

1. W. H. D. Fernando and et al. worked on Automatic road traffic signs detection and recognition using ‘You Only Look Once’ version 4 (YOLOv4)The objective of this study addresses road traffic sign detection and recognition using a technique that initially detects the bounding box of a traffic sign. Then the detected traffic sign will be recognized for usage in a speeded-up process. Since safe driving necessitates real-time traffic sign detection, the YOLOv4 network was employed in this research.
 2. Eric M. Masatu et al. worked on Development and Testing of Road Signs Alert System. Using a Smart Mobile Phone, the application provides a voice alert to a needed action that enhances the driver’s attention. The smartphone is used to avoid the need for onboard devices to detect and recognize road signs, sensors on road infrastructure, and the use of WLAN. We have used the Haversine formula for measuring and estimating the distance between two pairs of coordinates. According to the experimental results, the proposed methodology has the benefits of high accuracy within a user radius of 10 meters, minimum bandwidth, and low-cost application. All notifications are released in a close range of 250 meters before the actual signs.
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3. Harshada Rajale and et al. worked on Design of a road sign informing system based on GPS and RFID The wireless system provides visual and aural notification about forthcoming road aberrations at an ideal distance before dealing with them using GPS and RFID technology. The main objective is to enhance the present road safety standards by providing an electronic alternative to stationary road signs forming it more systematic and comfortable.
 4. Wajdi Farhat et al. worked on Design of Efficient Embedded System for Road Sign Recognition. It improves the vigilance of the driver by alarming-him/her of signs that he/she may not perceive. In this paper, an embedded real-time system for automatic traffic sign recognition is proposed. The segmentation task of an acquired scene is processed in the HSV colour space. The recognition process is performed by using the

Oriented fast-and-Rotated Brief features. The developed algorithm is implemented on a Zed Board hardware platform

5. 2017 Adhitya Bhawiyuga et al. worked on A Wi-Fi based Electronic Road Sign for Enhancing the Awareness of Vehicle. WIFI-based electronic road sign for enhancing the awareness of vehicle driver. The proposed system consists of two components: The Roadside Unit (RSU) placed at road sign and the On-Board Unit (OBU) placed in the vehicle. The proposed system consists of two components: Wi-Fi-based electronic road sign for enhancing the awareness of vehicle toward the RSU, it makes an association with the RSU through a predefined ad-hoc Wi-Fi connection.
6. Emin Guney et al. worked on Implementation of Real-Time Traffic Signs and Road Objects Detection Based on Mobile GPU Platforms. These systems aim to improve driving safety and reduce road accidents. Modern cars mostly have ADAS systems integrated into their electronics, but other vehicles don't have such an integrated system. This paper presents a portable and image based ADAS for real-time traffic signs, vehicles, and pedestrian detection. To realize real-time detection, the developed system uses YOLO v5 algorithm.
7. Yiqiang Wu and et al. worked on Real-time traffic sign detection and classification towards real traffic scene. a real-time traffic sign recognition algorithm which is robust to the small-sized objects and can identify all traffic sign categories. Specifically, we present a two-level detection framework which consists of the region proposal module(RPM) which is responsible for locating the objects and the classification module(CM) which aims to classify the located objects. In addition, to solve the problem of insufficient samples, we present an effective data augmentation method based on traffic sign logo to generate enough training data.

8. RajeshSingh and et al. worked on Highway 4.0: Digitalization of highways for vulnerable road safety development with intelligent IoT sensors and machine learning. Smart highway lighting, smart traffic and emergency management for user safety. Real-time implementation of renewable energy sources like wind, solar and piezoelectric on the highways. Smart display board, and AI on highways for smart Vulnerable Road User model.

9. Adnan Shaout and et al. worked on An Intelligent Real Time Road Sign System. The behavior of US Interstate 94 was modelled, where the typical road throughput was simulated and published to an MQTT broker for the embedded system to display the expected travel time to Ann Arbor, Michigan from the US23 junction. The embedded system additionally sampled a digital temperature and humidity sensor to note road conditions, where an external input allowed operators to provide a real time update when an unexpected event causes traffic (i.e., vehicle collision) or when the road has been cleared.