UDACITY

PROJECT

Traffic Sign Classification

A part of the Self Driving Car Engineer Nanodegree Program

PROJECT REVIEW

CODE REVIEW

NOTES

SHARE YOUR ACCOMPLISHMENT!

Meets Specifications

Nice job improving on the sections of your report that needed changes. Your project now meets all specifications defined by the project rubric for this project. Congratulations on passing the second project in the Self Driving Car Engineer Nanodegree and best of lucks in the ones ahead.
Cheers and Keep up the good work !!!

Files Submitted

The project submission includes all required files.

Dataset Exploration

The submission includes a basic summary of the data set.

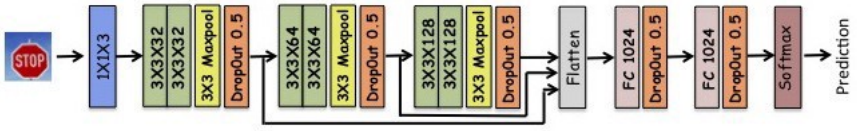
The submission includes an exploratory visualization on the dataset.

Design and Test a Model Architecture

The submission describes the preprocessing techniques used and why these techniques were chosen.

The submission provides details of the characteristics and qualities of the architecture, including the type of model used, the number of layers, and the size of each layer. Visualizations emphasizing particular qualities of the architecture are encouraged.

- In case you want to implement a model with 99% Accuracy, this is an awesome one by Vivek Yadav, a student in the SDCND:



- And here's a link to his article on it.
- Hope that will be helpful :)

The submission describes how the model was trained by discussing what optimizer was used, batch size, number of epochs and values for hyperparameters.

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Test a Model on New Images

The submission includes five new German Traffic signs found on the web, and the images are visualized. Discussion is made as to particular qualities of the images or traffic signs in the images that are of interest, such as whether they would be difficult for the model to classify.

A very good discussion to pinpoint the qualities of images that lead to classification difficulties is made. Great!

Suggestions & Comments

Besides the points made, I would like to share few factors that might affect the classification of an image in a more general sense. Hope it could inspire more on this topic.

1. The Brightness of the image
2. The Contrast of the image
3. The Angle of the traffic sign
4. Image might be jittered

This paper might provide further intuitions on the subject here.

The submission documents the performance of the model when tested on the captured images. The performance on the new images is compared to the accuracy results of the test set.

- A fair comparison has been made between the prediction accuracy of the model on the captured images and those on the testing set.

The top five softmax probabilities of the predictions on the captured images are outputted. The submission discusses how certain or uncertain the model is of its predictions.

- Nice job visualizing the softmax probabilities here
- And discussing how certain/uncertain your model is of its predictions