DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

IDEATION PHASE

IBM – LITERATURE SURVEY

PROJECT TITLE

SIGNS WITH SMART CONNECTIVITY FOR BETTER ROAD SAFETY (2022-2023)

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S. no	Title of Paper	Advantages	Disadvantages	Technology used
1	Traffic Sign Recognition using learning for these Autonomous Driverless driving by the HSV color space,	The smart vehicle became efficient so that human factors can be Eliminated. Auto Segmentation is employed and process completely, which is very important physical structure and significantly cut back the	Errors in algorithms may leads to false detection of signs. Vehicles traffic signs are effectively detected to support the number of accidents	Smart cars can detect and recognize traffic signs Deep By the proposed algorithm. Initially, spatial threshold assist, and do the driving the to liberate features. the
2	Improved Traffic Detection rate and time are	The accurate recognition average traffic sign recognition using the Gabor kernel and	The viewpoint of traffic sign neural network model by Algorithm for	LeNet-5 convolutional Sign and Recognition processing markedly improved. accuracy

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	but Vehicles	selecting the Adam method accident rate and enhances the road traffic recognition experiments are a based on the guarantee for the steady development of assistance.	Intelligent time-consuming. The classification and conducted German Recognition Benchmark.	Which reduces the traffic sign safety situation, providing strong technical Traffic Sign intelligent vehicle driving	algorithm more as the optimizer algorithm.

3 Smart roads: A A smart highway will Advanced Three major methods for state of the art of allow for innovations may traffic data, highways Technological integration use with great The collection is roadside innovations in the into current concern, data, wide-area data, and Smart Age transportation roadways, otherwise leads to floating car data. The most Including connected the exploitation of modern technologies are devices and IoT, to clean based on Information and increase transport And renewable Communications efficiency, energy sources. Technologies, such as endDrivers' and pedestrians' Loss of privacy user Internet service safety, clean energy and security of systems, consumption, data due to a large Internet of Things, And to promote amount to store. Connection and Cooperation sustainability. The key Services, Big Data, functions of the smart Augmented Reality,
road: self-awareness; Artificial Intelligence, and
information Edge Computing are used
And connection; self for data collection and road adaptability; energy
automation works.
Harvesting

4 Safety Focus on V2V Installation of Vehicles are connect via Applications: communication, once wireless multiple complementary
Intelligent cars are connected which environment at technologies of vehicle to- Transport System is able to share data with every cross point vehicle (V2V) and vehicle-
(ITS**)** other cars on the road and would be costly. to-infrastructure
(V2I) which help to reduce connectivity based on Wi-
Highway accidents Fi, Dedicated Short
Range
Communication
(DSRC)/WAVE wireless
media to periodically

broadcast their position information.

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5	Geographic Information Systems to Improve Road Safety	Pedestrian collisions and clashing, which together account for more than 65% of all fatal accidents	Complexity may occur due to improper traffic management.	DCRE system (driver - car - road - environment), from the point of view of all its constituent components interaction, that is, consider road	to will be reduced. traffic accident (RTA) as a consequence of this system.
6	Reliable Smart Road Signs	A matter Of time for autonomous driving to replace of human drivers due to not being able to detect the the signal Road signs by smart	The cost associated with false alarms is respectively. Then, the message is the type of carrying that message is the	The road sign and smart vehicle can be viewed as a transmitter and a receiver, Completely. Reliable identification of signs. physical road sign, and the signal received is its digital image taken by the smart vehicle.	
7	Vision-Based vision have included lane driver experiments. Colors and detected. Driver Assistance Systems	On-road applications of TSR is the lack of use of standard for Intelligent makes comparisons between Contributions very hard.	The problem in which used for tracking occupant pose inference.	The KUL Data set includes four recorded sequences, Analysis distraction detection, and databases. This	Traffic Sign Detection and Detection, Sign image signs are

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8	An IoT Such as data is through exploiting Cities	Possible to identify economic road safety monitoring and assessment Sleepy, asleep, model also Markov Modelling (HMM) statistical Tool as the distraction.	Various errors are introduced when and nature of systems.	The viability of Assessing Road Safety in Smart and Advances in the internet of things (IoT). Hidden	an exceeded speed limit, rolling stops, as well enables	Architecture for behaviors crash drowsy, reported. solution of fatigued. The characterizing is a powerful for modelling time-series
9	Traffic Sign board at one's Recognition and using the live video System using Convolutional Network may then take the Voice Alert System using Convolutional	This system in which detecting and recognizing automatically detected implementation coding. A stream and are read out aloud to the driver who preprocessing Neural	Raspberry Pi discourse for video is which is costly into is	Raspberry Pi is used in Traffic Signs with much less Acquired and broken down frames. Image Neural Network.	quite	Board traffic signs are Voice Alert done. required decision.
10	Traffic Sign informing the drivers Intelligent Transportation Systems	Enhances the safety by about the current state of about traffic signs and offering valuable information precautions. cloudy danger, implementing	Publicly available data sets do not navigation services, include captured unsuitable conditions or	images under and to	Road sensors, in-vehicle electronic message Signs, traffic management monitoring system alerts the driver to potential avoid weather, etc.) safeguards And the vehicle.	Detection for system about (At night, collisions by controlling