

## 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

The submission includes a basic summary of the data set.

You did very well here in producing visualizations on the dataset.

## Design and Test a Model Architecture

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

Well done providing sufficient details of the preprocessing techniques used ( normalization and one hot encoding) and also providing a discussion as to why you chose to use these specific techniques.

The submission provides 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. You clearly outlined in your answer:

1. The characteristics of the architecture.
  2. The type of model used.
  3. The number of layers in the model.
  4. The size of each layer.
  5. Input and output sizes of the layers
- The visualization produced with tensorboard is clear and helps to understand the model pretty easily. good job here

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

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

The project 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.

### Test a Model on New Images

The submission includes five new German Traffic signs on the web, and the images are visualized. 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.

The answer includes details of the five candidate images chosen for test set analysis, including particular qualities such as the fact that the images are non-German. Nice!

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.

Good job here on describing how well does your model performs on the capture images and also providing a brief comparison of the results of testing on the dataset to that of the new images.

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.

Great visualization of the softmax probabilities of the predictions on the captured images. You also added a good discussion on the certainty and uncertainty of the model. Nice!

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