

LITERATURE SURVEY ON SIGNS WITH SMART CONNECTIVITY FOR BETTER ROAD SAFETY

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1. Andrzej Czyżewski in his paper titled "Development of Intelligent Road Signs with V2X Interface for Adaptive Traffic Controlling", IEEE 2019, developed IOT based intelligent road signs capable of interacting with both the vehicles and other neighbouring sign boards using LORA. These sign boards were capable of communicating with one another and changing the speed limit based on traffic and weather.

2. Muhammed O. Sayin, Chung-Wei Lin, Eunsuk Kang, Shinichi Shiraishi & Tamer Basar in their paper titled "Reliable Smart Road Signs", IEEE 2019, proposed a game theoretical adversarial intervention detection mechanism for reliable smart road signs. A future trend in intelligent transportation systems is "smart road signs" that incorporate smart codes (e.g., visible at infrared) on their surface to provide more detailed information to smart vehicles. Such smart codes make road sign classification problem aligned with communication settings more than conventional classification .

3. L.F.P. Oliveira, L.T. Manera, P.D.G. Luz in their paper titled "Smart Traffic Light Controller System", IEEE 2019, developed smart traffic lights capable of traffic accident detection enabling the enhancement of traffic light management systems, blocking and creating alternative routes to not only avoid the traffic jams, but also avoid new accidents.

4. Francis John Gichaga et al. Road Safety and Road Safety Audit in India:

A Review. ISSN: 2347 - 4718 This paper had reviewed the concept of the road safety audit and its stages. Objective of the RSA is to evaluate ventures for potential mishaps end/lessening on the premise of road client learning, characteristics and aptitudes, day/night, wet/dry road conditions. It suggested on outline and before planning of agreement archives, to evaluate itemized intersection design, markings, signs, signals, lighting points of interest, Detail Design of junctions, Design of geometrics, Cross-fall Marking and Signs, Side drains, Embankment slopes, Presence of clear zone, Traffic Signals Lighting.

5 .Cyberabad Traffic Police (2017)

It reveals some guidelines like, the maximum speed on Lane 1 and Lane 2 of the ORR will be 120 KM per hour and minimum speed will be 80 KM per hour. (Lane1 is the one closest to the central median) The maximum speed on Lane 3 and Lane 4 of the ORR will be 80 KM per hour and minimum speed will be 40 KM per hour. The minimum speed on ORR will be 40 KM per hour. No vehicle is permitted to travel on ORR below this speed. Faster moving vehicles should move in Right Lanes (Lane 1 and 2) and slow-moving vehicles should move in Left lanes (Lane 3 and 4) within the above speed ranges.

6.Dariusz Grabowski & Andrzej Czyzewski in their paper titled "System for monitoring road slippery based on CCTV cameras and convolutional neural networks", Springer Publications 2020, made use of Convolutional Neural Networks to identify slippery roads using CCTV cameras