

Abstract

In this project, we used Python and TensorFlow to classify traffic signs. The project aimed to build deep learning model to predict traffic signs and identify which model is outperformed based on accuracy. We have trained our model using normalized_images, then we'll compute softmax cross entropy between logits and labels to measure the model's error probability. By using VGGNet, we've been able to reach a very high accuracy rate.

Methodology

- Loading the dataset.
- Data Preprocessing.
- Design a Model Architecture.
- Model Training and Evaluation.
- Testing the Model using the Test Set.
- Testing the Model on New Images.

Data

Dataset used: [German Traffic Sign Dataset](#). This dataset has more than 50,000 images of 43 classes. We able to reach a +99% validation accuracy, and a 97.3% testing accuracy.

Tools

- **Technologies:** Python using Jupyter notebook and Colab.
- **Libraries:** Pandas, Numpy, Matplotlib, Seaborn, Sklearn, Pickle, Skimage and Tensorflow.