Manual on
Tensor Flow Installation on Window

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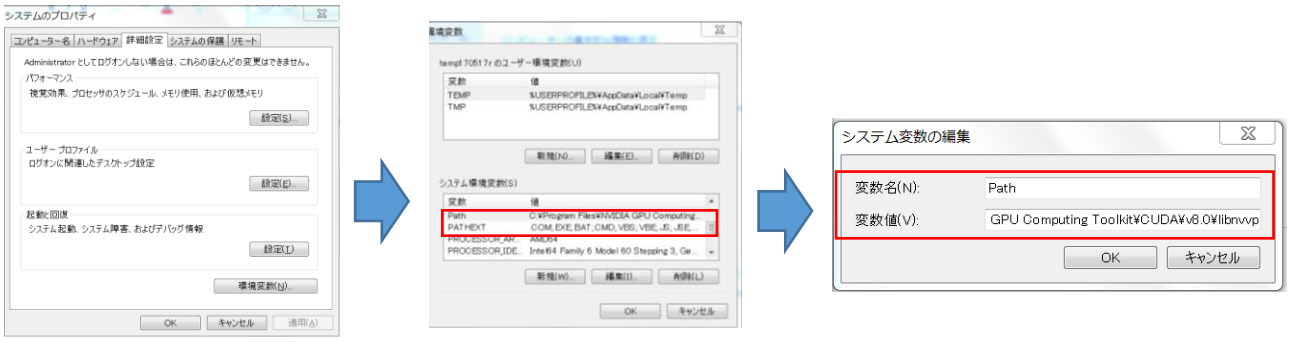
Requirement to run TensorFlow 1.3 with GPU support

- Step1: Download and Install Anaconda 3
- Step 2: Download and install cud toolkit 8.0 for GPU
- Set CUDA Path in Environment variable
  1. Path to “bin” folder. [For e.g. C:¥Program Files¥NVIDIA GPU Computing Toolkit¥CUDA¥v8.0]
  2. Path to libnvvp folder.
  3. Click OK.
- Step 3: Download CUDNN(ver 5.1 for tensorflow 1.1 and ver 6 for tensorflow 1.3)
  - Put the folder in the C drive and set path to bin folder in environmental variable as in Step 2(i).
- Step 4: Download and update latest NVIDIA drivers(see your computer GPU configuration)

Environmental Variable Setting



** Note: The above steps are not required for CPU version.*

Determine how to install tensorflow

- Step 1: Open Anaconda prompt.
- In anaconda command prompt:
- Step 2 : Install python 3.5.0 using following command line:
  - *conda create -n env_name anaconda python=3.5.0*
    - For e.g. env_name = tensorflow(any name)
- Step 3: Activate the conda environment by issuing the following command
  - *activate tensorflow*
- Step 4: To install the GPU version of TensorFlow, enter the following command (on a single line):
  - *pip install --ignore-installed --upgrade https://storage.googleapis.com/tensorflow/windows/gpu/tensorflow_gpu-1.1.0-cp35-cp35m-win_amd64.whl*

➢ To install the CPU-only version of TensorFlow, enter the following command ：

- *pip install --ignore-installed --upgrade https://storage.googleapis.com/tensorflow/windows/cpu/tensorflow-1.1.0-cp35-cp35m-win_amd64.whl*

After completion of above steps1-4 check your installation

Validate your tensorflow

- Step 1: Start your terminal, anaconda prompt command window
- Step 2: Activate tensorflow with command:
  - *activate tensorflow*
- Step 3: Write python then enter
- Step 4: Enter the following short program inside the python interactive shell:

```
>>> import tensorflow as tf
>>> hello = tf.constant('Hello, TensorFlow!')
>>> sess = tf.Session()
>>> print(sess.run(hello))
```

- If the system outputs the following, then you are ready to begin writing TensorFlow programs:
  - *Hello, TensorFlow!*

Visualization of MNIST DATA In Tensor Board

- Step 1: Create a folder in your computer drive and put the mnist.py file in the folder).
- Step 2: Open the mnist.py in notepad or sypder then give the path of your Step 1 folder in LOGDIR as below and save it:
  - *LOGDIR = 'D:¥¥TensorFlow¥¥MnistVisualization2¥¥'*

Change this PATH

Code Path : ¥¥172.24.207.160¥モデル開発統括部門¥システム開発 U¥02_CAD データ

¥TensorFlow_MnistCode

** Note: I have already edited some line of code, so no need to change the code except LOGDIR*

- Step 3: Run anaconda prompt then activate tensorflow.
- Step 4: After activation run the mnist.py file from anaconda prompt
  - *python mnist.py*
- Step 5: After completion, we will see lots of data file in the folder where you have put your mnist.py file.
- Step 6: Launch tensor board in command prompt
  - *tensorboard --logdir=path/to/log-directory*

PATH of your folder of mnist.py

- For e.g. tensorboard --logdir = D:¥TensorFlow¥MnistVisualization

- Step 7: Run tensorboard in browser
  - *localhost:6006*
- Step 8: In the Projector Tab, we will see the visualization of MNIST Data.

Successfully Completed!! ☺