

Tutorial: Configure Python Packages

EE 4163 / EL 6183 : Digital Signal Processing Lab

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1 Windows Users

For windows users, some necessary packages for this course may need to be installed with some additional configurations. Here, we provide a method to manage packages with `pip`.

1.1 Before install pip

To enable `pip` (presumably under Python 2.7), **Microsoft Visual C++ Compiler for Python 2.7** is required, which is available at:

- <http://www.microsoft.com/en-us/download/details.aspx?id=44266>

The installation process is quite simple.

1.2 Install pip

`pip` is one of the PyPA recommended tools for installing Python packages. For more details about `pip`:

- <https://pypi.python.org/pypi/pip>

To install `pip`, you need to run a Python script called `get-pip.py`. We have made it available in the Recourses of the course, and it is also available at:

- <http://pip.readthedocs.org/en/stable/installing/>

You can use `Command Prompt` with `cd` command, direct to the folder containing the file. Then, use:

```
python get-pip.py
```

to run the script, which is same to running a normal Python script from Prompt. The result of finishing installation will show in the Prompt after a few minutes (Internet connection required of course ...).

1.3 Install specific packages

As long as `pip` is configured, the packages can be installed with very straight-forward commands. In `Command Prompt`, type

```
pip install "some package"
```

to install "some package". For instance, to install `numpy`, you need to type:

```
pip install numpy
```

The installation of each package may need a few minutes, and you may need to press ‘y’ and ‘Enter’ during the installation. Note that `matplotlib` may require a priori installation of `numpy`, so we suggest to install `numpy` before any other packages.

Moreover, using

```
pip list
```

you can check the installed packages.

Typing

```
pip
```

you can find all the possible commands.

2 Ubuntu Users

Ubuntu users can get most of the popular Python packages with `apt-get` command in **Terminal**. In particular, installing `numpy` and `matplotlib`, the corresponding commands are

```
$ sudo apt-get install python-numpy
```

and

```
$ sudo apt-get install python-matplotlib
```

3 Mac Users

We tested on Mac OS X 10.10.5, and it seems nothing extra needs to do for `numpy` and `matplotlib`.