DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

IBM - LITERATURE SURVEY

PROJECT TITLE

SIGNS WITH SMART CONNECTIVITY FOR BETTER ROAD SAFETY

(2022-2023)

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S.NO	TITLE OF THE PROJECT	ADVANTAGES	DISADVANTAGES	TECHNOLOGY USED
1	An IoT Architecture for Assessing Road Safety in Smart Cities	This system practices Safe system approach. This work offers a comprehensive, IoT-based architecture with the objective of assessing the safety of the transportation road network.	In the context of raising driver awareness of the road safety conditions during their trips.	Trough the OBD-II, various real-time and diagnostic information can be accessed. Telematics allows for such monitoring within the IoT/ITS context and is facilitated by several option and also by using dedicated sensors.
2	Integrating IoT and Block chain for Ensuring Road Safety: An Unconventional Approach	The priorities for ensuring better QoS quotient can be effectively done using hashgraph. This paper proposes in reducing the accidents in terms of parameters like speed, security, stability, and fairness.	The framework will mitigate delay in reactions through the innate agreement process that is the USP of the hashgraph.	This model is simulated using OMNeT++ with proper design and network description files.
3	Road Safety Performance Associated with Improved Traffic Signal Design and Increased Signal Conspicuity	C-SVM shows very good performance, but ν-SVM gives better results in some case.	There are several opportunities to expand the safety analysis, which will be completed and published at a later date.	Empirical Bayes analysis technique is used to account for the problematic confounding factors associated with road safety evaluation and ensure that the results are reliable.
4	Traffic and Road Sign Recognition	Four colour segmentation algorithms are developed and tested. They are a shadow and highlight invariant, a dynamic threshold, a modification of de la Escalera's algorithm and a Fuzzy colour segmentation algorithm. Approximately 97% successful segmentation rate was achieved.	The performance of the whole system in general and every individual step in particular together with failure analyses. The classifier performance and the parameters which could affect the classification rate.	Classification is undertaken using a Support Vector Machine (SVM) classifier.

5	Reliable Smart Road Signs	The system provides a randomized detection strategy based on the distance between the decoder output and the received input, i.e., error rate.	It emphasize that sensor fusion where we collect information through several separate sources can lead to more resilient and robust systems. A network of smart vehicles can lead to more reliable traffic networks.	A future trend in intelligent transportation systems is “smart road signs” that incorporate smart codes on their surface to provide more detailed information to smart vehicles.
6	Road Safety Awareness and Comprehension of Road Signs from International Tourists Perspectives	The system would help highway and traffic authorities in better understanding tourist’s travel behavior and contribute to road safety design standards serving both local and foreign users.	Road safety was not explicitly indicated in the results, security was identified as one of the significant factors for service quality in the tourism industry.	Questionnaire survey is used as a means of data collection in the present study.
7	Study on Performance of Road Signs and Markings along TANZAM Highway in Mbeya Region, Tanzania	It eliminates traffic accidents and improve safety to road users along road networks.	To increase visibility to road users from obstructed road sign, the tree brunches covering road signs should be removed.	For maintenance and rehabilitation programs while TARURA use DROMAS a software for road maintenance management system.
8	The Role of Block chain, AI and IoT for Smart Road Traffic Management System	It is a good strategy for overcoming the problem of centralized to a decentralized system. To observe human/driver activities in real-time inside the vehicle.	The DPoS algorithm proves only stake owners can be chosen as block producers, but the actual consensus occurs on the distributed PoA level.	Electronic message service provides up-to-date information about the road ahead to go through.

9	Development of an IoT based real-time traffic monitoring system for city governance	The early-warning messages will help citizens to save their time, especially during peak hours. This system also defines how good accuracy in vehicle detection and a low relative error in road occupancy estimation.	The proposed system does not expect any smart equipped devices with the driver.	The proposed system uses magnetic sensor nodes to collect real-time vehicle information. The real-time data is processed by Wi-Fi enabled micro controllers and sends to an IoT platform for further actions.
10	IoT based Traffic Sign Detection and Violation Control	The proposed prototype is to detect the traffic signs in autonomous by using an effective deep learning technique Convolutional Neural network (CNN) and control the system according to the road sign detected.	This work collaborates both edge and cloud computing for sanctioning live analytics in wireless IoT networks	The built of the system is majorly concentrated on a cost effective, out of the box solution using a mini embedded computer Raspberry Pi. To provide fast processed results deep learning techniques, Convolutional Neural Network (CNN) has been used with the help of TensorFlow and Keras.