

项目

Traffic Sign Classification

此部分属于 Self Driving Car Engineer Nanodegree Program

项目审阅

代码审阅

注释

Meets Specifications

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Well Done

Files Submitted

**The project submission includes all required files.**

A great job was done in submitting all the required files needed for this project review i.e the ipython notebook, the html output and the writeup report. Bravo!!

Dataset Exploration

**The submission includes a basic summary of the data set.**

Great job done in this section of the project, the solution validated all the requirements in the "TODOs" of the data exploration sections of the notebook. A summary of the traffic sign data was also printed out using python methods and libraries correctly. Kudos!

**The submission includes an exploratory visualization on the dataset.**

A nice job was done in displaying an image in the dataset and also printing the distribution of the dataset on a histogram for visualization. Keep it up!!

Design and Test a Model Architecture

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

Great job in discussing how grayscale and normalization were used for preprocessing👍

**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.**

A wonderful job was done in providing details on how the Lenet architecture was used to built the network architecture, the characteristics of the architecture, the layers of the architecture and the qualities of the architecture. Bravo

✓	The submission describes how the model was trained by discussing what optimizer was used, batch size, number of epochs and values for hyperparameters.
	The submission has a good discussion in the writeup on the the training i.e the number of epochs: 10 and a batch size of 128. The solution has also discussed how the Adam Optimizer was used with a customized learning rate 0.002. Keep it up!
✓	The submission describes the approach to finding a solution. Accuracy on the validation set is 0.93 or greater.
	The description used in finding the solution was quite amazing which finally gave a validation accuracy of +933% . The Validation accuracy also increased to +97% after data augmentation.
	<h3>Suggestions and Comments</h3> <p>Please, another strategy to improve on this validation accuracy could be to add convolutional layers and dropout layers to the Lenet architecture.</p>

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.
	Wonderful job done in including 5 pictures from German traffic light in the solution and also discussing the qualities that made classification.
✓	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.
	Wonderful job in documenting the performance of your model i.e you did a great job in comparing the 83% accuracy on the capture images and the 95% test accuracy after augmentation. Kudos!
✓	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 in outputting the softmax probabilities predictions on the captured images and also discussing how the softmax function showed at least 83% certainty. Keep it up!

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