DEEP LEARNING PROJECT REPORT

Traffic Sign Classification

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By:

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PROJECT ABSTRACT

Traffic sign recognition system (TSRS) is a significant portion of intelligent transportation system (ITS). Being able to identify traffic signs accurately and firstly, an image is preprocessed to highlight important information.

Traffic sign detection and identification method on account of the image processing is proposed, which is combined with convolutional neural network (CNN) to sort traffic signs. On account of its high recognition rate, CNN can be used to realize various computer vision tasks. TensorFlow is used to implement CNN. In the German data sets, we are able to identify the circular symbol with 70% accuracy.

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METHODOLOGY

1). Data pre-processing:

1.1) Uploading the dataset

2). Data modeling:

2.1). splitting dataset into test and train models,

2.2). Feature Scaling

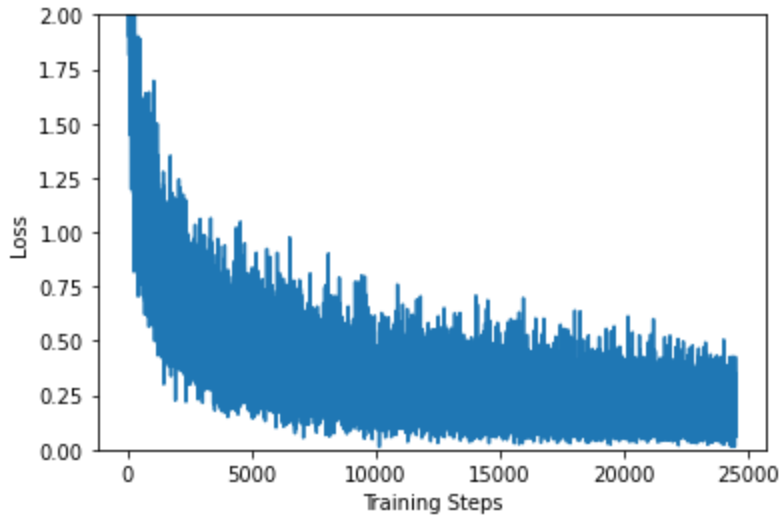
3). Applying classification algorithm

4). Accuracy of different classifiers

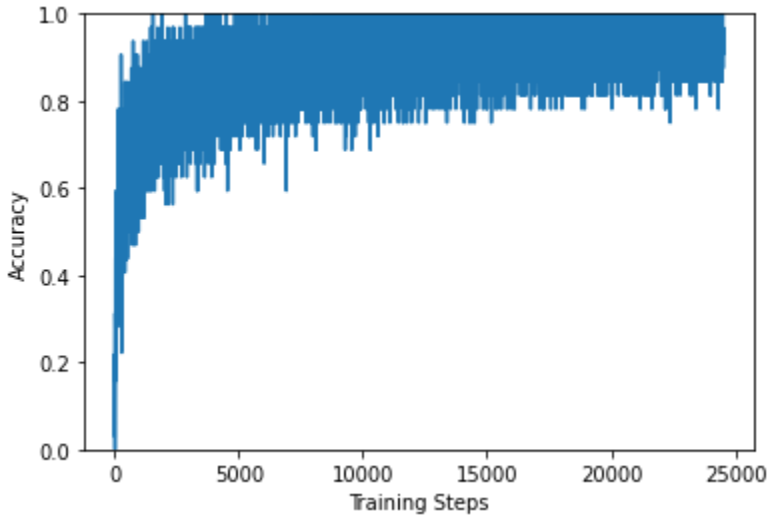
IMPLEMENTATION AND RESULTS

MobileNet v2

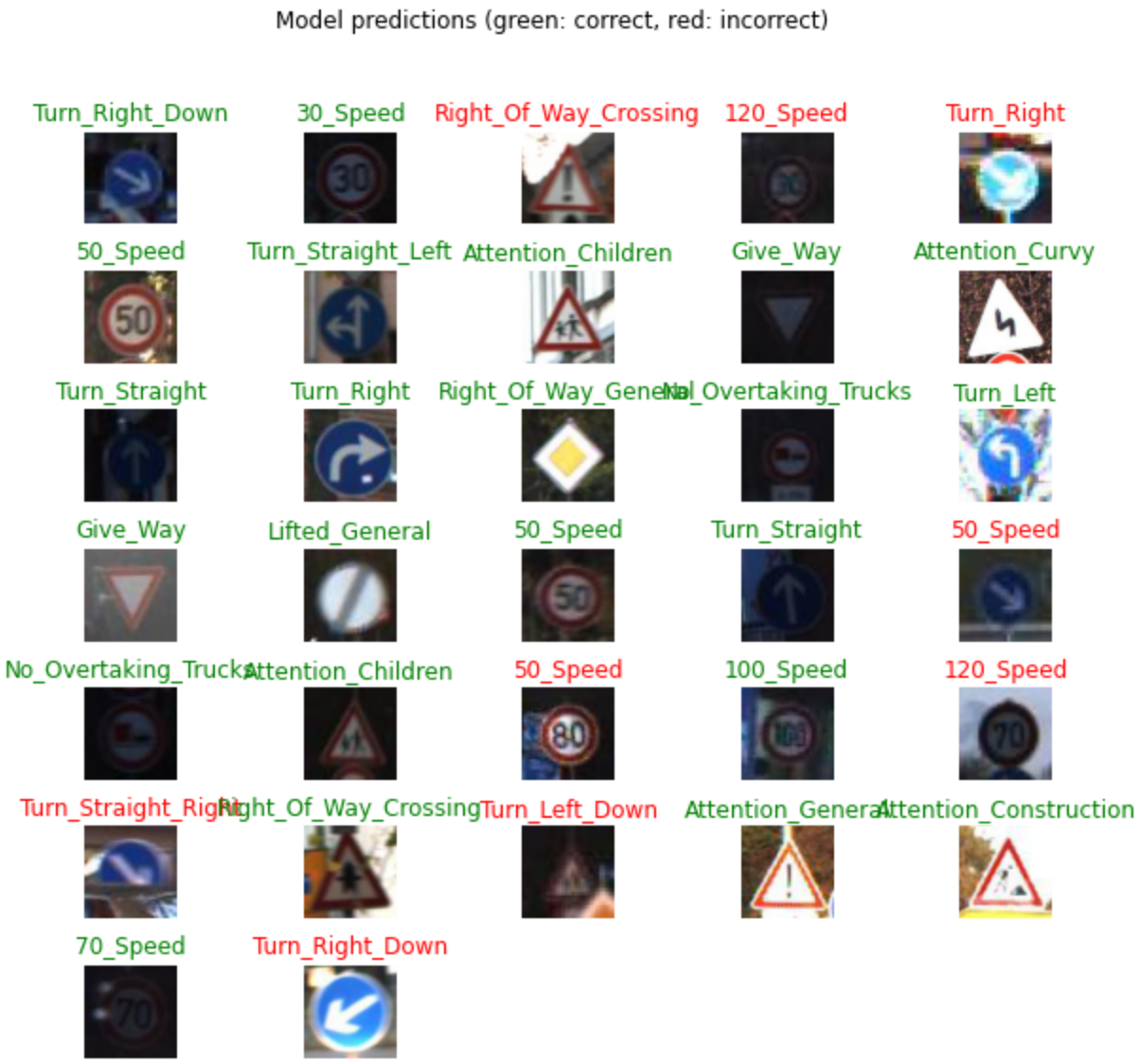
Loss Function Plot:



Accuracy Plot :



CONCLUSION



-> I conclude that almost all the algorithms are giving accuracy of around 90%.

-> So we can use CNN to classify Traffic Sign Classification .It will give us the best result.