The work on Traffic sign recognition in real time systems were successfully implemented till like,2000’s.  Nonetheless due the difficulties like blurring,weather condition,faded color,unclear pictures due to vehicles motion, Scene Complexity etc.. it’s still a challenging problem.

For classification of data we need segregated images. In 2011,German Traffic Sign Recognition Benchmark[GTRSB] was introduced by [9]( <https://ieeexplore.ieee.org/document/6033395>). Work on this has been mainly revolving around three methods: Color Based methods, Shape based methods and machine learning methods. Machine learning algorithms which have been used are mainly support vector machines and deep learning algorithms. Moreover, in deep learning algorithms, CNNs have really showed great results.

[1] uses transfer learning over the pre-trained model VGG-16(OxfordNet). They have used the pretrained model weights, chopped the top layer and added the 43 classifier layer .This model has shown about 96% accuracy on GTSRB.[4] has tried to address the problems with real time traffic sign recognition .In their approach false positives are removed by SVM classifier and then rest is classified based HOG feature .It also justifies how trade off of time and accuracy is done. This method has produced an accuracy of 97.75% and they were able to recognize an image in 3ms .[2] gives a data drive approach to tackle the problem of low resolution images due to weak camera. They use multitask CNN to classify and refine the region of interest in Traffic sign.This approach has produced up to 99 % accuracy. In [3] they have used Convolution Neural Networks. CNNs have ability of learning from features as well as classifiers. Paper suggests the use of Hinge Loss Stochastic Gradient Descent to train CNNs. This approach got an accuracy of 99.56%.[5]Spatial Transformer Networks have reached the accuracy of 99.61%. Currently, the state of the art in Image detection is ResNet model. ResNet is a pre-trained model (Winner of ILSVRC 2015 in image classification, detection, and localization) which is intensively used in classification of Images. We have used transfer learning with model and compared the accuracy with the proposed model.

Except [4] most of the papers didn’t touch upon the time taken to classify the image. And [4] has shown that it outperforms the previous best [5] in time consumption. [4] justifies the tradeoff and shows that the simple model developed takes a time quantum of 3 ms with an accuracy of 97.7%.