



IoT Base “Car Alert System”

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Abstract— Intelligent vehicles offer the potential to boost safety and convenience considerably for each drivers and passengers. As a district of the intelligent installation (ITS), the intelligent vehicle uses varied intelligent sensing and management algorithms to assess the vehicles. Distance sensor will help to detect the vehicle which is very close to backside of car, If Driver has drunk then our system won't allow him/her to start vehicle. Wiper/Rain detection if rain starts out system automatically start wiper. Day night sensor system is much smart to detect intensity of light. These all sensors are used here each and every sensor having different functionality. The system is in a ready position to find alcohol concentration in a person's breath sample and calculates the detected amount in terms of BAC (Blood Alcohol Concentration) for detecting Alcoholic user.

Keywords— Smart Wiper System, Intelligent Vehicle, Rain Sensing, Wiper Control, Alcohol, Drunk, Shadow, Light Sensor, Distance Sensor.

INTRODUCTION

Many good wiper systems try and regulate the wiper's speed and intermittent interval mechanically in line with the number of rain or snow. The key part of those systems is that the sensing element to live the number of water on the screen. In most systems, associate optical sensing element is employed for this purpose. This kind of sensors uses the very fact that the refraction angle and also the quantity of reflection of the sunshine area unit completely different once the screen is wet. Several sensors use many LEDs to emit the sunshine into the screen at a tiny low incident angle. Interval as a result of the number of precipitation on the screen perpetually varies in line with time and vehicle's speed. As a result of the manual adjustment of the wiper distracts driver's attention, which can be an immediate explanation for traffic automatic wiper systems exploitation some optical sensors with numerous levels of success. As an element of the intelligent transportation (ITS), the intelligent vehicle uses numerous intelligent sensing and management algorithms to assess the vehicle's atmosphere and assist the motive force with safe driving. Distance sensor will help to detect the vehicle which is very close users not able to see the back vehicle unfortunately, and then our system wills the alert to driver. If driver has drunk then our system won't allow him/her to start vehicle. If Rain starts out system automatically starts the wiper. Day night system is much smart to detect Intensity of light if the intensity is so poor him our system will start the headlight of the car and vice-versa.

SENSORS DESCRIPTION

Distance Sensor

Distance sensor will help to detect the vehicle which is very close users not able to see the back vehicle unfortunately, and then our system wills the alert to driver.

Alcohol Sensor

If driver has drunk then our system won't allow him/her to start vehicle.

Rain detection

If Rain starts out system automatically starts the wiper.

Day/Night Detection

Day night system is much smart to detect Intensity of light if the intensity is so poor him our system will start the headlight of the car and vice-versa.

LITERATURE SURVEY

1. Development of Vision based Control Smart Windshield Wiper System for Intelligent Vehicle

Explanation

Windshield wipers play a key role in reassuring the driver's safety throughout precipitation. the normal wiper systems, however, needs driver's constant attention in adjusting the wiper speed and therefore the intermittent wiper interval as a result of the number of precipitation on the screen perpetually varies in keeping with time and vehicle's speed. As a result of the manual adjustment of the wiper distracts driver's attention, which can be an on the spot reason for traffic accidents, several firms have developed automatic wiper systems mistreatment some optical sensors with varied levels of success. This paper presents the event of vision-based good wiper system that may mechanically change its speed and intermittent interval in keeping with the number of water drops on the screen. The system employs varied image process algorithms to find water drops and formal logic to see the speed and therefore the interval of the wiper.

2. Breathalyzer Enabled Ignition Switch System

Explanation

In this project, a breath alcohol detector that controls the switch victimization microcontroller is going to be developed. Rather than simply indicating and displaying the BAC share, the tester is going to be programmed to manage the switch, additionally as associate degree alarm and variety LEDs. The elemental parts of this method are the MQ-3 alcohol sensing element, PIC16F877A microcontroller unit, 2x16 characters LCD digital display and switch circuit. Compared to the already accessible detectors within the market, this method offers simplicity with intensive options and at a bottom value of production.

3. Mono-Camera Based Side Vehicle Detection for Blind Spot Detection Systems

Explanation

This paper proposes vision-based facet vehicle detection for blind spot detection systems. The planned algorithm uses a HoG cascade classifier so as to observe vehicles, and tracks the detected vehicles with Kalman filter. The proposed formula performs periodical vehicle detection instead of each frame vehicle detection and therefore the planned algorithm reduces the sleuthing image size by downscaling the original image and setting the region of interest wherever vehicles can exist. As a result, we will scale back the time interval for vehicle detection.

4. Intelligent Headlight Control Using Camera Sensors

Explanation

This paper describes our recent work on showing intelligence dominant a vehicle's headlights employing a forward-facing camera detector. Specifically, we have a tendency to aim to mechanically management its beam state (high beam or low beam) throughout a night-time drive based on the detection of oncoming/overtaking/leading traffics similarly as urban areas from the videos captured by the camera. A three-level call framework is planned that includes varied kinds of image and video content analysis, an SVM-based learning mechanism associated a frame-level call making mechanism.

PROPOSED SYSTEM

In This System we use different sensors Day night detection sensor, Day Light Sensors, Alcohol detector sensor these sensors having different functionality. Micro-controller having functionality, If user gives input and input containing about any sensor it will provide that type of output. Wiper system, Day Light sensor, Alcohol sensors these type of sensors.

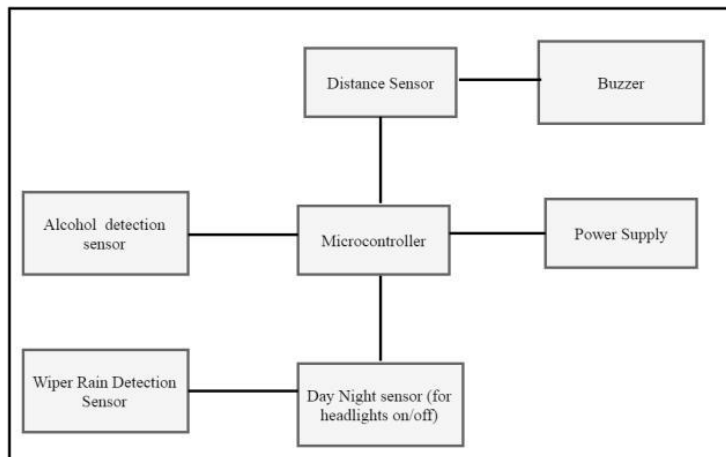


Fig 1: System Architecture

ADVANTAGES

- It reduces impact of accident
- Improve vehicle safety

GOALS AND OBJECTIVES

- It is cost efficient and available at low costs.
- Provide solution with use of technologies a Day night detection method is proposed by combining the shadow feature and the edge scattering feature.
- Although the sensor is capable of detecting other substances and misinterpret it as alcohol, but the sensitivity towards alcohol is much higher and this makes it a very reliable alcohol detecting device
- Here we are using sensor for the purpose of the assess the vehicle's environment and assist the driver with safe driving.

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