

PROJECT

Traffic Sign Classification

A part of the Self Driving Car Engineer Nanodegree Program

PROJECT REVIEW

CODE REVIEW

NOTES

Meets Specifications

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Dear Udacian,

Well done with the precise amendments you made in this submission after the previous review. This was an exceptional submission! 😊 Keep up the good work.

Dataset Exploration

Student performs a visualization on the dataset.

You did very well here in producing a visualization on the dataset. It is a wise idea to plot a histogram of the number of images against their image label. This helps to give an overview of how the classes are distributed in the dataset.

Design and Test a Model Architecture

Student thoroughly discusses the approach taken for deriving and designing a model architecture fit for solving the problem given.

Excellent work here on providing a good and reasonable explanation of your approach on deriving and designing your model architecture.

Student provides sufficient details of the characteristics and qualities of the architecture, such as the type of model used, the number of layers, the size of each layer. Visualizations emphasizing particular qualities of the architecture are encouraged.

Well done on providing details of the characteristics and qualities of your architecture and also describing the type of model used.

Students provides sufficient details of the preprocessing techniques used. Additionally, the student discusses why the techniques were chosen.

Well done with your amendments from the previous review and providing sufficient details of the preprocessing techniques used and also providing a discussion as to why you chose to use these specific techniques.

Student describes how the model was trained and evaluated. If the student generated additional data they discuss their reasoning.

Amazing work here on describing how you trained and evaluated your model and providing

details on additional parameters like your batch size, learning rate, number of epochs and optimizer. You should note that, image transformation falls also under the generation of additional data, since it was not present at the beginning. Good job with your discussion on why you generated additional data

Test a Model on New Images

Student chooses five candidate images of traffic signs taken and visualizes them in the report. Discussion is made as to any particular qualities of the images or traffic signs in the images that may be of interest, such as whether they would be difficult for the model to classify.

Nice! your answer includes details of the five candidate images chosen for test set analysis, the fact that the images are non-German, and that some of them are made up of multiple traffic signs are indeed particular qualities that might make training difficult.

Student documents the performance of the model when tested on the captured images and compares it to the results of testing on the dataset.

Good job here in documenting the performance of the model when tested on the captured images. *The model did not perform equally well on the test images* just like you said can be considered as a good enough comparison because, it is statistically challenging to directly compare both accuracies due to the huge different in the number of samples. However, you produced a very good discussion in your second attempt by providing details on how some specific signs performed while putting them on par with their supposed representations in the testing set.

The softmax probabilities of the predictions on the captured images are visualized. The student discusses how certain or uncertain the model is of its predictions.

Well done here on the discussion on the certainty and uncertainty of the model for its predictions.

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