

Setting up your Linux machine

All the needed dependencies for setting up your machine for these tutorials.

— Overview of requirements —

The installation will depend on your operating system, but overall, you will need:

- Python 2.x - there are plans to update/include Python 3.x
- git
- A C compiler
- pip
- virtualenv
- virtualenvwrapper

— Installation —

Python

Linux machines come with Python pre-installed. To check, open up the Terminal application, then type `python`:

```
$ python
Python 2.7.3 (default, Aug 9 2012, 17:23:57)
[GCC 4.7.1 20120720 (Red Hat 4.7.1-5)] on linux2
Type "help", "copyright", "credits" or "license" for more information.
>>>
```

git

You will need to install git^[12] either from commands below or through their download page^[13]. You can then follow the Save your Progress^[14] page to set it up.

- Fedora: `sudo yum git`
- Ubuntu: `sudo apt-get install git`

C Compiler

A C compiler, either GCC or clang, is needed because the `numpy` library we are using has some C extensions, which will need to be compiled.

To test if you have either GCC or clang, type `$ gcc` or `$ clang` into your terminal. If you get an error that says “command not found” then follow the install instructions:

- Fedora:
 - `sudo yum groupinstall "Developer Tools"`
 - `sudo yum install python-devel`
- Ubuntu:
 - you may need to run `sudo apt-get update` first.
 - `sudo apt-get install build-essential python-dev`

This gives you the GCC^[15] or the GNU Compiler Collection. To test installation, within the Terminal application, type `gcc` and you should get something like the following:

```
$ gcc
gcc: fatal error: no input files
compilation terminated.
```

pip

`pip`^[16], stands for “python install python”, is a tool for installing and managing Python packages. Within your Terminal application, use the following commands (ignore the leading `$` as that is your terminal prompt) for downloading & installing. It may prompt you for your computer login password.

```
$ sudo curl -O http://python-distribute.org/distribute_setup.py | python
$ sudo curl -O https://raw.githubusercontent.com/pypa/pip/master/contrib/get-pip.py | python
$ pip
Usage: pip COMMAND [OPTIONS]
You must give a command (use "pip help" to see a list of commands)
```

virtualenv & virtualenvwrapper

`virtualenv`^[17] creates isolated environments for each of your Python projects. It helps to solve version & dependency problems with multiple Python installations and/or multiple versions of different Python packages. We’ll use `pip` to install it:

```
$ sudo pip install virtualenv
```

virtualenvwrapper^[18] is a great (but not required) tool for using virtualenv by simplifying the commands that virtualenv needs. We'll use `pip` again to install it:

```
$ sudo pip install virtualenvwrapper
$ export WORKON_HOME=~/.Envs
$ mkdir -p $WORKON_HOME
$ source /usr/local/bin/virtualenvwrapper.sh
```

— Text Editor —

If you already have a text editor that you like to use, great!

If not, I would suggest grabbing Sublime Text 2^[19]. It's free, and very user-friendly, especially for the beginner.

Now continue on to “Test your setup”.

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