**Jupyter Notebooks**

We will start with a very very short introduction to Jupyter Notebooks – just what we need to work through this workshop.

Jupyter is a project to develop open-source software. In many different languages. And the most useful tool is the Jupyter Notebooks, that is a web application to create interactive scripts. Most of the time, you’ll be running in your computer, but still it is accessed through your web browser. You could also run them on a remote server (as we are doing).

But Jupyter Notebook is more than just an interactive script interface. It lets you enter and save text visualizations, equations, and save them, so you can see them later without needed to rerun your code. Here an example: text include formatting and links, these cells are code cells, graphics will show every time you open the file, and you could add and visualize equations.

Change example to cartopy

We will cover the basics, but more detailed tutorials and useful links to installation and use are provided at the end of this notebook

Let’s start with the dashboard. When you launch Jupyter notebook server, either in your computer or remotely, you’ll see a dashboard like this, where files are listed, and you can create new file by clicking on the New button at the top right. It will give you choices of languages or type. In our case, we are using python 3.

As a result, we will get a brand new file like this.

We have skipped all these steps because we are running in these, already made scripts online, bout you’ll need to use them when you try this at home.

From now on, we will practice as we go, so get your fingers ready.

**Rename a script**

Insert image of pop-up window

**Saving your own script**

Test on mybinder

**Modes**

Jupyter Notebook has two operation modes. Command and Edit. In command mode, typing and shortcuts applies to the entire script. In Edit mode, it only applies to the selected cell.

If you click on the cell bellow, automatically you enter the Edit mode, which is recognized by the green color on the left of the cell. By pressing Esc, you go into “command” mode, which is shown by the blue color on the right.

The main reason to tell you this is because once we start using shortcuts, sometimes you’ll think your notebook is doing something weird, which is easily explain by the fact that you think your editing, and in reality, you’re in command mode.

**Cell types**

There are two useful cell types, Code and Markdown. You can select the type on the icon menu on the top (center).

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Other Links?