



Aug 27,  
2019

## First steps using a jupyter notebook

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1 Works for me dx.doi.org/10.17504/protocols.io.6uphevn

Metagenomics class 2019



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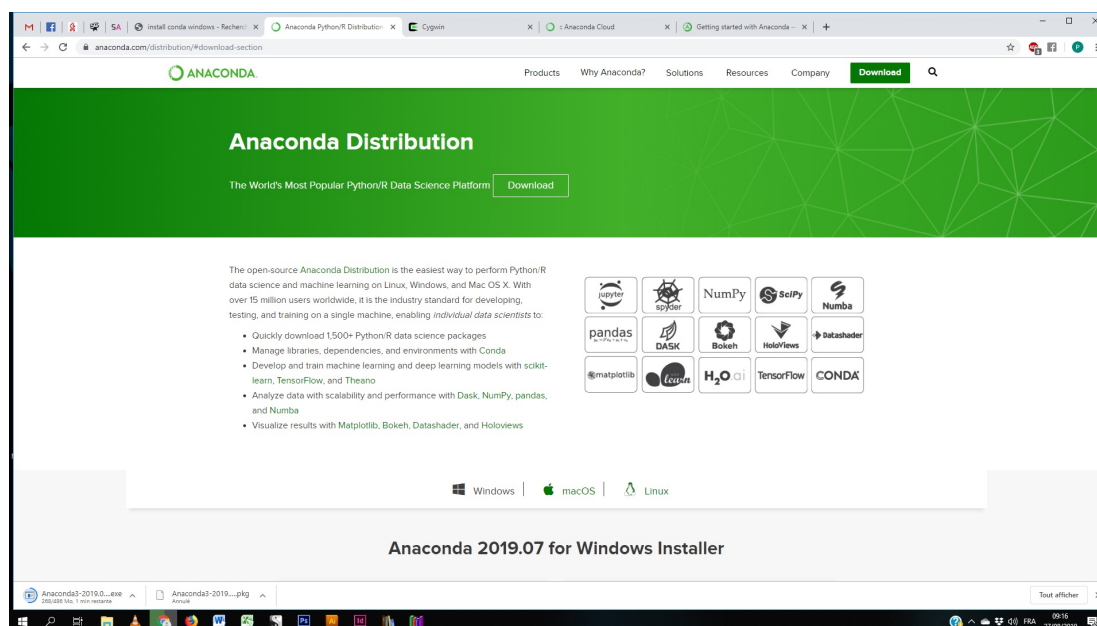


### ABSTRACT

Install and start using awesome jupyter !

### Install Anaconda

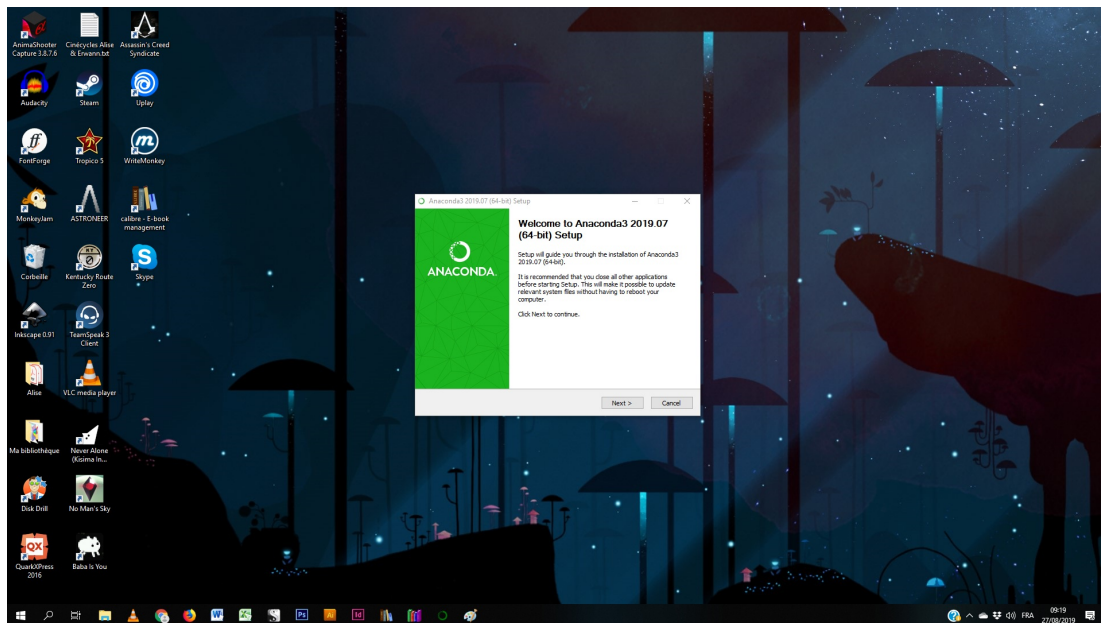
- 1 Open your favorite web browser and go to <https://www.anaconda.com/distribution/>



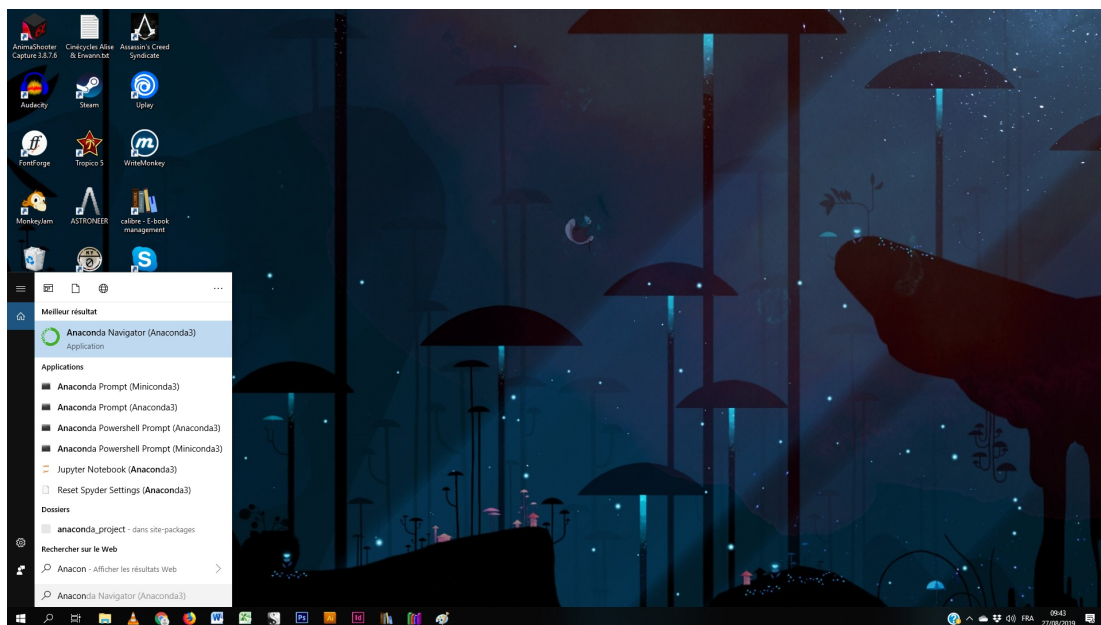
Select the distribution that fits your personal computer (Linux, Windows or MacOS)

## 1.1 For Windows users :

Download the executable file and open it. This should start the installation wizard. Follow the instructions of the wizard to complete the installation. Keep it simple and choose the recommended settings !



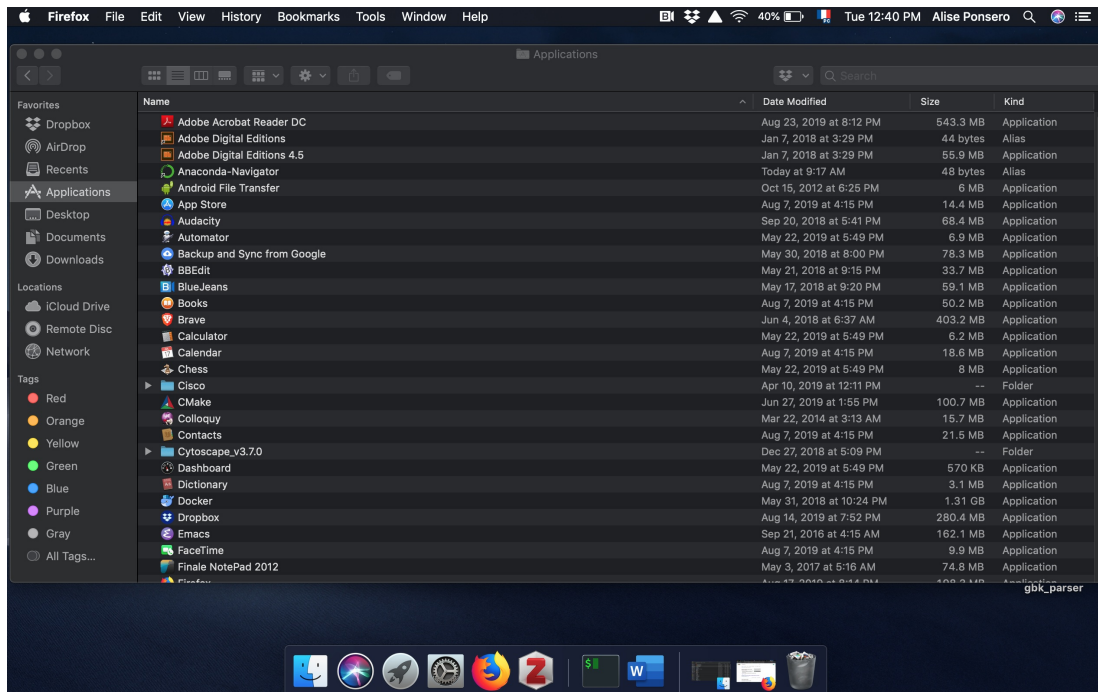
Once the installation is complete, you can open the Anaconda navigator through your desktop menu search bar.



## 1.2 For Mac Users :

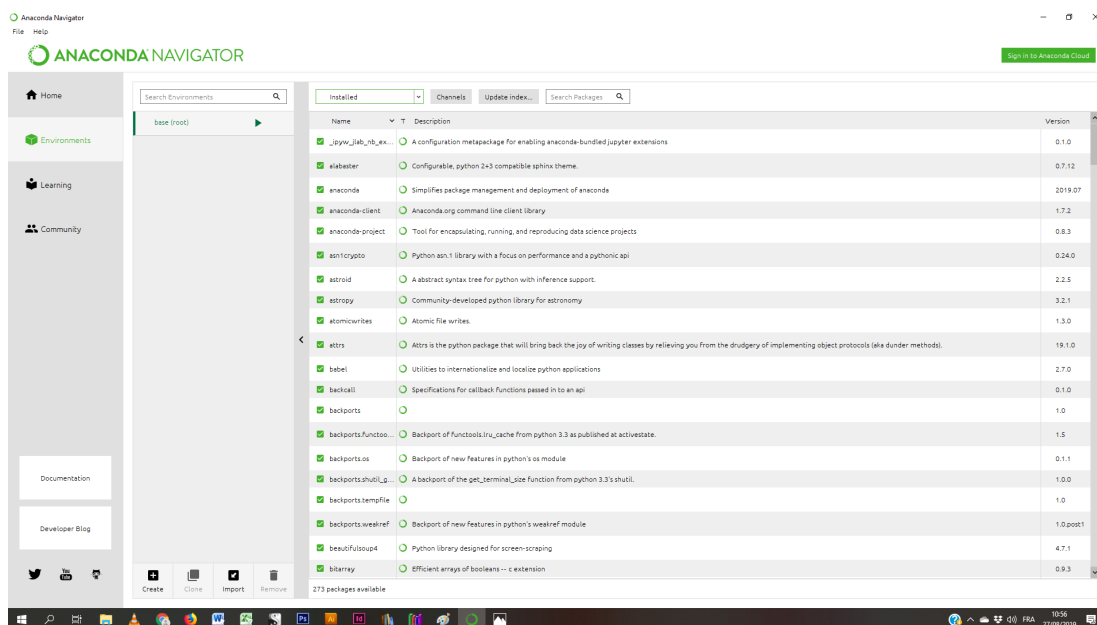
Download the installation package. Follow the instructions and recommended setting to install anaconda.

Once the installation is complete, you can find the Anaconda navigator in your application folder.



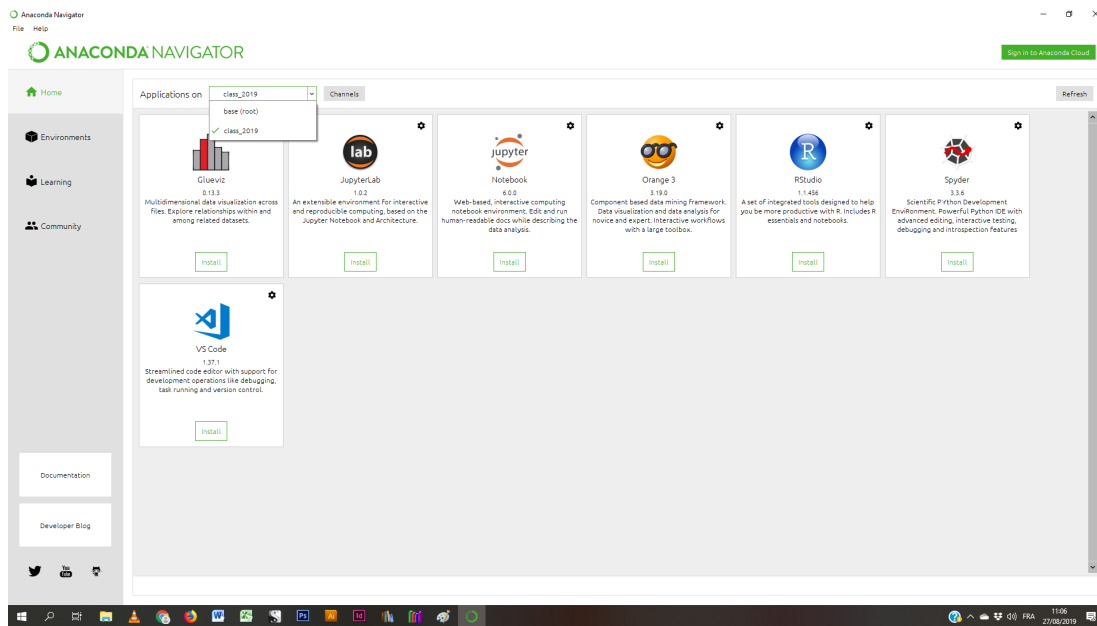
### Create a Conda env

- 2 Open your shiny new Anaconda navigator. On the side bar, click on "Environments". This displays your conda environments installed on your computer. By default, you'll see the base environment.





- 3 On the side bar, you can now go back on the Home tab. On top of this page, you can find a drop down menu that allows you to navigate from environment to another. Make sure that you are in the "class\_2019" environment.

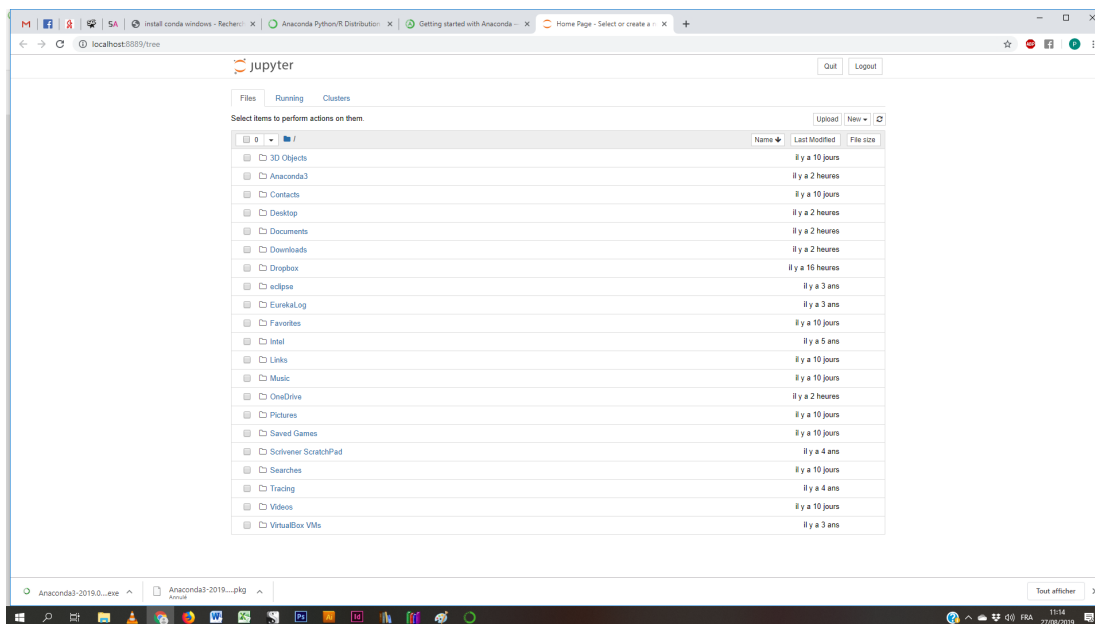


Since it's a brand new environment, you'll need to install jupyter Notebook in it. Find the tile and click on install. This will take a while. In the meantime, you can discover a new passion for [microbial art](https://creativecommons.org/licenses/by/4.0/).

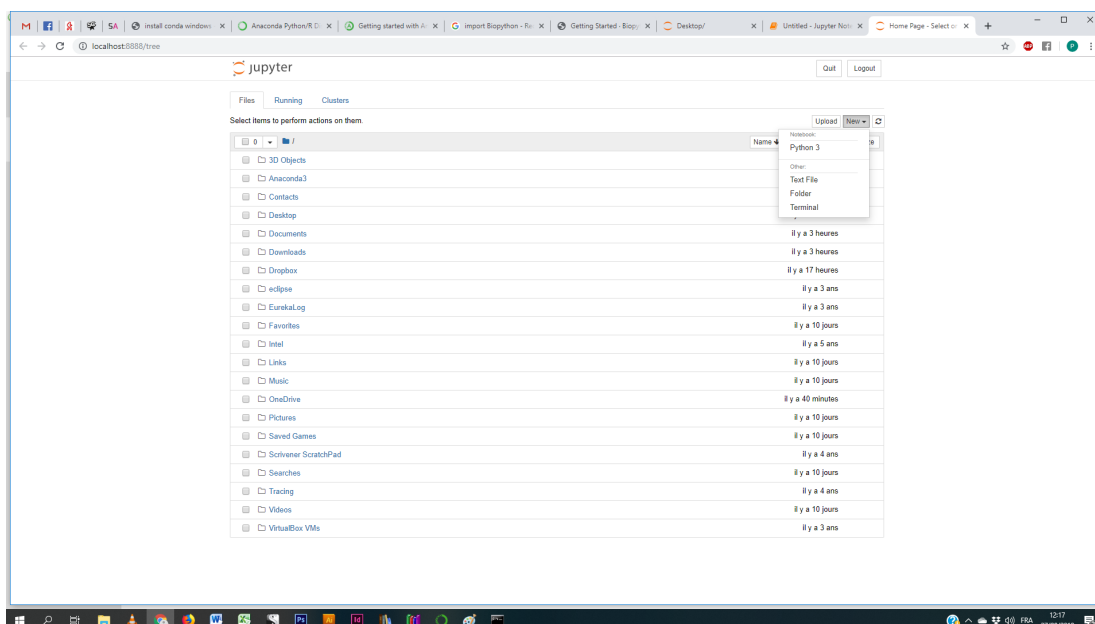
Hurray ! you can now open your first Jupyter Notebook by clicking the "launch" button.

## Opening a Notebook

- When clicking on the launch button, Jupyter will start a jupyter server on your internet browser. You should see your personal folders and you can navigate on your computer this way.



Navigate to your Document directory and create a notebook by clicking on "new" and "Python3"

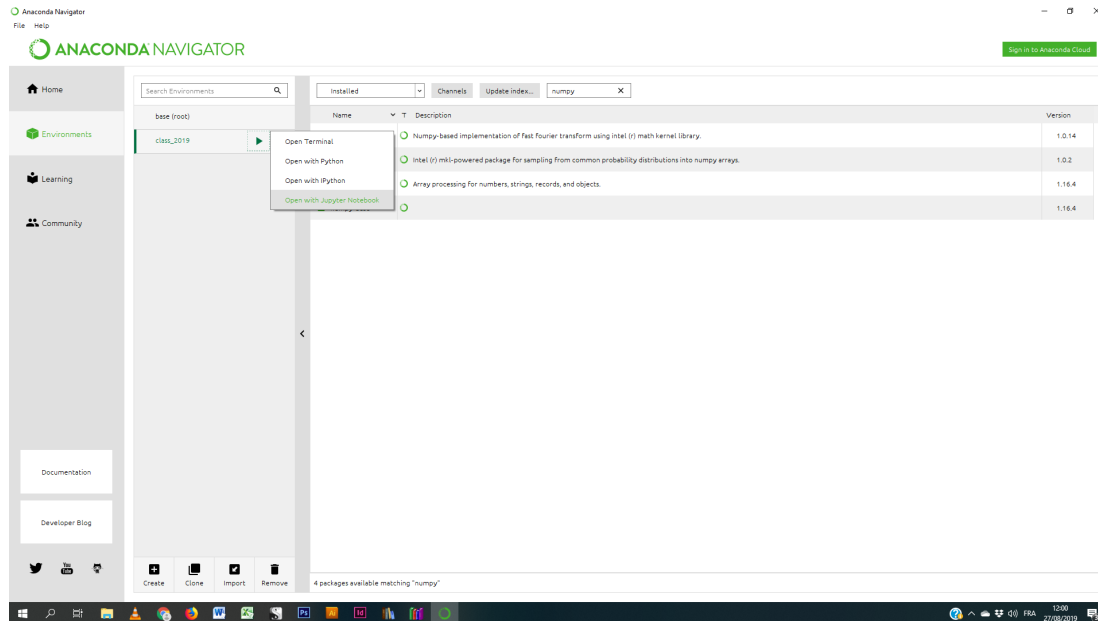


If for some reason, the launch button doesn't open anything, DO NOT PANIC. Let's try some quick fixes. (if it works, you can skip the next couple of steps and go to step 5)

4.1 Try opening the jupyter server directly in your browser by going to the page <http://localhost:8888/tree>

Still doesn't work for you ? Let's try something else...

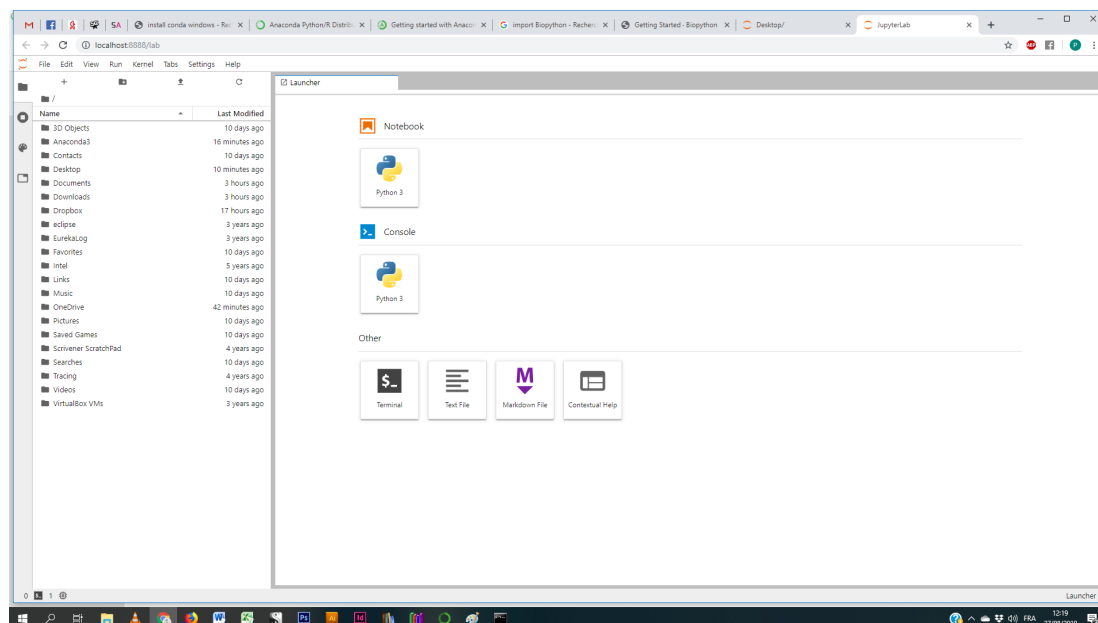
4.2 Go to the Anaconda navigator, go to the environment tab. Click on the class\_2019 environment. You should see a green arrow next to the name. If you click on it, you should see a dropdown menu where you can select "Open with Jupyter Notebook". Try it now !



Did it work? If not, do not despair (yet) and let's try another fix !

- 4.3 Go to the Home menu, make sure that you selected the right environment "Class\_2019". Find the tile "Jupyter lab" and install it. It'll take a while. In the meantime, you can finally find out [how long would it take for a single person to fill up an entire swimming pool with their own saliva?](#)

Is it done? Ok, try and launch the Jupyter lab. It should open a tab in your internet browser. It looks slightly different from the Jupyter server window, but the main ideas are the same. You have a way to browse your folders on the left. Navigate to your Document folder and create your first Notebook by clicking on the tile "Notebook Python3"



If it didn't work, congrats! You are officially went through your first bioinformatic hardship. Contact me or the class teacher to get personalized help. Where there is a will, there is a way (to install this damn thing).

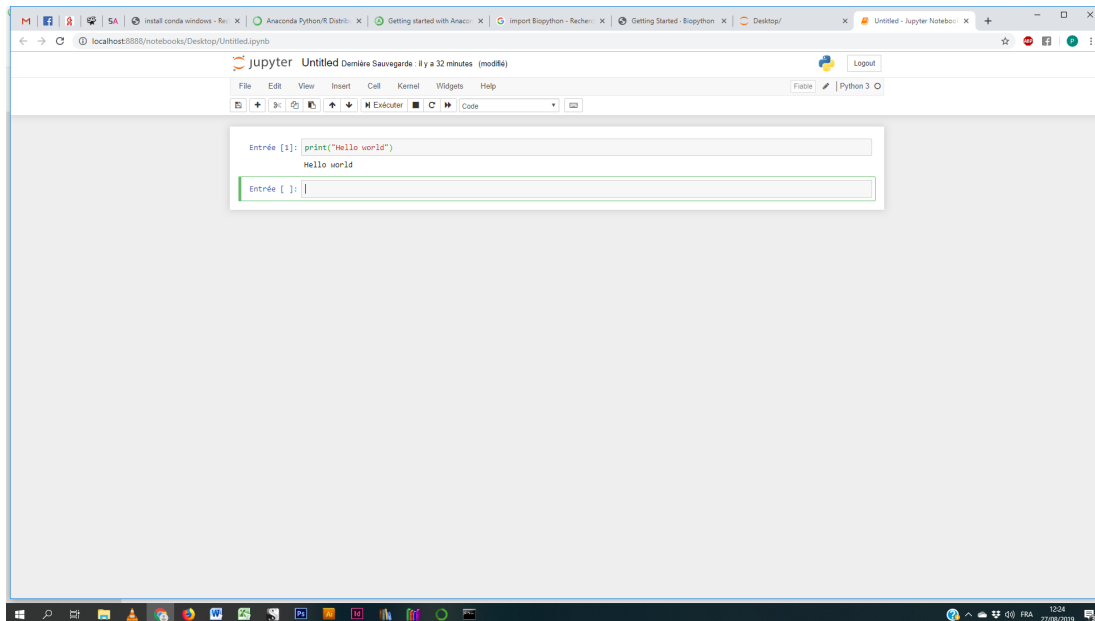
- 5 Let's make sure that everything works well.

In the first cell of the notebook, type :

```
print("Hello world")
```

To run the cell, hold shift+enter. This should print "Hello world" just below the cell. Exciting, I know...



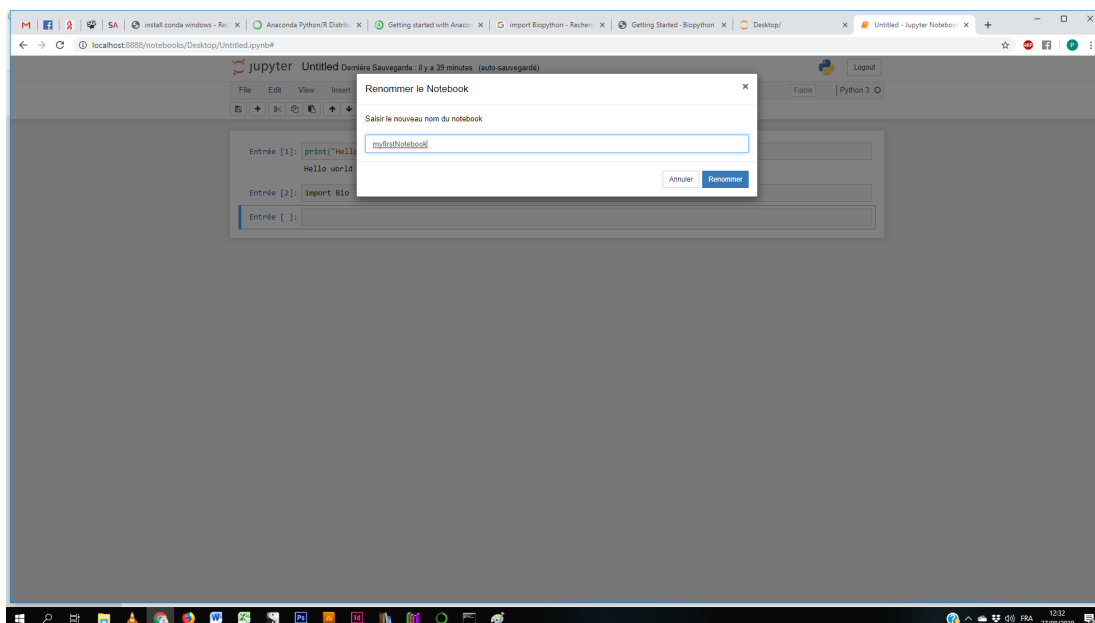


Next, we want to check that everything is working well. In the next cell, we'll try to import the Biopython package we installed earlier. Type :

```
import Bio
```

Once again, run the cell holding the shift key and enter. **This shouldn't print any message. If it does, you have a problem, and we'll try to fix it in the section 5.1.**

If everything worked, change the name of notebook by going to the "file" dropdown menu and "Rename".



Note that the interface should be in English. Except if you're a fellow French...

## 5.1 For some reason, the installation of Biopython didn't work? Ok, let's fix it.

Go to the Anaconda navigator, and click on the environment tab. Select the base environment. As you did previously for the class\_2019 environment, install Biopython on the base.

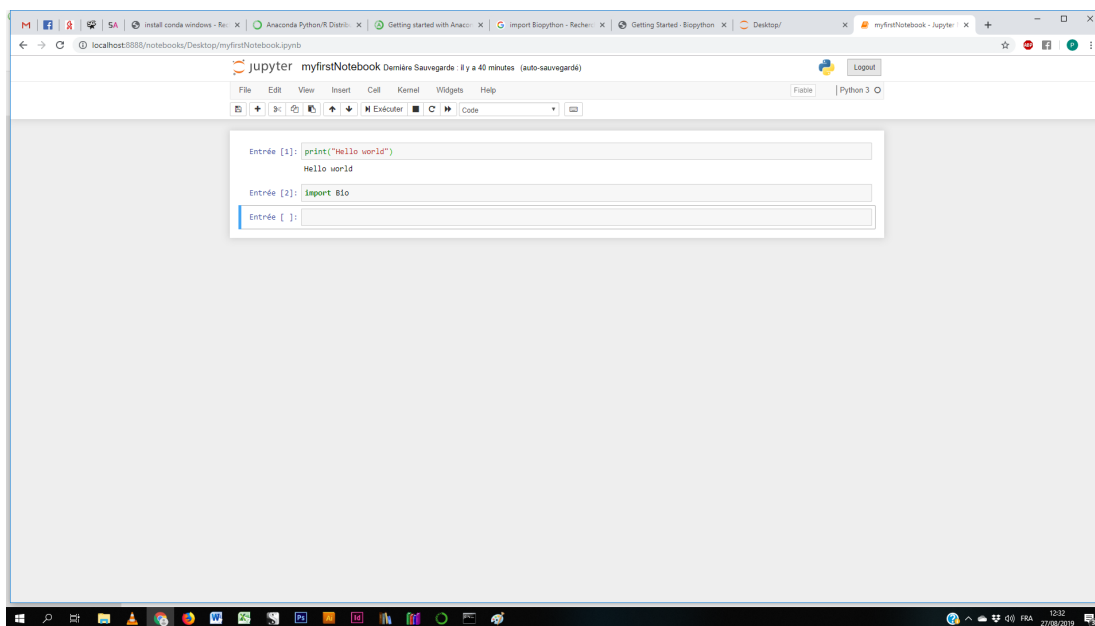
Try to open a jupyter notebook and try to import Bio...

If this fix doesn't work, contact me or the teacher to get help...

closing jupyter

## 6 You created your first notebook. Let's close the server properly!

On the top right of your screen you should see the "LogOut" button. Click on it. This should display a message saying that the server was turned off properly.



Note : If you're using Jupyter Lab, the shutdown button is on the "File" dropdown menu, and "Shutdown".

**Congrats on finishing this first tutorial !**



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