



[Return to "Self-Driving Car Engineer" in the classroom](#)

[DISCUSS ON STUDENT HUB](#)

# Traffic Sign Classification

REVIEW

CODE REVIEW

HISTORY

## Meets Specifications

## Files Submitted

The project submission includes all required files.

- Ipython notebook with code
- HTML output of the code
- A writeup report (either pdf or markdown)

## Dataset Exploration

The submission includes a basic summary of the data set.

The statistics that you calculated for the Build a Traffic Sign Recognition data set are accurate,

The submission includes an exploratory visualization on the dataset

The submission includes an exploratory visualization on the dataset.

The report includes important visualization, a bar plot that depicts the count distribution for each traffic sign. Please consider expanding the visualization to include an example of each traffic sign. This is important because that allows you to see the classification the model is trained to identify.

## Design and Test a Model Architecture

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

The report discusses the preprocessing steps performed on the images before using them for the training and suggests reasoning or justification for each step.

As for the gray images, I am not sure that the gray images will improve the results of the model. However, using grayscale will decrease the model dimension which will make the training more efficient.

[why we normalize 1](#)

[why we normalize 2](#)

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.

The report provides a detailed description of the network architecture and the parameter settings of the layers. Please consider using visualization here to depict the network.

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

For the training of the model, how did you decided on the number of Epochs? Longer or shorter training might cause overfitting/underfitting of the model to the training set. Therefore, it is important to find the right balance Instead. You can do that quite easily by identifying the number of the epoch that provides the maximum performance (or convergence) on the validation set. It will be useful to implement a condition, that when met the training iteration stops. That can save processing time and will promise optimal network for the following analysis.

The submission describes the approach to finding a solution. Accuracy on the validation set is 0.93 or greater.

## 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.

Excellent discussion 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.

Well done the report include a discussion about the comparison of the result f the model.

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.

 [DOWNLOAD PROJECT](#)

[RETURN TO PATH](#)

Rate this review