SMART CONNECTIVITY FOR BETTER ROAD SAFETY

ABSTRACT:

Smart Connected Signs for Road Safety System Project which includes the safety for the riders for reducing road accidents. In present, the road signs and speed limits are lagging but the road signs can be changed in some cases. This project aims to solve some of the biggest challenges in the transportation in the areas of safety, mobility and environment.If there is rainfall then the roads will be slippery and the speed limit would be decreased.In such circumstances,you can enter the data of the road diversions, accident prone areas and the information sign boards through web app.This data is retrieved and displayed on the sign boards.So, more importance must be given on road safety measures.

This illustrates, an IOT system will notify the police traffic to control the traffic light using the smart phone or computer instead of standing in the middle of the junction to direct the movement of the vehicles. Intelligent transportation systems offers significant opportunities to save lives and has focused on relation between interconnected mobility and road safety.

LITERATURE SURVEY:

Road safety is the prevention and protection of road accidents by using all the road safety measures. It is to secure people while traveling on the roads. It is to make safe all the road users such as pedestrians, two-wheelers, four-wheelers, multi-wheelers, and other transport vehicle users**.**

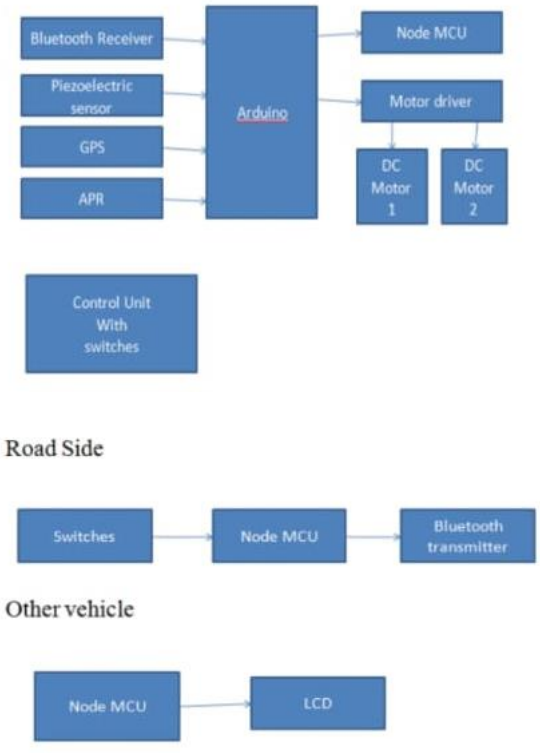
Assistant Prof. Ankita Gandhi, Recent studies have shown us that the higher rate of major accidents on road is occurred due to high ungovernable speed rather than speed restricted in the zone and also due to ignorant obstacles. The priority for the driver while driving should be conscious of the particular area so they are aware of the obstacle in front of the road. In most instances, the driver is at fault.. In some of the areas, speed bumps are made to create hindrance to the speed of vehicles, but the drivers do not lower their speeds. Several times due to the driver's fault speed is not controlled. The whole system is being controlled by an Arduino Uno R3 as a microcontroller.

Ashok Kumar K. Karunakar Reddy Vanga. The major advantage of proposed system is to avoid accidents at rush areas and also provide reliable

communication to authorized society in case of emergency. Whenever vehicle enters secured zone, the transmitter of vehicle sends a signal to receiver.

Vaishnavi Laxmanrao Gadewar. Several road safety articles and literature databases were searched but very few information was available regarding speed control system. As much till now, not lot of work is carried out in this area. Numerous articles were found related to the present road conditions and urgent need of safety measures. Various studies are being carried out but the documentation is not yet done. Also the implementation of various proposed methods is not feasible.

Ankita Mishra, worked on speed control system by the use of RF design. The main purpose is to design the controller for smart display which is meant for the vehicle's speed control and to monitor the speed zones which have speed limits, and which can operate on an associated embedded system. Smart Display & Control (SDC) can be custom designed so that they can fit into dashboard of the vehicle, and display the information available on the vehicle.



To sum it up, everyone must follow the road rules. Do not drive at excessive speed and try to enhance the general awareness so risks of traffic accidents can be reduced. One must also check the vehicle health regularly and its maintenance parts to eliminate any potential risks.

REFERENCE:

[1] Abd-Elhamid M. Taha-An IoT Architecture for Assessing Road Safety in Smart Cities(2018)
URL:
https://www.researchgate.net/publication/329067887_An_IoT_Architecture_for_Assessing_Road_Safety_in_Smart_Cities

[2] Nina Dragutinovic & Divera A. M. Twisk - The effectiveness of road safety education, a literature review(2006)
URL:
https://www.researchgate.net/publication/251880437_The_effectiveness_of_road_safety_education_a_literature_review

[3] Mohammed Abdul Kader & Engr.Md Eftekhar Alam & Sabrina Momtaj & Saidun Necha(2019)

URL:
https://www.researchgate.net/publication/340056638_IoT_Based_Vehicle_Monitoring_with_Accident_Detection_and_Rescue_System

[4] Nagarjuna R Vatti & PrasannaLakshmi Vatti & Rambabu Vatti & Chandrashekhar Garde - Smart Road Accident Detection and communication System(2018)
URL:
https://www.researchgate.net/publication/329317933_Smart_Road_Accident_Detection_and_communication_System

[5] Sreenithy Chandran & Sneha Chandrasekar & N. Edna Elizabeth - An Internet of Things(IoT) based smart helmet for accident detection and notification(2016)
URL:
https://www.researchgate.net/publication/313453650_Konnect_An_Internet_of_ThingsIoT_based_smart_helmet_for_accident_detection_and_notification