Install Keras with TensorFlow

quantra

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In this course, we will be using the Keras library to create our trading strategies. You will be required to install this library on your system to verify the strategy results at your end. This document will serve as a step by step guide for you to install the Keras library. We recommend that you install anaconda before installing TensorFlow and Keras.

Keras Background

Keras (κέρας) means horn in Greek. It is a reference to a literary image from ancient Greek and Latin literature, first found in the Odyssey, where dream spirits (Oneiroi, singular Oneiros) are divided between those who deceive men with false visions, who arrive to Earth through a gate of ivory, and those who announce a future that will come to pass, who arrive through a gate of horn. It's a play on the words κέρας (horn) / κραίνω (fulfill), and ἐλέφας (ivory) / ἐλεφαίρομαι (deceive).

Keras was initially developed as a part of the research effort for the project ONEIROS (Open-ended Neuro-Electronic Intelligent Robot Operating System). Keras is a high-level neural networks API, written in Python and capable of running on top of TensorFlow, CNTK, or Theano. It was developed with a focus on enabling fast experimentation. If you know Keras you will be able to access the above-mentioned libraries easily to create your own Deep Learning models.

Keras Installation

Before installing Keras, please install one of its backend engines: TensorFlow, Theano, or CNTK. For this course, we recommend the TensorFlow backend.

TensorFlow installation instructions (recommended):

For Windows:

Create a conda environment named tensorflow by invoking the following command in the conda prompt.:

1. **conda create -n tensorflow pip python=3.5**

Activate the conda environment by issuing the following command:

2. **activate tensorflow**

After this command your prompt should change to (tensorflow).

To install the TensorFlow, enter the following command:

3. (tensorflow)C:> **pip install --ignore-installed --upgrade tensorflow**

You can post your queries on the community page or visit the link below in case you have any issues with installation

https://www.tensorflow.org/install/install_windows

For Mac:

Create a conda environment named tensorflow by invoking the following command:

1. **$ conda create -n tensorflow pip python=2.7 # or python=3.5**

Activate the conda environment by issuing the following command:

2. **$ source activate tensorflow**

After this command your prompt should change to (tensorflow).

Issue a command of the following format to install TensorFlow inside your conda environment:

For Python 2.7 type the command below

3. **pip install --ignore-installed --upgrade https://storage.googleapis.com/tensorflow/mac/cpu/tensorflow-1.8.0-py2-none-any.whl**

For Python 3.4 and above type the command below

4. **pip install --ignore-installed --upgrade https://storage.googleapis.com/tensorflow/mac/cpu/tensorflow-1.8.0-py3-none-any.whl**

You can post your queries on the community page or visit the link below in case you have any issues with installation

https://www.tensorflow.org/install/install_mac

For Ubuntu:

Create a conda environment named tensorflow by invoking the following command:

1. **$ conda create -n tensorflow pip python=2.7 # or python=3.5**

Activate the conda environment by issuing the following command:

2. **$ source activate tensorflow**

After this command your prompt should change to (tensorflow).

Issue a command of the following format to install TensorFlow inside your conda environment:

For Python 2.7 type the command below

3. **pip install --ignore-installed –upgrade https://storage.googleapis.com/tensorflow/linux/cpu/tensorflow-1.8.0-cp27-none-linux_x86_64.whl**

For Python 3.4 and above type the command below

4. **pip install --ignore-installed --upgrade https://storage.googleapis.com/tensorflow/linux/cpu/tensorflow-1.8.0-cp34-cp34m-linux_x86_64.whl**

You can post your queries on the community page or visit the link below in case you have any issues with installation

https://www.tensorflow.org/install/install_linux

Install Keras using conda:

Steps:

1. Open the Conda prompt
2. Type the code below

```
conda install -c conda-forge keras
```

Verify the installation:

You can verify your installation by following the below instructions.

1. Open the Python API, Spyder or Ipython Notebook
2. Type the code:

```
import keras
```

3. Run the command

If the execution does not throw any error, then your installation is successful.