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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

IBM – LITERATURE SURVEY

SIGNS WITH SMART CONNECTIVITY FOR BETTER ROAD SAFETY

TEAM ID: PNT2022TMID15148

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S. No	TITLE OF THE LITERATURE	TECHNOLOGIES USED	PROS	CONS
1	Road Safety Awareness and Comprehension of Road Signs from International Tourists Perspectives	In the current study, data are gathered by a questionnaire survey.	The system would support the development of design guidelines for roads that promote both local and international users' safety and aid highway and traffic authorities in better comprehending tourists' travel habits.	Although security was highlighted as one of the important aspects for service quality in the tourist business, road safety was not specifically included in the results.
2	Integrating IoT and Block chain for Ensuring Road Safety: An Unconventional Approach	OMNeT++ is used to simulate this model, together with the appropriate design and network description files.	The hash graph may be used to set priorities effectively and provide higher QoS quotient. This essay makes recommendations for decreasing accidents based on factors including speed, security, stability, and justice.	The hash graph's USP, the intrinsic agreement process, will be used by the framework to reduce reaction time.
3	IoT based Traffic Sign Detection and Violation Control	The system's design is primarily focused on an inexpensive, ready-to-use solution employing a Raspberry Pi tiny, embedded computer. With the aid of TensorFlow and Keras, Convolutional Neural Network (CNN) has been employed in deep learning approaches to deliver quickly processed results.	The suggested prototype uses Convolutional Neural Networks (CNN), an efficient deep learning technology, to identify traffic signals autonomously and manage the system in accordance with the observed indicators.	On this study, edge and cloud computing are combined to approve real-time analytics in wireless IoT networks.
4	Traffic and Road Sign Recognition	A classifier called a Support Vector Machine (SVM) is used for classification.	The development and testing of four-color segmentation algorithms. They are a dynamic threshold, a tweak to de la Escalera's method, a fuzzy colors segmentation technique, and a shadow and highlight invariant. A successful segmentation rate of almost 97% was attained.	The effectiveness of the entire system in general and of each distinct phase, as well as failure assessments. the effectiveness of the classifier and the variables that might have an impact on the classification rate.

5	Development of an IoT based real-time traffic monitoring system for city governance	The suggested system gathers real-time vehicle data using magnetic sensor nodes. Wi-Fi equipped micro controllers process the real-time data and transfer it to an IoT platform for additional processing.	The residents will benefit from time savings thanks to the early warning messages, particularly during rush hour. This approach also describes how well vehicle identification is accurate and how road occupancy estimation has little relative error.	The suggested approach does not anticipate the driver to have any smart gadgets.
6	An IoT Architecture for Assessing Road Safety in Smart Cities	Various real-time and diagnostic data may be obtained using the OBD-II. Telematics enables such monitoring within the IoT/ITS environment and is made possible by a few options as well as the use of specialized sensors.	The Safe System Approach is used by this system. With the aim of evaluating the safety of the transportation road network, this study provides an extensive, IoT-based infrastructure.	in the context of increasing traveler knowledge of the conditions for road safety.
7	Reliable Smart Road Signs	The development of "smart road signs" with embedded smart codes to give intelligent cars more precise information is a potential development in intelligent transportation systems.	Based on the error rate—the difference between the decoder output and the received input—the system offers a randomized detection technique.	It emphasizes how sensor fusion, in which information is gathered from several independent sources, may result in more resilient and robust systems. More dependable traffic networks may result from a network of intelligent automobiles.
8	The Role of Block chain, AI and IoT for Smart Road Traffic Management System	Current information on the route to take is provided through electronic message services.	It is an effective method for resolving the issue of moving from a centralized to a decentralized system. can see the driver and human activity inside the car in real time.	Only stake owners, according to the DPoS algorithm, may be chosen as block producers, however the distributed PoA level is where the actual consensus takes place.

9	Road Safety Performance Associated with Improved Traffic Signal Design and Increased Signal Conspicuity	To guarantee that the results are accurate and dependable, troublesome confounding variables related to road safety evaluation are taken into consideration using the empirical Bayes analysis approach.	C-SVM performs quite well, however v-SVM occasionally produces superior outcomes.	The safety analysis can be expanded in a few ways; it will be finished and released later.
10	Study on Performance of Road Signs and Markings along TANZAM Highway in Mbeya Region, Tanzania	TARURA uses DROMAS, a software for managing road maintenance plans, for maintenance and rehabilitation.	It ends traffic collisions and enhances user safety on networked roads.	The removal of the tree brunches hiding road signs is necessary to improve sight to drivers. .