Signs with Smart Connectivity for Better Road Safety

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LITERATURE SURVEY:

MOHAMMED AL-TURK Published on “Signalized Intersection Control in Mixed Autonomous and Regular Vehicles Traffic Environment—A Critical Review Focusing on Future Control” IEEE 2022. Through the effective use of autonomous vehicles, recent advancements in industrial technology have provided new chances to address many issues with humans' stochastic driving behaviour (AVs). Maximum use of driving behaviour and the AVs' enhanced capabilities have made it possible. autonomous cooperative-based techniques for signalized intersection control will be proposed by researchers in a traffic environment for AV. In the future, AVs and conventional vehicles (RVs) will share road networks, symbolizing a dynamic mixed-traffic scenario made up of two distinct groups of cars. In such a complicated environment, it is a risk to compromise the safety and level of service, traffic operation, and control, difficult task. The current paper contains a thorough analysis centred on the signalized junction ways of control in a situation of mixed traffic.

Shubhankar Vishwas Bhate, Published on "Second International Conference on Inventive Communication and Computational Technologies (ICICCT) 2018”. India's population is expanding, and so are the country's automobile fleets. This makes it challenging to prioritise and manage the time of emergency vehicles like ambulances, fire trucks, and police cars, among others. The proposed strategy focuses primarily on effectively managing traffic and relieving vehicle congestion to make room for emergency vehicles and decrease their effort and travel time. Even while some academics have already worked on effective traffic management by classifying the priority of the cars, their efforts fall short of fully resolving the issue. Therefore, a suggestion has been put out in this article to address the issue of traffic congestion, which includes the usage of IoT to help alleviate congestion for emergency vehicles.

Rajesh Singh Published Book on “INTERNET OF THINGS on 2019” . This book's purpose is to offer readers a platform via which they may access the "Internet of Things" applications that are used in the automotive industry. The Internet of Things in Automotive Industries and Road Safety imparts fundamental knowledge of the modules with interfaces and programming. In order to help reader understand the idea of IoT, several instances of quick prototyping are provided. This book is helpful for those who wish to start with hardware-based project prototypes because it has 10 chapters on designing various independent prototypes for automotive applications. The literature is based on the writers' real-world experience, which they gained via working on initiatives with students and businesses. The discussion of technical issues in the IOT Interfacing and Node MCU and its Interfacing with I/O devices.

M N Manjunath “3rd International Conference on Computing Methodologies and Communication (ICCMC)2019”.The largest problem many cities are currently facing is traffic management and control as a result of rapid population increase. Each year, traffic accidents in India claim the lives of more than 150,000. That works out to almost 400 fatalities daily. In most big centres, including Delhi, Mumbai, Chennai, etc., 40,000 gallons of fuel are lost in traffic jams during the busiest times of the day. Even the inefficiency of traffic signals, needless fuel consumption, and air pollution present significant problems in our daily lives. With the knowledge of the traffic data beforehand, we can lessen the current issues using IoT-based techniques. Therefore, the goal of this project is to build and create a real-time traffic monitoring system using the Internet of Things (IoT).

Vikram Bali Published on “2nd International Conference on Advances in Computing, Communication Control and Networking (ICACCCN)2020”.Traffic congestion is currently a major worry for residents of smart cities like Delhi, Bangalore, Mumbai, Hyderabad, etc. In the present, this has become a common issue. The number of accidents in the city has increased significantly as a result of this traffic congestion, making the importance of lives lost in accidents even greater. Emergency vehicles including ambulances, fire trucks, and other vehicles are unable to arrive on time because of the traffic on the roadways. This causes a significant loss of life. In this study, we offer a resolution that addresses these problems to a significant extent. We can address these problems by building "Green Corridors" for emergency vehicles using IoT-enabled technology.

Abdul Kadar Muhammad Masum Published on “3rd International Conference on Computing Methodologies and Communication (ICCMC)2019”.Monitoring and controlling traffic congestion has become a significant concern due to the rapid rise of the population. The number of vehicles increases several issues, including time and fuel waste, air and noise pollution, and even fatalities from emergency vehicles being stuck. This study suggests a real-time traffic management system (TMS) that makes use of data analytics and the Internet of Things (IoT). The traffic density is measured using ultrasonic sensors. After analysing the sensor data, the system controller adjusts the timing of the traffic signal using a traffic management algorithm and also transmits data via a Wi-Fi module to a cloud server. The suggested approach is able to forecast potential traffic congestion at the intersection. If an emergency vehicle is found, precedence is given, and a long signal duration is used to pass the intersection.

Emmanuel Yahaya Published on “SPEED LIMIT VIOLATION DETECTOR SYSTEM WITH SURVEILLANCE CAMERA” 2018.This concept demonstrates a device to identify reckless highway driving and notify the traffic authorities of any violations. There have been many gadgets created in the past to catch reckless highway driving. The majority of the methods demand a lot of human work and concentration, which makes them challenging to put into practise. In this study, we propose to develop a system for the early detection and warning of rash driving-related risky vehicle driving behaviours. An IR transmitter, IR receiver, control circuit, security camera, and buzzer are needed for the full implementation. The police employ a system to determine the speed limit based on the volume of traffic in the area.

Sajid M. Sheikh Published on “A SMART MICROPROCESSOR-BASED FOUR WAY STOPROAD TRAFFIC CONTROLLER in 2018". African nations like Botswana, South Africa, and many others frequently use four-way stops. The first automobile to arrive at the intersection is meant to go under the four-way stop idea. There have been instances where this has proven to be ineffective and has also resulted in accidents as a result of confusion over who has the right of way. The system degrades and creates traffic congestion during periods of high traffic density. This study suggests a smart microcontroller-based four-way stop traffic controller system that lessens obstruction at four-way stops and confusion about whose turn it is to move forward. The smart microcontroller-based road traffic controller system in this work is created using an Arduino microcontroller for the system's logic operation.