**LITERATURE SURVEY**

**1.Automatic road traffic signs detection and recognition using ‘You Only Look Once’ version 4 (YOLOv4)**-**-Publisher IEEE**  
**W. H. D. Fernando; S. Sotheeswaran--Date Added to IEEE Xplore: 25 October 2021**  
  
  
\*The traffic sign detection and recognition system (TSDR) play an essential role in the intelligent transportation system (ITS). TSDR can be utilized for driver assistance and, eventually, driverless cars to reduce accidents

\*TSDR allows drivers to view traffic sign information without having to divert their attention.  
\*YOLOv4 was evaluated on our dataset, which consisted of manual annotations to identify 43 distinctive traffic signs classes. It was able to achieve an average recognition accuracy of 84.7%. \*Overall, the work adds by presenting a basic yet effective model for real-time detection and recognition of traffic signs.

2.**An Efficient Real-Time Traffic Sign Recognition System for Intelligent Vehicles with Smart Phones--Publisher: IEEE**

**Ching-Hao Lai; Chia-Chen Yu--Date Added to IEEE Xplore: 20 January 2011**

\*The traffic sign recognition system is one kind of driving assistance system (DAS) which is used to automatically inform the driver the traffic sign information by a head up display (HUD), monitor, or speaker device.

\*The proposed scheme can integrate in-vehicle computing devices and smart phones to construe an in-vehicle traffic sign recognition system.

\* This scheme contains four major stages: video frame capturing and transmitting, image preprocess, traffic sign detection, and character/icon extraction and recognition.

\*smart phone first captures videos,these extracted frames can be transmitted to an in-vehicle computing device by a wireless network (Bluetooth, WiMAX, Wi-Fi etc.)

\*Lower computing complexity, however it still can obtain a well accuracy.

**3.Wireless digital traffic signs of the future publisher: IET-Chai K. Toh;Juan-Carlos Cano; Carlos Fernandez-Laguia;Pietro Manzoni;Carlos T. Calafate October 2018**

\*With advancements in wireless communications, embedded electronics, and software, the author worked on the system where it has digital traffic sign posts will be able to wirelessly broadcast traffic sign information to drivers, transforming our roads into intelligent highways where In-vehicle displays will prompt and automatically display signs to warn the driver.

\*No longer is it necessary to exercise caution for traffic signs since automatic wireless detection will be used.

\*This change will ease the pressure on the drivers, allowing them to concentrate more on the traffic up ahead while they are driving. Additionally, the development of wireless digital sign posts integrate nicely with the idea of future smart cities, where intelligent transportation