Udacity Self Driving Car Engineer Nano Degree
Traffic Sign Classifier Project
Lim Ju won's Project / ReadMe Document
Overview

Hello. I am a student of self driving car nano degree Program. My name is Juwon lim.

Thisdocument explaining of my third project.

Installation Process

1.python 3.x

2.tensorflow

3.numpy

4.matplotlib

5.csv

6.pandas

7.glob

8.random

9.math

10.sklearn

Usage

Basically, it should be run on the jupyter notebook.

Under Jupyter notebook

Please select first cell and push the shift + enter.

It will run on each of cells.

The File Manifest

1. lim_with_dropout_code_Traffic_Sign_Classifier_2020_11_27.ipynb
2. ReadMe.pdf
3. Image files(PNG / Korea traffic signs

Special Notice

When I first wrote the code, I forgot to add a drop out layer to the LeNet Network.
The result was a zigzag-shaped graph. It was not reliable.
I experimented by adding from 3 to 5 dropout layes, but even if I added 5, there was no significant difference from the result of adding 3.

Even if the EPOCH was also conducted more than 25 times, the accuracy remained at the 90-95% Accuracy rate.
So, I thought that more than 30 times of EPOCH was not necessary.,

For the final submission, I tried 40 EPOCH, but the difference between the results was negligible when I did 30 times.

I had a hard time not knowing how to save and restore meta file to distinguish Korea traffic sign. But I got help from mentor Tejas J.

I didn't know How to create a custom label for korea traffic signs.
But found out that to match korea traffic signs(name) to number of names(in the file signames.csv). and it will works!

The reason for the low accuracy is that the sign contains Korean characters (hanguel:한글)

Miscellaneous

It tooks 30 days to complete this Project.

I spent 2 weeks for understanding CNN and LeNet and rest of 2 weeks for coding.

I am anxious if I can finish the course until the end, but I will try.

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