**Keywords— blue eye technology, psychological parameter sensor, virtual reality, High speed Infra-red sensor , Artificial intelligence speech recognition**

## 1. INTRODUCTION

Artificial Intelligence is the science and engineering of making intelligent machines, especially intelligent computer programs to suit his wish and desire. It is related to the similar task of using computers to understand human intelligence, but AI does have to confine itself to methods that are biologically observable to certain extend. As a theory in the philosophy of mind, artificial intelligence (AI) is the view that human cognitive mental states can be duplicated in computing machinery for his welfare and for his sophistication. The artificial intelligence in audio control and safety focuses on driver as well as his fellow being well fare. The audio controller focuses on song sequence which plays automatically based on various biological observations to control their emotions. The high speed IR sensor takes care about the driving speed external people crossing the road .In case of audio entertainment the psychological parameter sensor takes care . Thus a complete integration of certain sensors would bring out betterment in artificial intelligence.

## 2 .LITERATURE SURVEY

- The artificial intelligence network by S. A. Oke University of Lagos Nigeria International Journal of Information and Management Sciences Volume 19, Number 4, pp. 535-570, 2008.
- Ethics of artificial intelligence 28, May 2015,volume521,2015 Macmillan Publishers Limited.
- Artificial Intelligence and Pro-Social Behaviour Joanna J. Bryson , University of Bath, BA2 7AY, United Kingdom.
- Intutive automobiles, John starafford,23 march 2008, Texas university.

## 2. MOTIVES

The motive behind the project ideas are

- To make sophistication to user
- To ensure  safety to user and road people
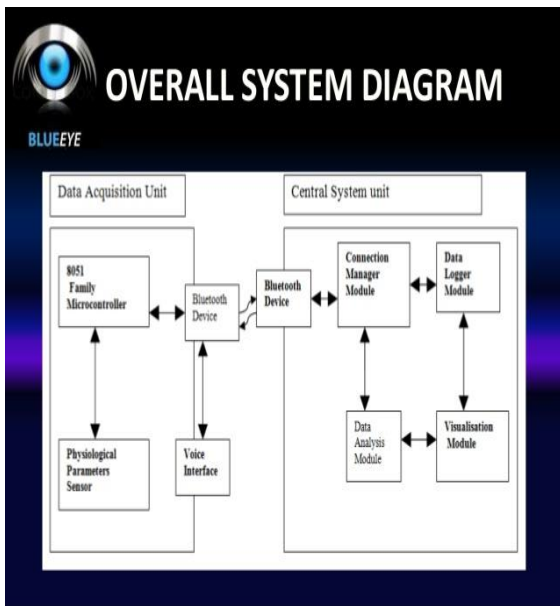- To understand user requirement and act accordingly.

## 3. COMPONENTS

### Blue Eye technology

Blue eye is a technology, which aims at creating computational machines that have perceptual and sensory abilities like those of human beings .The basic idea behind this technology is to give computer human power. For example, we can understand humans 'emotional state by his facial expressions. If we add these perceptual abilities to computers, we would enable them to work together with human beings as intimate partners.. It can able to actuate, take control or do some specialized action based on person's eye ball

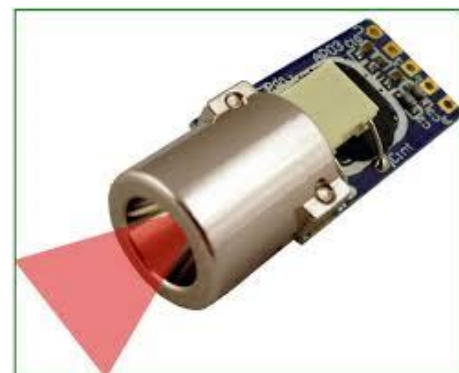### Movement.

## Psychology parameter sensors

It's an emotion seeking sensory device which keeps track of pressure, temperature, humidity, heart beat rate of the person .It takes decision of appropriate song sequence.It also seeks of persons health and drive accordingly.It comprise of

- Pressure sensor
- Heart beat sensor
- Temperature sensor
- Galvanic skin response(GSR)sensor
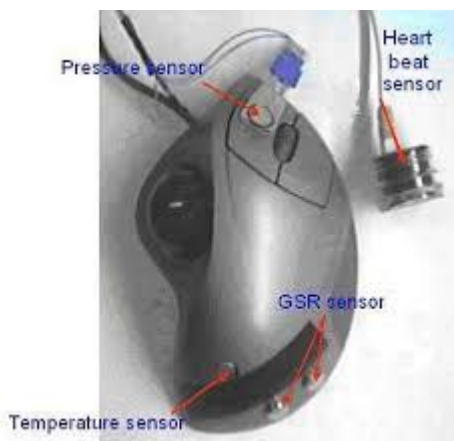


### a)Pressure sensor

Detects pressure rate of person in order to seek the person emotion.

### b)Temperature sensor

During various emotions temperature varies which is tracked by this sensor.

### c)Heart beat sensor

Based on heartbeat rate the sensor generates suitable pulses.

### d)Galvanic Skin Response sensor(GSR)

This sensor generates responses based on sweat expelled from hands of a person.

High speed Infra-red sensor
This is a sensor which tracks of people around the vehicle i.e. People who are crossing across the vehicle. This sensor enables time when brakes have to be applied for safety. It has fast time constant of 0.3 msec .



Door opening alert

It consists of a RPM sensing device at door side.This sensor enables safety purpose of two wheelers crossing the vehicle. It enables the passenger to open the door after the two wheeler crosses.

Unlike Pole Repeller

It's an electromagnet  device which can create unlike poles to maintain a safer distance at high speeds.

Artificial intelligence speech recognisation
It helps to control audio, calls and driving mode.

3.1 WORKING

When a person is riding or travelling in a car the sensor keeps the track of their various biological parameters. It can perform following things

## I AUTOMATED AUDIO CONTROL

During driving the person might get various emotions. This psychological parameter sensors sum up the individual sensor responses and decides his emotion, before that the person has to preset the song sequence to counter act the emotions. Based on his preset song and sensors output the audio player plays song to suppress his emotion.

| | Component | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| Eigenvalue | 2.00 | 1.30 | 1.18 |
| Affect | | Loading | |
| Joy | .76 | −.19 | −.21 |
| Anger | −.60 | −.01 | −.03 |
| Tenderness | .51 | .21 | −.10 |
| Interest | .51 | −.34 | .25 |
| Jealousy | −.53 | −.69 | .23 |
| Guilt | −.38 | .44 | −.39 |
| Shame | −.24 | .43 | .43 |
| Fear | −.03 | .14 | −.59 |
| Sadness | .22 | .51 | .57 |

*Note:* Principal component analysis of ipsative affect scores
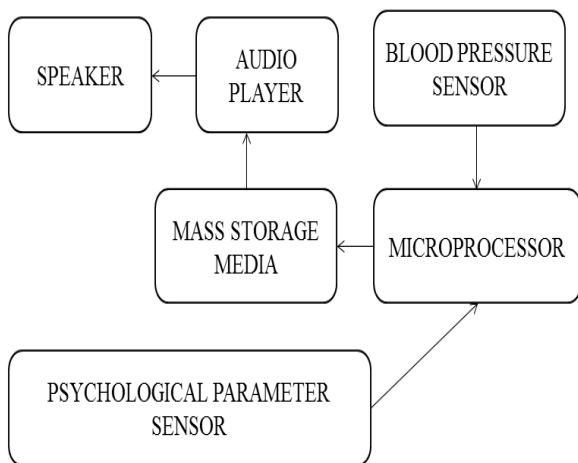


## II AUTOMATED VEHICLE CONTROL

The psychological parameter sensors seeks for driver's health and checks for adverse condition .Further it decides manual driving or Intuitive driving.

## III AUTOMATED PHONE AND MAP SEARCH

The speech recognition sensor takes care of making phone calls and search map locations.

## IV MAP NAVIGATIONS

Using blue eye technology zooms in or zooms out map data.

## V AUTOGUIDED PATH

When a person crosses the road the high speed IR sensors tracks the person motion and autoguide the steering direction to avoid accidents.
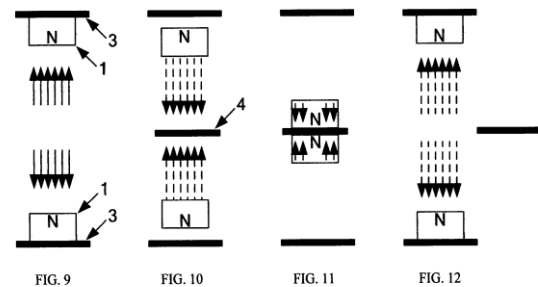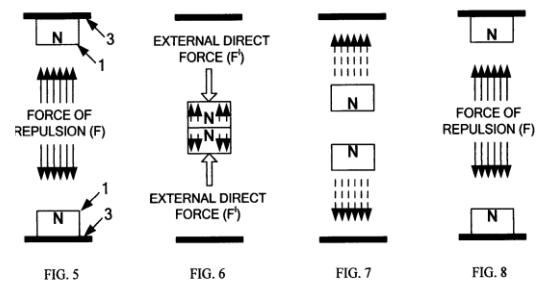
## VI DOOR OPENING ALERT

The speed governing sensor senses the speed and then it identifies the nearby coming two wheeler and generates a warning signal not to open the doors.
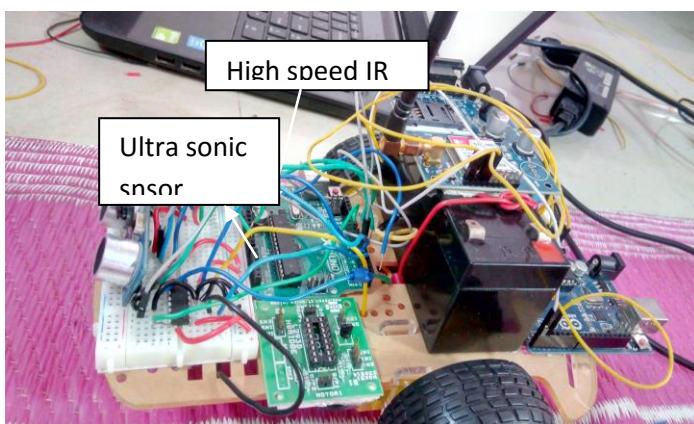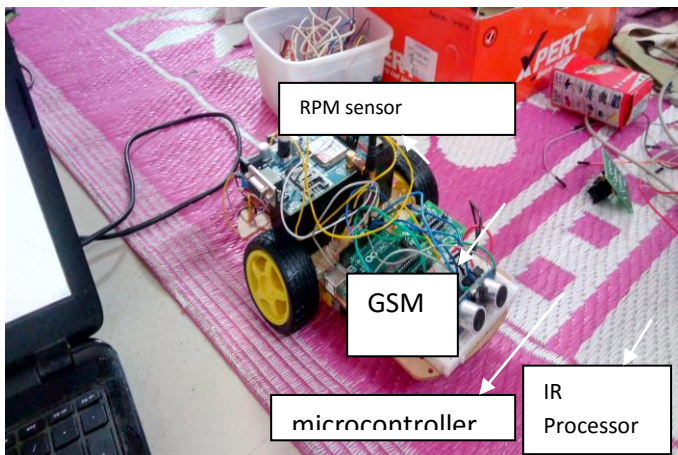


## VII DISTANCE MAINTANANCE

The distance maintance sensor works by electromagnetic reulsion .It works in accordance with ABS system to maintain vehicle stability.

## 4.PROTOTYPE



## 4. ADVANTAGES

### 1) Reduces stress to driver:

The work done by driver is drastically reduced due automation.

### 2) Reduces accident:

Since most of the things are automated by artificial intelligence. The chances of accidents are low.

### 3) Convenient to road users:

Due to use of high speed Infrared sensor, the road crossers can cross the road without any panic.

### 4)Enhanced safety to two wheelers:

Due to door alert sensor the two wheelers can cross aside a stand by car without any hazard.

## 5. COMPARISON

| S.NO | FIELD OF ARTIFICIAL INTELLIGENCE | | |
|------|--------------------------------|------|------|
|      | FIELD | TYPE | YEAR |
| 1 | Personalized Medicine Problems | Person alized | 6, December 2015 |
| 2 | tackle the healthcare spending growth | Person alized | May 16-20, 2015. |

## 6. CONCLUSION

Thus if we incorporate all these technologies it would increase sophistication to user and at the same time increases safety to other road users. As the artificial intelligence is still in the course of development each and every improvement will be a great boon.

## 7. ACKNOWLEDGEMENT

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## 8. BIOGRAPHIES

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