

Project: Build a Traffic Sign Recognition Classifier

-Vidit Shah

In this write up I will explain my code and Architecture which was used to develop this model.

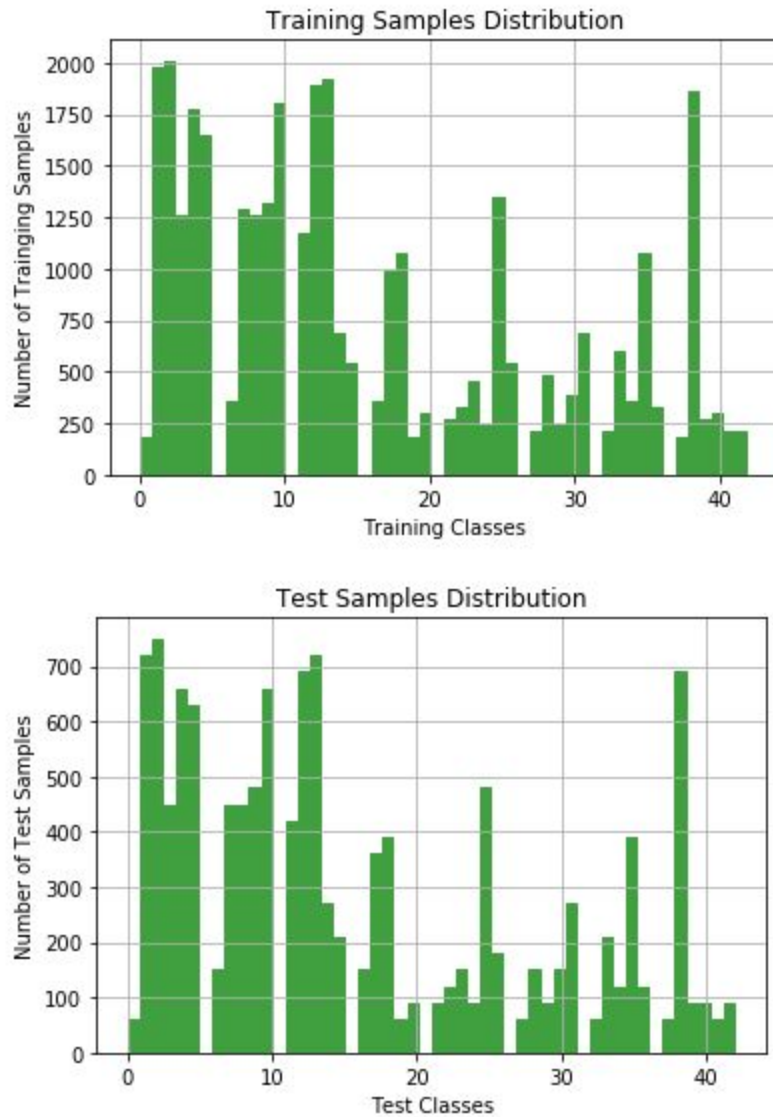
Data Set Summary & Exploration

Utilized Numpy Library to get the insights of the Data:

1. Size of training set-34799
2. Size of testing set -12630
3. Shape of image is - 32 by 32 by 3
4. The number of unique classes is : 43

Visualisation.

The image below Shows the distribution of training and testing samples



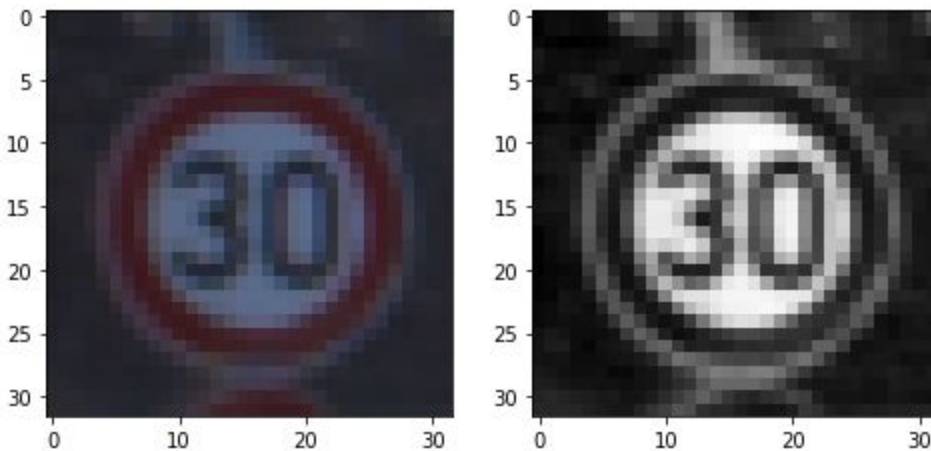
Preprocessing Technique:

The preprocessing technique used here is grayscale and normalization.

Converting into grayscale help us to deal with only 2 pixel values(0-255)

This reduces the Image depth from 3 to 1 which reduces the computation burden and also does not compromise the accuracy of the model.

Grey Scale Image shown below is:



Architecture.

I have used Convolutional Neural Network for the approach of this project.

My CNN is based on LENET Architecture.

The Values described Them is as follows:

Layer	Description
Input image	32 by 32 by 1 (1 because Gray scale)
Convolution Layer	1 by 1 stride with valid padding
relu	Activation
Max_pool	2 by 2 filter size