SIGNS WITH SMART CONNECTIVITY AND BETTER ROAD SAFETY

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LITERATURE SURVEY

Introduction:

IOT is influencing our lifestyle from the way we react to the way we behave and it conceptualizes the idea of remotely connecting and monitoring the real-world objects through the internet. Road accident nowadays has become a national catastrophe for over populated developing countries.one of the main cause of accident in the sensitive public zones like school, college, hospitals etc. and the sharp turning points is the over speed of vehicles avoiding the speed limit indicated in the traffic sign board. Drivers endanger the lives of passengers, pedestrians and fellow drivers not limiting their vehicle speed in these sensitive public zones. The main objective of this project is to operate the vehicles in s safe speed at critical zones & bad weathers minimizing the possible risk of unwitting accidents, traffic and casualties. This project paves a system to alert the driver about the speed of the vehicle in sensitive public zones and if need any diversion at that place without any interference of the drivers. The system operates in such way that the accident information is passed to the vehicles entering the same zone to take diversion to avoid traffic congestion. This project is sub divided into three parts. These are weather monitoring display, warning and service alert display, diversion sign display. The controls are taken automatically by the use of a wireless local area network. Weather conditions can be monitored through open weather app. With the help of G-map we will indicate the sensitive zone. Let's analyze the diversion area with the help of AI camera.

S NO	TITLE	Authors	Abstract	Drawbacks
1	A smart notice board system using IOT technology	• G.Brindha • S.Gladson	Digital Notice board is used in institution or organization or public utility places like College campus, railway stations etc., but Sending and monit oring various notices every day is a heavy process. A separate person is required to take care of these notices. This paper deals with advanced notice board. Our proposed system will enable people to wireless transmit notices on a notice board using GSM with smart Phone and users get auto notification using parse cloud. Its operation is based on microcontroller ATMEGA 328 Programmed in C language. When the user sends notice via registered smart Phone that message will get display on the notice board simultaneously through the parse cloud other users get auto notification on their smart Phone. We can also makethe system compatible with more than one wireless technology. The numbers of notice boards are connected in IOT to get the status of the notice boards automatically to the cellular device.	1.This method using wireless communication so internet facilities had poor for some area 2.Cost is high.
2	Digital Notice Board Based on IOT	• Lurdhumary • Abisha.M • Asha.T.K3l • Francima.C	This project presents a digital notice board using IoT module. The idea behind this project is to provide its users with a simple, fast and reliable way to put up important notices in an LED where the user can send a message to be	1. Signal Interference The common frequency that a Wi-Fi device operates on is 2.4 GHz, which can be disturbed or hindered

			displayed in the LED. The message can be sent through an android application designed in this project, through the IoT module. So, notices can be put up in an LED display from any location in the world. It uses a microcontroller for system control, IoT based technology for communication and sends the message through the android application. The project consists of Arduino UNO board, IoT module, an LED, and an android application for user interface with the hardware. This device can be used anywhere irrespective of the place of deployment provided mobile network connectivity is available.	due to the presence of other electromagnetic devises or walls between you and the WiFi source. 2.This system supports only one message at a time.
3	The Role of Blockchain, AI and IoT for Smart Road Traffic Management System	• Ashish Sharma • Yogesh Awasthi • Sunil Kumar	Nowadays vehicles are increasing on the road. Due to this, it is a challenge for society to manage traffic jams and road accidents all over the world. Artificial Intelligence (AI) such as Machine Learning (ML) algorithms are very helpful to improve the performance of the overall road safety management system. AI is used for many real-world applications to make any system be a smart system. The Smart Road Traffic Management System (SRTMS) easily recognizes the influence occurs for random changes on road safety. The SRTMS detects the unsafe driving patterns as well as convey the information to the respective authorities. The Internet of Things (IoT) is a boon technology to observe human activities in real-time. IoT devices or nodes are composed of sensors that are commonly utilized to identify and reply to electrical and other signals. Currently, Blockchain (BC) is the most trending technology to automate	1.It concludes that the solution is not easily manageable because of its complexities on various causes. 2. In this paper, it is designed as an architecture for the traffic management system by the combination of boon technologies IoT, AI, and BC for real-world problems

			transactions, which means sharing or exchange of information between the IoT devices or nodes. BC technology facilitates for sharing of information on the network is decentralized, secure, persistent, anonymity, suitability and trustworthy manner. With consensus algorithms and smart contracts, Blockchain holds to manage communication among nodes without the involvement of a third-party or intermediary body. Simultaneously, AI has the ability to offer intelligent and decision-making machines similar to human beings' minds. This paper proposes the SRTMS model for solving the road accident, traffic jam and disseminate the information to all stakeholders. This proposed model is a combination of most trending technologies such as AI, BC, and IoT.	
4	IOT Based Electronic Notice Board	• Satish D. Jadhav • Yogita Mistry • Student PHCET Rasayani	This technical paper deals about development of IoT based electronics notice board using available IP based infrastructure & IoT devices. Smart notice board can be developed to make noticing system much simple and faster & cost effective with web & SMS interface the system is platform independent which overcomes the disadvantages of existing Noticing system. Web and SMS interface of system gives access to both IP based as well as cellular based network devices to provide	1.This use advanced high technology notice so cost is high. 2.Large amount of date to stored not to be efficient

			input to the system. This prototype developed can be used to eliminate the need of huge bill boards thus it is also a better method of going green Index Terms: IoT;Web; SMS	
5	IOT Road Safety	SOWPARNIKA B	Road accident nowadays has become a national catastrophe for over populated developing countries. One of the main cause of accident in the sensitive public zones like school, college, hospitals etc. and sharp turning points is the over speed of vehicles avoiding the speed limit indicated in the traffic sign board. Drivers endanger the lives of passengers, pedestrians and fellow drivers not limiting their vehicle speed in these sensitive public zones. The main objective of the proposed system is to operate the vehicles in a safe speed at critical zones minimizing the possible risk of unwitting accidents and casualties.This project paves a system to alert the driver about the speed limits in specific areas and reduce the speed of the vehicles in sensitive public zones without any interference of the drivers.The controls are taken automatically by the use of a wireless local area network. The system operates in such way that the accident information is passed to the vehicles entering the same zone to take diversion to avoid traffic congestion.	1.Increased traffic can increase carbon emissions and other pollution. 2.Land use for roads can damage built and natural environment, impose mortality on wildlife if habitats are severed, and construction has associated environmental costs.
6	Smart roads: A state of the art of highways innovations in the Smart Age	• Andrea Pompigna • Raffaele Mauro	The years we are experiencing are often identified as those of the Age of Smart Technologies. Smart is now a very popular term, with the meaning of clever, intelligent, sharp, quick on the uptake. Its	1.Smart roads combine physical infrastructures such as sensors and solar panels with

			extensive meaning can be grasped if we consider it as an acronym for Self-Monitoring Analysis and Reporting Technology to indicate the essential features of the innovative technologies that characterize today's soci- ety in its daily life. Thus, the advent of the Smart Age, which is therefore the era of smart technologies, has heavily characterized and modified many aspects of today's society compared to the past. In this panor- ama, some arising questions regard transport infrastructure systems and, first of all, road transport. This research proposes a focus on one main issue: how roads fit into this smart revolution? Actually, the paper aims to offer an overview of the smart approach in road engineering by proposing a broad discussion about the current state of innovation in the smart roads field, i.e. the roads of the Smart Age. After defin- ing the key functions of a smart road, the paper reviews some innovative technologies that make these items effective. These are studied in depth both with regard to motorway-type infrastructures and urban roads and intersections, with attention to the various technological aspects and to the benefits perceiv- able by management, users and the community. The paper,	software infrastructure like AI and big data. 2.Smart road technologies are embedded in roads and can improve visibility, generate energy, communicate with autonomous and connected vehicles, monitor road conditions, and more. .

			therefore, offers a bird's eye view of this extremely dynamic sector with innovative technologies for a new intelligent and connected mobility, and discusses some of their criticalities and strengths allowing for optimization and development of new transport functions and services, improving energy efficiency and promoting social, economic and environmental sustainability.	
7	Internet of Things Based Notifications Using Smart Notice Board	• G.Lavanya • N.N.Deepika • T. Sangeetha • R.Maheshwari • R.Josephine	Conventional Notice Board employs manual display and monitoring with papers and ledgers. The Target users are unaware of information displayed on the notice board. The objective of the project is to display the message on the notice board from anywhere and anytime, that even provides broadcast alerts to the target users. The system was designed and developed using the Internet of Things. Arduino board integrates the display unit, Mobile App and SMS Agent through Internet. The message to be displayed on the notice board is sent through a mobile app to the board with Arduino. As soon as the message is displayed, SMS alert is sent to the target users. A system of efficient Notice Board display controlled through the Internet is accomplished and presented in this paper.	1.This method using wireless communication so internet facilities had poor for some area 2.Sometime the user cannot to seeing notifications
8	Application of IoT and Artificial Intelligence in Road Safety	• Srimantini Bhattacharya • Harsh Jha • Radhikesh P	This paper explores the advancement of the Internet of Things (IoT) and Machine Learning in the field of Road Safety and accident prevention with a state-of-the-art review of various techniques adopted for implementing an intelligent road Safety System. In this review, emphasis is given	1.Although the concepts of IoT applying to road safety sound exciting and very much increase road safety, these applications are still not in use. This

			on the behavior of drivers, the condition of vehicles (two-wheelers, four-wheelers), health condition of roads and bridges, and theft-related issues using Radio Frequency Identification (RFID). It is seen that, with the help of IoT, the safety system can be updated on a real-time basis which can help to create a smart, intelligent, and highly efficient Road Safety system. Artificial Intelligence (AI) is applied to enhance the technology further for detecting the driver's behavior like drowsiness with the help of real-time camera feed or high-resolution images. Additionally, the role of AI in detecting the condition of roads and bridges in preventing road accidents is also discussed. Though the paper provides a good insight into the application of IoT and Machine Learning in the smart Road safety system, certain limitations are highlighted.	can be accredited for several reasons. 2.The current body of knowledge lacks a method for quantitatively evaluating the effectiveness of such technologies, which probably is one reason why they have not been deployed widely.
9	IOT based Smart Notice Board	● Gaurav Bhardwaj ● Gunjan Sahu ● Rajan Kumar Mishra	IOT is the network of physical "things" or object that contain embedded technology to interface and sense to move with their internal states or the external setting. Automation is the most often spelled term within the field of electronics. The hunger for automation brought several revolutions within the existing technologies. Notice board could be a primary factor in any establishment or public places like bus stations, railway stations, colleges, malls etc. Sticking out numerous notices day to day could be a tough method. A separate person is needed to take care of this notice display. This project is regarding ad-vanced wireless notice board. In IOT based Web Controlled Notice Board, Internet is employed to wirelessly send the mes-	1.Currently this system is totally dependent on the sim card service provider to perform the transmission and reception, so any problem with the service provider will affect our system. 2.Secondly this system has a wide bandwidth, which can be optimized by modifying the protocols or platform of the sys-tem.

			sage from Browser to the display. A local web server is created, this could be a global server over net. At the PIC microcontroller, LED matrix is used to display message and flask for receiving the message over network. Whenever microcontroller receives any wireless message from GSM module, it displays on the LED matrix. The Internet of Things (IOT) belief system can be looked as an exceptionally unique and radically distributed networked system composed of a very large number of identifiable smart objects. These objects can convey and to interface among themselves, with end- users or different elements in the system. Entering the era of Internet of Things, the use of small, shoddy and flexible computer hardware that allow end-user programming become present. One of them, considered in this, is the PIC microcontroller, fully customizable and programmable small computer board. Relative investigation of its key components and exhibitions with some of current existing IOT prototype platforms have shown that despite few disadvantages, the PIC microcontroller remains an modest with its effectively utilization in diverse range of research applications in IOT vision.	