

## 3. Running the Jupyter Notebook

### 3.1. Launching *Jupyter Notebook App*

The *Jupyter Notebook App* can be launched by clicking on the *Jupyter Notebook* icon installed by Anaconda in the start menu (Windows) or by typing in a terminal (*cmd* on Windows):

```
jupyter notebook
```

This will launch a new browser window (or a new tab) showing the [Notebook Dashboard](#), a sort of control panel that allows (among other things) to select which notebook to open.

When started, the *Jupyter Notebook App* can access only files within its start-up folder (including any sub-folder). No configuration is necessary if you place your notebooks in your home folder or subfolders. Otherwise, you need to choose a *Jupyter Notebook App* start-up folder which will contain all the notebooks.

See below for platform-specific instructions on how to start *Jupyter Notebook App* in a specific folder.

#### 3.1.1. Change Jupyter Notebook startup folder (Windows)

- Copy the *Jupyter Notebook* launcher from the menu to the desktop.
- Right click on the new launcher and change the *Target field*, change %USERPROFILE% to the full path of the folder which will contain all the notebooks.
- Double-click on the *Jupyter Notebook* desktop launcher (icon shows [IPy]) to start the *Jupyter Notebook App*. The notebook interface will appear in a new browser window or tab. A secondary terminal window (used only for error logging and for shut down) will be also opened.

#### 3.1.2. Change Jupyter Notebook startup folder (Mac OS)

To launch *Jupyter Notebook App*:

- Click on spotlight, type `terminal` to open a terminal window.
- Enter the startup folder by typing `cd /some_folder_name`.
- Type `jupyter notebook` to launch the *Jupyter Notebook App*. The notebook interface will appear in a new browser window or tab.

## 3.2. Shut down the *Jupyter Notebook App*

Closing the browser (or the tab) **will not close** the *Jupyter Notebook App*. To completely shut it down you need to **close the associated terminal**.

In more detail, the *Jupyter Notebook App* is a server that appears in your browser at a default address (*http://localhost:8888*). Closing the browser will not shut down the server. You can reopen the previous address and the *Jupyter Notebook App* will be redisplayed.

You can run many copies of the *Jupyter Notebook App* and they will show up at a similar address (only the number after “:”, which is the port, will increment for each new copy). Since with a single *Jupyter Notebook App* you can already open many notebooks, we do not recommend running multiple copies of *Jupyter Notebook App*.

## 3.3. Close a notebook: *kernel* shut down

When a notebook is opened, its “computational engine” (called the *kernel*) is automatically started. Closing the notebook browser tab, will not shut down the *kernel*, instead the kernel will keep running until is explicitly shut down.

To shut down a kernel, go to the associated notebook and click on menu *File -> Close and Halt*. Alternatively, the *Notebook Dashboard* has a tab named *Running* that shows all the running notebooks (i.e. kernels) and allows shutting them down (by clicking on a *Shutdown* button).

## 3.4. Executing a notebook

Download the notebook you want to execute and put it in your notebook folder (or a sub-folder of it).

Then follow these steps:

- Launch the *Jupyter Notebook App* (see [previous section](#)).
- In the *Notebook Dashboard* navigate to find the notebook: clicking on its name will open it in a new browser tab.
- Click on the menu *Help -> User Interface Tour* for an overview of the *Jupyter Notebook App* user interface.
- You can run the notebook document step-by-step (one cell a time) by pressing *shift + enter*.
- You can run the whole notebook in a single step by clicking on the menu *Cell -> Run All*.
- To restart the *kernel* (i.e. the computational engine), click on the menu *Kernel -> Restart*. This can be useful to start over a computation from scratch (e.g. variables are deleted, open files are closed, etc...).

More information on editing a notebook:

- [Notebook Basics](#) (or [alternate link](#))

#### ⓘ Note

**Save notebooks:** modifications to the notebooks are automatically saved every few minutes. To avoid modifying the original notebook, make a copy of the notebook document (menu *File* -> *Make a copy ...*) and save the modifications on the copy.

#### ⓘ Warning

Pay attention to not open the **same** notebook document on **many tabs**: edits on different tabs can overwrite each other! To be safe, make sure you open each notebook document in only one tab. If you accidentally open a notebook twice in two different tabs, just close one of the tabs.

More info on the [Jupyter Notebook App](#) environment see [References](#).