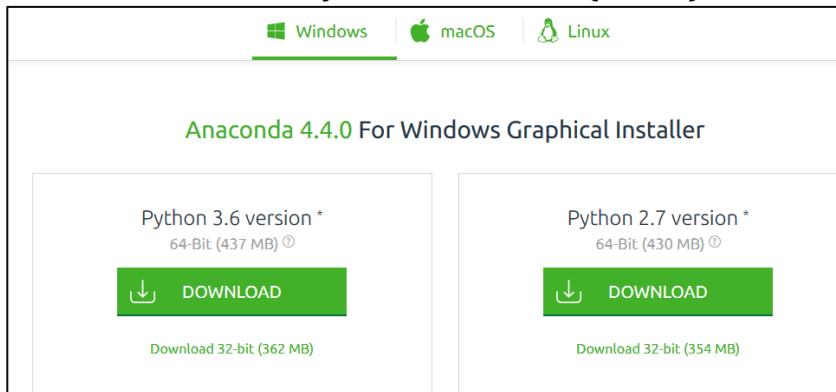# PYTHON 101: prerequisites

Introduction to Python in Neuroscience. Jeremy LB.
Tuesdays, 16th October till mid-November 2018.
14:00-16:00

I. Install ANACONDA package

1. Google " anaconda package download "
2. Click on this one: *https://www.continuum.io/downloads*
3. Select if you're using MAC, Windows or Linux
4. Click sur download **Python 3.6 version (NOT 2)**

5. Just click yes for the rest

In case of trouble, watch the beginning of this video:
https://www.youtube.com/watch?v=YJC6ldI3hWk

IIa. If you have a MAC or Linux

1. Open the *terminal* (on the search button, write "terminal" and double click on it)
2. In the *terminal*: write "ipython" then press Enter button on your keyboard.
3. Write "import numpy" then press Enter button.

If you don't have any error message then perfect, go straight to the point **III.**
If you do, check if you really activated ipython or if Anaconda was well installed, if yes and still error, watch the video below. If there is still an error, come see me with your computer.

In case of trouble, watch the middle part of this video:
https://www.youtube.com/watch?v=YJC6ldI3hWk

IIb. If you have a Windows

1. Open the "*anaconda prompt*" (It should be in your Windows start button on the bottom left, otherwise just type it in the search area)
Note: You can also used the windows terminal (search for "cmd")
2. Write "ipython" then press Enter button
3. Write "import numpy" then press Enter button

If you don't have any error message then perfect, go straight to the next point. If you do, check if you really activated ipython or if Anaconda was well installed, if yes and still error, watch the video below. If there is still an error, come see me with your computer.
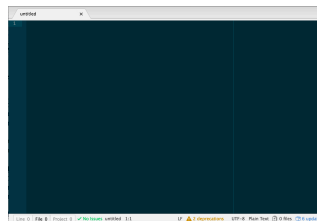
In case of trouble, watch this video:
https://www.youtube.com/watch?v=SjKtDEEv0_E

III. Download ATOM

1. Google "Atom.io"
2. Download it from the above website.

IV. Check everything

1. Open *Atom* => should looks like this:

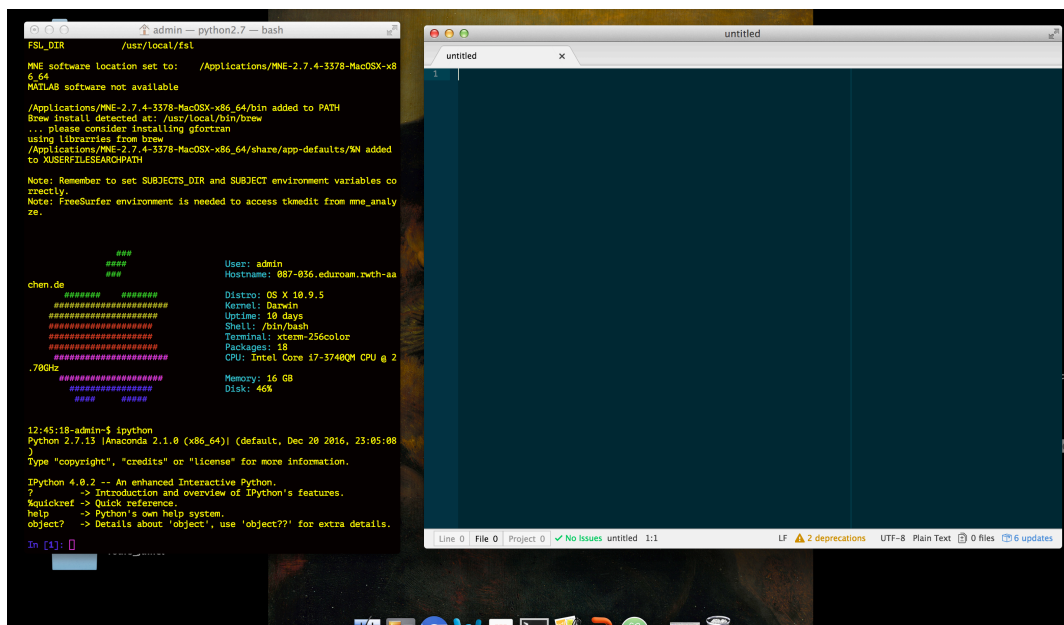**2. Open the terminal and activate ipython** (open the terminal, write ipython and press Enter)
=> should look like this (the text not the colors):

3. Finally, you should have your screen with atom on one side and the terminal next to it. Looking like this:

4. Final test.

a) Write this in *atom* (mind the space and paragraph!):

import numpy
a = numpy.array([1])
print a

b) select it and copy it
c) write "paste" on your terminal (with ipython activated) and press the Enter button
If you have no error and something like this is written (with a bunch of colors):

*In [**1**]: paste*
import numpy
a = numpy.array([1])
print a
-- End pasted text --
[1]

Then, CONGRATULATIONS!! And see you Tuesday 16th October at 2pm for the first Python class!
If error, please reread and retry. If problem, come see me with your computer.

----OPTIONAL----
If you want to understand what and why you just did what you did, see below :-)

About Python 3.6:
In easy words: to directly "talk" to your computer, you use the **terminal**. Then, you activate an interpreter (a language) (here => *python 3.6*) to "talk" to the machine. We are actually using **ipython3.6**. The *i* stands for *"interactive"* python. We are using it because it makes everything more simple.
We are using the version 3.6 and not 2.7 because the versione 2.7 is depreciated.
-Please, do not download the version 2.7- because many scripts I will give you wouldn't work in the version 2.7.
FYI Python was not named after the snake but after the Monty Python :-)

About Anaconda:
Anaconda is a package including Python 3.6, ipython and many other useful modules that I will tell you more about later on.
It also allows to create environments (end of this video:
https://www.youtube.com/watch?v=YJC6ldI3hWk). I will tell you more details about it later, but in sum, it puts everything at the same place in your computer which avoids errors. Don't worry about the environment, we will do that all together during the first class.

About Atom:
Atom is basically a text editor. So we use it to write and save scripts, that's it.
But atom is quite awesome for several reasons:
1. there are several great *add ons.* For example, one is called *flake8* and automatically corrects your script to make it well written.

2. It makes the script really easy to read thanks to its color syntax
3. A lot of short cuts and options make the process of writting scripts easier.

Here we go! If you have any question, I am at your disposal, just email me or come see me with your computer at the shared office.

See you soon!
Jeremy