# LITERATURE SURVEY ON SIGNS WITH SMART CONNECTIVITY FOR BETTER ROAD SAFETY

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# ABSTRACT

Connected for better road safety technology aim to solve some of the biggest challenges in the transportation in the areas of safety, mobility and environment. The safety application for help to reduce Highway accidents. Ultimately, vehicles are connect via multiple complementary technologies of vehicle to-vehicle and vehicle-to-infrastructure connectivity based on Wi-Fi, GPS, Dedicated Short Range Communication . There are many dangerous roads in the world like mountain roads, narrow curve roads, T roads. Some mountain roads are very narrow and they have many curves. The problems in these curve roads is that the drivers are not able to see the vehicle or obstacles coming from another end of the curve. If the vehicle is in great speed then it is difficult to control and there are chances of falling off a cliff. Hence there is a need of many road safety systems. By using the advanced technology create smart connectivity for better road safety.

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| **BOOK/ JOURNAL** | **TOPIC** | **AUTHOR NAME** | **YEAR** | **INFERENCE** |
| THE ROYAL SOCIETY PUBLISHING | Advances in smart roads for future smart cities | Chai K.Toh, Julio  A. Sanguesa, Juna  C. Cano and Francisco J. | 2020 | In the paper,they discussed therecent 10  technological advances and developments in the area of smart roads. They  include: (i) energy-harvesting road, (ii) musical road, (iii)  automatic- weighing road,   1. electrifiedroad, 2. roadswith wireless digital traffic   signs, (vi) roads with automatic  traffic violation detection and notification, (vii) roads that talk (V2X), (viii) roads with smart intersections, (ix) roads with fast emergency rescue, and (x) roads with smart street lights. These advances will aid in the progress, development and realization of smart transport for future smart cities. |
|  |  | Martinez |  |
| ICT INNOVATIONS 2017 | Internet of Things Based Solutions for Road Safety and Traffic Management in Intelligent Transportation Systems | Arnav Thakur, Reza Malekian, Dijana Capeska Bogatinoska | 2017 | Vehicle to vehicle communication and vehicle to infrastructure based channels are studied. Wireless communication technologies  suitable for the |
|  |  |  |  | channels are |

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|  |  |  |  | studied. Additional benefits and services that can be added to a system with the IoT approach are also studied. The effectiveness of such a system is studied with the use of validation framework.  Multiple case studies of current and future IoT based ITS along with the  challenges in the application is discussed. |
| JOURNAL OF ADVANCED TRANSPORTATION | Development and Testing of Road Signs Alert System Using a Smart Mobile Phone | Eric M Masatu, Ramadhani Sinde, Anael Sam | 2022 | In this study a system for alerting drivers about road signs has been  developed and |
|  |  |  |  | tested using a  smart mobile phone. |
| SAGE JOURNALS | Reading | Enes Karaaslan, | 2021 | The objective of |
|  | Vehicular | Burak Sen, Tolga |  | this paper is to |
|  | Messages from | Ercan,Haluk |  | investigate the |
|  | Smart Road | Laman,James pol |  | operational |
|  | Signs: A Novel |  |  | challenges of the |
|  | Method to |  |  | proposed low-cost |
|  | Support Vehicle- |  |  | solution in |
|  | to-Infrastructure |  |  | different V2I |
|  | in Rural Settings |  |  | applications, |
|  |  |  |  | including a Map |
|  |  |  |  | Data message in |
|  |  |  |  | an unsignalized |
|  |  |  |  | traffic |
|  |  |  |  | intersection, |
|  |  |  |  | traveler |
|  |  |  |  | information |
|  |  |  |  | message in a work |
|  |  |  |  | zone, and a red- |
|  |  |  |  | light violation |

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|  |  |  |  | warning with the help of a smart sign. The  proposed system showed some important advantages, such as invulnerability to third-party alterations and robust operation under harsh  environmental conditions. |