**INTRODUCTION**

This system is used for the detection and recognition of road speed limit sign, an important advanced driver assistance system. In order to solve the concerns over road and transportation safety, automatic traffic sign detection system has been introduced. An automatic traffic sign detection system can detect and recognise traffic signs from and within images captured by cameras or imaging sensors .In adverse traffic conditions, the driver may not notice traffic signs, which may cause accidents. In such scenarios, the traffic sign detection system comes into action. The main objective of the research on traffic sign detection system is to improve the robustness and efficiency of the traffic sign detection system. To develop an automatic traffic sign detection system is a tedious job given the continuous changes in the environment and lighting conditions. Among the other issues that also need to be addressed are obscuring, multiple traffic signs appearing at a single time, and blurring and fading of traffic signs, which can also create problem for the detection purpose. For applying the traffic sign detection system in real-time environment, a fast algorithm is needed.

In this work,vehicles are informed with the maximum speed limit which is allowed in a certain road through automatic finding of the speed limit sign using image processing , where the speed limit signboard is detected in a red ring which surrounds the sign in a circle form . First the image is segmented in color to extract the red part and removing all noise and unnecessary small objects. Circular Hough’s transform is adopted to detect the circle, cropping it off out of the image. After that recognition operation starts which includes extracting the black color number. The aim of the current research is to design and implement speed limit signboard automatic detection and recognition system with high accuracy and processing speed, as well as, checking and validating the system performance.

The aim of this research is to develop an efficient traffic sign detection system which can detect and classify traffic signs into different classes in realtime environment. For detecting the red traffic signs, a combination of colour and shape based algorithm is presented .The heart of the system is Raspberry Pi 3+.