Installing Tensorflow on Windows

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This tutorial introduces how to install TensorFlow on Windows. You can also refer to the TensorFlow official installation tutorial.

1 Installation

1.1 Determine which TensorFlow to install

There are two versions of TensorFlow you can install: CPU-only support version and GPU support version.

If your system has a NVIDIA® GPU, you can install either the GPU support version or the CPU-only version. TensorFlow programs typically run significantly faster on a GPU than on a CPU. This tutorial explains the installation of the CPU-only version. For the GPU version you can refer to the TensorFlow official installation tutorial.

1.2 Installing TensorFlow

There are different ways to install TensorFlow. Using Anaconda is the best way in our opinion. It will make both the installation and the programming later easier.

1.2.1 Installing Anaconda

First of all we need to install the Anaconda. Go to the Anaconda download page, and you need to choose which version of Python you will use. Here, we choose 64-BIT(X86) INSTALLER for Python 3.6.

1. Run the .exe file to install anaconda.
2. Install it in the default folder
3. Select the path box as shown in the picture below (this is important)

1.2.2 Installing TensorFlow with Anaconda

Now we need to install tensorflow inside anaconda. Open the command line of Windows type the following commands in this order:

1. conda create -n tensorflow python=3.5 (type 'y' to confirm if asked)
2. activate tensorflow
3. pip install --ignore-installed --upgrade `https://storage.googleapis.com/tensorflow/windows/cpu/tensorflow-1.2.1-cp35-cp35m-win_amd64.whl`
4. pip install scipy (or 'conda install scipy' if the first produce an error)
5. pip install keras
6. pip install matplotlib

1.2.3 IDE installation

In order to write programs in python we need an IDE or editor. The easiest option is to use Spyder that comes with anaconda.

1. Open the anaconda navigator that we just installed
2. Choose the tensorflow channer in the dropdown list
3. Click install under Spyder

1.3 Validate the installation

Finally, we need to run a simple TensorFlow program to make sure tensorflow was installed correctly. Open Spyder, write and execute the following program:

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

If the systems outputs 'Hello, TensorFlow!', then you have successfully installed tensorflow.