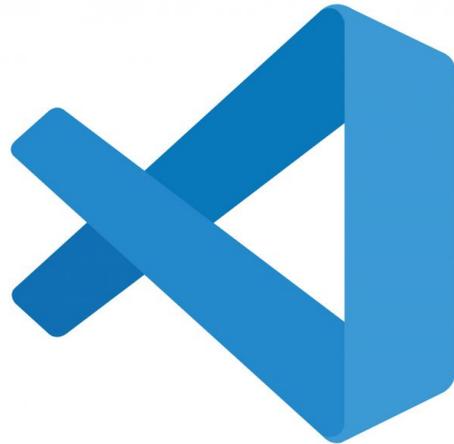


# Visual Studio Code for Ubuntu

<https://gogs.elic.ucl.ac.be/pbarriat/learning-vscode>



**Pierre-Yves Barriat**

ELIC Training Sessions June 14th, 2023

# What is Visual Studio Code ?

**Visual Studio Code** (VS Code) is a lightweight but powerful source code editor which runs on your desktop and is available for Windows, macOS and Linux.

It has a rich ecosystem of extensions for languages (such as C++, Fortran, Java, Python, etc) and runtimes (Git, Jupyter, etc)

VSC is one of the most popular and powerful text editors used by software engineers today

free, open-source and [available](#) for macOS, Windows and Linux 👍

# VS Code

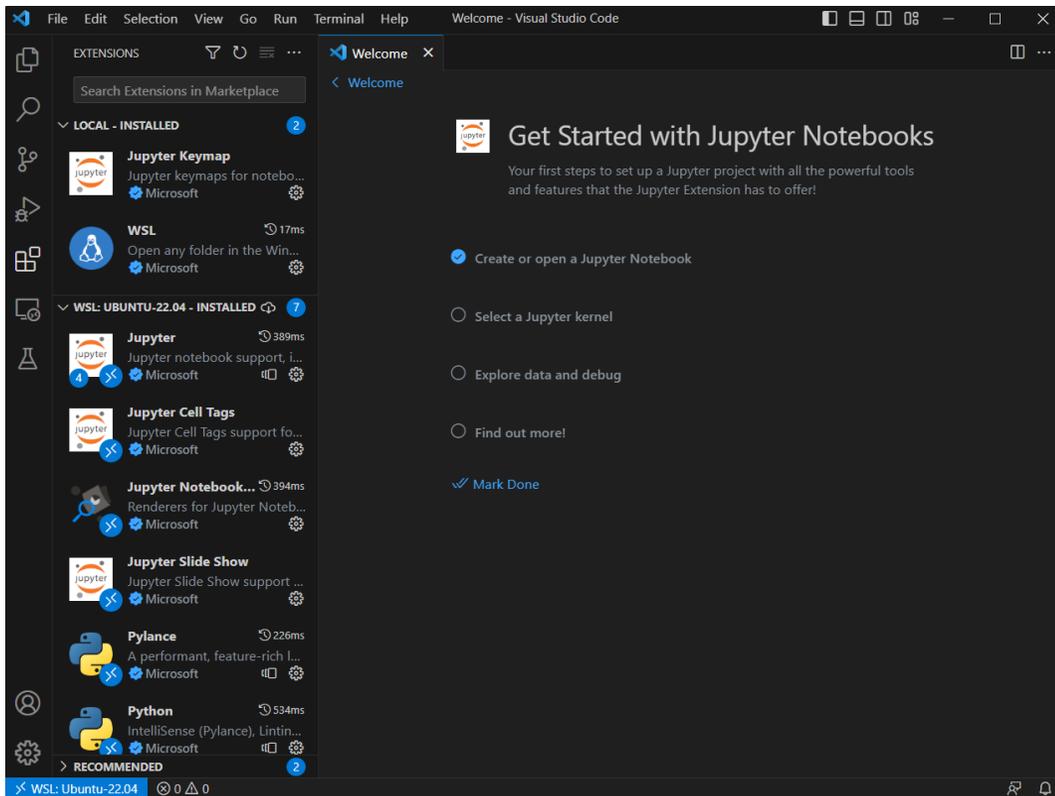
You can install Visual Studio Code from the web link [here](#)

```
wget the deb package then dpkg -i code*.deb
```

That's it ! 😊

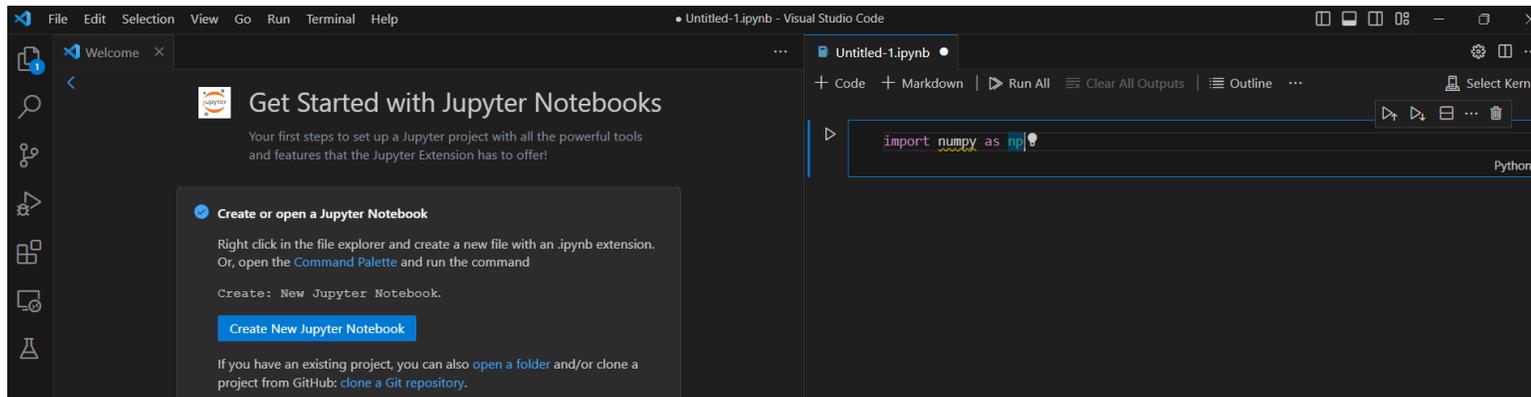
# Install extensions

- Python
- Jupyter



# Jupyter Notebook in VS Code

## Create a new Jupyter Notebook

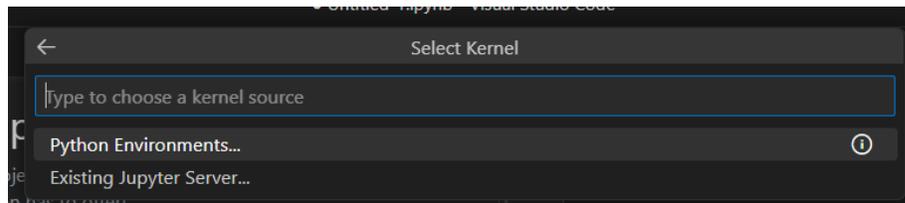


## Fill the first cell

```
import numpy as np
```

Try to run the cell

you must choose a Python environment first (Python 3.6)



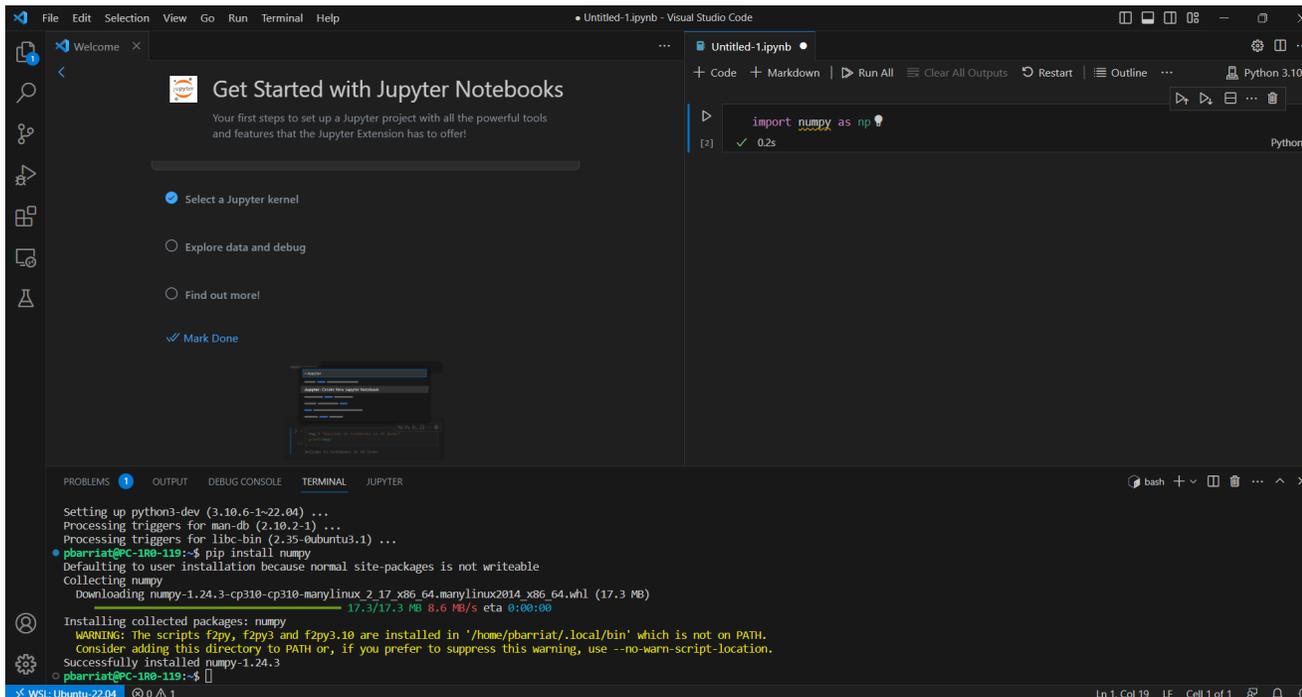
If ✨ ... maybe you must install a missing extension !

So open a **terminal** in VS Code and do

```
sudo apt install python3-pip
```

Now, install the missing Python extension ...

```
pip instal numpy
```



The screenshot shows the Visual Studio Code interface with a Jupyter Notebook. The notebook cell contains the code `import numpy as np`, which previously caused an error. The terminal window at the bottom shows the command `pip install numpy` being executed, resulting in the successful installation of `numpy-1.24.3`. The terminal output includes the following text:

```
Setting up python3-dev (3.10.6-1~22.04) ...  
Processing triggers for man-db (2.10.2-1) ...  
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...  
pbarriat@PC-1R0-119:~$ pip install numpy  
Defaulting to user installation because normal site-packages is not writeable  
Collecting numpy  
  Downloading numpy-1.24.3-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (17.3 MB)  
    17.3/17.3 MB 8.6 MB/s eta 0:00:00  
Installing collected packages: numpy  
  WARNING: The scripts f2py, f2py3 and f2py3.10 are installed in '/home/pbarriat/.local/bin' which is not on PATH.  
  Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.  
Successfully installed numpy-1.24.3  
pbarriat@PC-1R0-119:~$
```

... and run the cell again: great, it's OK now 😊

# Let's try a full notebook example

Install Git : `sudo apt install git -y`

Now clone this **Git repository**

```
git clone https://gogs.elic.ucl.ac.be/pbarriat/learning-vscode
```

You don't already know what's Git ?

Shame on you ! 🙄

**It's not to late:** take a look here

[https://gogs.elic.ucl.ac.be/TECLIM/Git\\_Training](https://gogs.elic.ucl.ac.be/TECLIM/Git_Training)

Now open the file `example.ipynb`

The first cell implies you must install some requirements

To run this example, install the extensions below

```
pip install netCDF4
sudo apt install libgeos-dev libgdal-dev
pip install cartopy
```

Now, try to run all the cells of this notebook !

# VS Code nice extensions

- `Tabnine` : code faster with AI code completions
- `Regex Previewer` : shows the current regular expression's matches
- `Modern Fortran` : Fortran syntax is missing in built-in version



# Visual Studio Code for Ubuntu