Introduction to Python

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January 26, 2019

Overview

Python

Python is a programming language that lets you work more quickly and integrate your systems more effectively. You can learn to use Python and almost immediate gains in productivity and lower maintenance costs.

Python Features:

- Free
- Open source general-purpose language
- Great interactive environment
- Easy to interface with C/ObjC/Java/Fortran
- Easy-to-learn, a beginner's language

Install Python environment

Download

- Please go to the following webpage to download the installer for Python:
  https://www.python.org/downloads/release/
- Python 2 vs. Python 3:
  - most of the things written on 2.x were not compatible with 3.x
  - "Python 2.x is legacy, Python 3.x is the present and future of the language."
    http://learntocodewith.me/programming/python/python-2-vs-python-3/
- For a detailed tutorial for Windows:
  http://www.howtogeek.com/197947/

Anaconda

Anaconda is an easy-to-install free package manager, environment manager, Python distribution, and collection of over 720 open source packages offering free community support.

- If you use Windows system, it is strongly recommended to download Anaconda.
  download: https://www.continuum.io/downloads
- Note: Miniconda cannot solve the problem with errors when installing Python packages on Windows

Python editor

After installing Python, you may wish to install a Python editor (which acts as a front end for writing and compiling your code). I recommend **Pycharm Edu** for newcomers to Python since it is very user friendly and has a similar look and feel to Matlab.

- Please go to the following link to download the **Pycharm Edu** Installer
  https://www.jetbrains.com/pycharm-edu/download/#
- A quick tutorial for **Pycharm Edu**:
  https://blog.jetbrains.com/pycharm/2016/01/introducing-getting-started-with-pycharm-video-tutorials/
- Other choices: Spyder, Jupyter notebook

Install packages

You may need to install some packages needed for your programming. There are two ways to do this:

1. **Option 1:** Open command prompt / terminal (mac) and write the following commands: **pip install pandas**
   - For Anaconda: open Anaconda prompt and write the following commands:
     conda install pandas
   - Anaconda also support pip install:
     conda install pip
     pip install pandas
2. **Option 2:** You can install libraries / packages from within the PyCharm application. Go to the following webpage to see instructions: https://www.jetbrains.com/help/pycharm/2016.1/installing-uninstalling-and-upgrading-packages.html#d114511e134

Thanks!