

# **PYENV, PYTHON, JUPYTER**

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2024**



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**pour :**





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# I. Installation (Windows)

## 1) pyenv

Ouvrir Powershell en administrateur.

Tuer la politique d'exécution :

```
$> Set-ExecutionPolicy Unrestricted -Scope CurrentUser
```

Fermer le terminal et relancer autre powershell en administrateur :

```
$> Invoke-WebRequest -UseBasicParsing -Uri "https://raw.githubusercontent.com/pyenv-win/pyenv-win/master/pyenv-win/install-pyenv-win.ps1" -OutFile "./install-pyenv-win.ps1"; &"./install-pyenv-win.ps1"
```

Vérifier dans la variable d'environnement que pyenv a été placé en tête de liste.

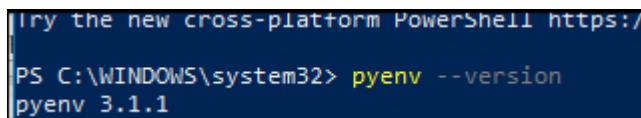


S'assurer que ces deux chemins de la variable path existent en haut pour l'utilisateur ET pour le système.

Tester:

Réouvrir un PowerShell en administrateur

```
$> pyenv --version
```



## 2) Python

\$> **pyenv install -l**

```
PS C:\WINDOWS\system32> pyenv install -l
:: [Info] ::  Mirror: https://www.python.org/ftp/python
2.4-win32
2.4.1-win32
2.4.2-win32
2.4.3c1-win32
2.4.3-win32
2.4.4-win32
2.5-win32
2.5
2.5.1-win32
2.5.1
2.5.2-win32
2.5.2
2.5.3c1-win32
2.5.3c1
2.5.3-win32
2.5.3
2.5.4-win32
2.5.4
2.6-win32
2.6
2.6.1-win32
2.6.1
2.6.2c1-win32
2.6.2c1
2.6.2-win32
2.6.2
2.6.3rc1-win32
2.6.3rc1
2.6.3-win32
2.6.3
2.6.4rc1-win32
2.6.4rc1
2.6.4rc2-win32
2.6.4rc2
2.6.4-win32
2.6.4
2.6.5rc1-win32
2.6.5rc1
2.6.5rc2-win32
2.6.5rc2
2.6.5-win32
2.6.5
```

La dernière version stable est la 3.11.1.

La liste propose les versions :

3.11.1 arm ( Apple 64 bit)  
3.11.1 win-32 (Windows-32 bit)  
3.11.1 (windows 64 bit)

On installe la version 2 :

```
$> pyenv install 2.7.18
```

```
PS C:\WINDOWS\system32> pyenv install 2.7.18
:: [Info] :: Mirror: https://www.python.org/ftp/python
:: [Downloading] :: 2.7.18 ...
:: [Downloading] :: From https://www.python.org/ftp/python/2.7.18/python-2.7.18.amd64.msi
:: [Downloading] :: To C:\Users\jcran\.pyenv\pyenv-win\install_cache\python-2.7.18.amd64.msi
:: [Installing] :: 2.7.18 ...
:: [Info] :: completed! 2.7.18
PS C:\WINDOWS\system32>
```

On installe la version 3 :

```
$> pyenv install 3.11.1
```

```
PS C:\WINDOWS\system32> pyenv install 3.11.1
:: [Info] :: Mirror: https://www.python.org/ftp/python
:: [Downloading] :: 3.11.1 ...
:: [Downloading] :: From https://www.python.org/ftp/python/3.11.1/python-3.11.1-amd64.exe
:: [Downloading] :: To C:\Users\jcran\.pyenv\pyenv-win\install_cache\python-3.11.1-amd64.exe
:: [Installing] :: 3.11.1 ...
:: [Info] :: completed! 3.11.1
PS C:\WINDOWS\system32>
```

On active la version 3 en tant que version globale

```
$> pyenv global 3.11.1
```

```
PS C:\WINDOWS\system32> pyenv global 3.11.1
PS C:\WINDOWS\system32>
```

On vérifie les versions installées :

```
$> pyenv versions
```

```
PS C:\WINDOWS\system32> pyenv versions
2.7.18
* 3.11.1 (set by C:\Users\jcran\.pyenv\pyenv-win\version)
PS C:\WINDOWS\system32> ■
```

On vérifie que python fonctionne en démarrant l'interpréteur

```
$> python
```

```
PS C:\WINDOWS\system32> python
Python 3.11.1 (tags/v3.11.1:a7a450f, Dec  6 2022, 19:58:39) [MSC v.1934 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> .
```

On vérifie pip :

```
$> pip --version
```

```
PS C:\WINDOWS\system32> pip --version
pip 22.3.1 from C:\Users\jcran\pyenv\pyenv-win\versions\3.11.1\lib\site-packages\pip (python 3.11)
```

### 3) Jupyter Notebook

On installe jupyter notebook:

```
$> pip install notebook
```

```
PS C:\WINDOWS\system32> pip install notebook
Collecting notebook
  Using cached notebook-6.5.2-py3-none-any.whl (439 kB)
Collecting jinja2
  Downloading Jinja2-3.1.2-py3-none-any.whl (133 kB)
    ----- 133.1/133.1 kB 7.7 MB/s eta 0:00:00
Collecting tornado>=6.1
  Using cached tornado-6.2-cp37-abi3-win_amd64.whl (425 kB)
Collecting pyzmq>=17
  Downloading pyzmq-24.0.1-cp311-cp311-win_amd64.whl (990 kB)
    ----- 990.3/990.3 kB 15.8 MB/s eta 0:00:00
Collecting argon2-cffi
  Using cached argon2_cffi-21.3.0-py3-none-any.whl (14 kB)
Collecting traitlets>=4.2.1
  Using cached traitlets-5.8.0-py3-none-any.whl (116 kB)
Collecting jupyter-core>=4.6.1
  Using cached jupyter_core-5.1.2-py3-none-any.whl (93 kB)
Collecting jupyter-client>=5.3.4
```

```
$> cd c:/
```

```
$> mkdir jupyter-notebooks
```

```
$> cd jupyter-notebooks
```

On lance le notebook:

```
$> jupyter notebook
```

```
PS C:\jupyter-notebooks> jupyter notebook
[I 17:38:15.399 NotebookApp] Serving notebooks from local directory: C:\jupyter-notebooks
[I 17:38:15.399 NotebookApp] Jupyter Notebook 6.5.2 is running at:
[I 17:38:15.399 NotebookApp] http://localhost:8888/?token=a1e4433f03ab9a1a511b35faefbf0aa0d53167262f150069
[I 17:38:15.399 NotebookApp] or http://127.0.0.1:8888/?token=a1e4433f03ab9a1a511b35faefbf0aa0d53167262f150069
[I 17:38:15.399 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 17:38:15.461 NotebookApp]

    To access the notebook, open this file in a browser:
        file:///C:/Users/jcran/AppData/Roaming/jupyter/runtime/nbserver-33056-open.html
    Or copy and paste one of these URLs:
        http://localhost:8888/?token=a1e4433f03ab9a1a511b35faefbf0aa0d53167262f150069
        or http://127.0.0.1:8888/?token=a1e4433f03ab9a1a511b35faefbf0aa0d53167262f150069
0.00s - Debugger warning: It seems that frozen modules are being used, which may
0.00s - make the debugger miss breakpoints. Please pass -Xfrozen_modules=off
0.00s - to python to disable frozen modules.
0.01s - Note: Debugging will proceed. Set PYDEVD_DISABLE_FILE_VALIDATION=1 to disable this validation.
```



On install jupiter-labs:

On arrete le server notebook

```
$> ^c
```

```
0.00s - make the debugger miss breakpoints. Please pass -Xfrozen_modules=
0.00s - to python to disable frozen modules.
0.01s - Note: Debugging will proceed. Set PYDEVD_DISABLE_FILE_VALIDATION=
[I 17:42:10.464 NotebookApp] Interrupted...
[I 17:42:10.464 NotebookApp] Shutting down 0 kernels
[I 17:42:10.464 NotebookApp] Shutting down 0 terminals
Terminate batch job (Y/N)?
```

```
$> pip install jupyterlab
```

```
PS C:\jupyter-notebooks> pip install jupyterlab
Collecting jupyterlab
  Downloading jupyterlab-3.5.2-py3-none-any.whl (8.8 MB)
    ..... 8.8/8.8 MB 20.8 MB/s eta 0:00:00
Requirement already satisfied: ipython in c:\users\jcran\pyenv\pyenv-win\versions\3.11.1\lib\site-packages (from jupyterlab) (8.8.0)
Requirement already satisfied: packaging in c:\users\jcran\pyenv\pyenv-win\versions\3.11.1\lib\site-packages (from jupyterlab) (22.0)
Requirement already satisfied: tornado>=6.1.0 in c:\users\jcran\pyenv\pyenv-win\versions\3.11.1\lib\site-packages (from jupyterlab) (6.2)
Requirement already satisfied: jupyter-core in c:\users\jcran\pyenv\pyenv-win\versions\3.11.1\lib\site-packages (from jupyterlab) (5.1.2)
Collecting jupyterlab-server~=2.10
  Downloading jupyterlab_server-2.18.0-py3-none-any.whl (56 kB)
    ..... 56.4/56.4 kB ? eta 0:00:00
Requirement already satisfied: jupyter-server<3,>=1.16.0 in c:\users\jcran\pyenv\pyenv-win\versions\3.11.1\lib\site-packages (from jupyterlab) (2.0.6)
Requirement already satisfied: nbclassic in c:\users\jcran\pyenv\pyenv-win\versions\3.11.1\lib\site-packages (from jupyterlab) (0.4.8)
Requirement already satisfied: notebook<7 in c:\users\jcran\pyenv\pyenv-win\versions\3.11.1\lib\site-packages (from jupyterlab) (6.5.2)
Requirement already satisfied: jinja2>=2.1 in c:\users\jcran\pyenv\pyenv-win\versions\3.11.1\lib\site-packages (from jupyterlab) (3.1.2)
Collecting tomli
  Downloading tomli-2.0.1-py3-none-any.whl (12 kB)
Requirement already satisfied: MarkupSafe>=2.0 in c:\users\jcran\pyenv\pyenv-win\versions\3.11.1\lib\site-packages (from jinja2>=2.1->jupyterlab) (2.1.1)
Requirement already satisfied: aiohttp<4,>=3.1.0 in c:\users\jcran\pyenv\pyenv-win\versions\3.11.1\lib\site-packages (from jupyter-server<3,>=1.16.0->jupyterlab) (3.6.2)
Requirement already satisfied: argon2-cffi in c:\users\jcran\pyenv\pyenv-win\versions\3.11.1\lib\site-packages (from jupyter-server<3,>=1.16.0->jupyterlab) (21.3.0)
Requirement already satisfied: jupyter-client>=7.4.4 in c:\users\jcran\pyenv\pyenv-win\versions\3.11.1\lib\site-packages (from jupyter-server<3,>=1.16.0->jupyterlab) (7.4.8)
Requirement already satisfied: jupyter-events>=0.4.0 in c:\users\jcran\pyenv\pyenv-win\versions\3.11.1\lib\site-packages (from jupyter-server<3,>=1.16.0->jupyterlab) (0.5.0)
Requirement already satisfied: jupyter-server-terminals in c:\users\jcran\pyenv\pyenv-win\versions\3.11.1\lib\site-packages (from jupyter-server<3,>=1.16.0->jupyterlab) (0.4.3)
Requirement already satisfied: nbconvert>=6.4.4 in c:\users\jcran\pyenv\pyenv-win\versions\3.11.1\lib\site-packages (from jupyter-server<3,>=1.16.0->jupyterlab) (7.2.7)
Requirement already satisfied: nbformat>=5.3.0 in c:\users\jcran\pyenv\pyenv-win\versions\3.11.1\lib\site-packages (from jupyter-server<3,>=1.16.0->jupyterlab) (5.7.1)
Requirement already satisfied: prometheus-client in c:\users\jcran\pyenv\pyenv-win\versions\3.11.1\lib\site-packages (f
```

On lance jupyterlab :

```
$> cd c:/
```

```
$> mkdir jupyter-labs
```

```
$> cd jupyter-labs
```

```
$> jupyter-lab
```

```

PS C:\> mkdir jupyter-labs

Directory: C:\

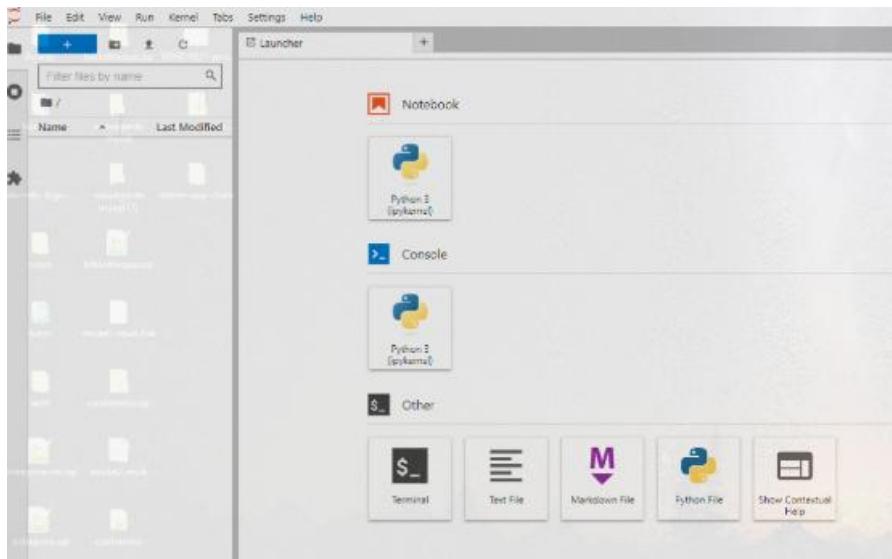
Mode                LastWriteTime     Length Name
----                -----        ---- 
d-----       1/7/2023   5:44 PM          jupyter-labs

PS C:\> cd jupyter-labs
PS C:\jupyter-labs> jupyter-lab
[I] 2023-01-07 17:45:12.812 ServerApp] jupyter_server_terminals | extension was successfully linked.
[I] 2023-01-07 17:45:12.812 ServerApp] jupyterlab | extension was successfully linked.
[I] 2023-01-07 17:45:12.827 ServerApp] nbclassic | extension was successfully linked.
[I] 2023-01-07 17:45:12.827 ServerApp] Writing Jupyter server cookie secret to C:\Users\jcran\AppData\Roaming\jupyter\run
time\jupyter_cookie_secret
[I] 2023-01-07 17:45:13.093 ServerApp] notebook_shim | extension was successfully linked.
[I] 2023-01-07 17:45:13.312 ServerApp] notebook_shim | extension was successfully loaded.
[I] 2023-01-07 17:45:13.312 ServerApp] jupyter_server_terminals | extension was successfully loaded.
[I] 2023-01-07 17:45:13.312 LabApp] JupyterLab extension loaded from C:\Users\jcran\.pyenv\pyenv-win\versions\3.11.1\Lib\site-packages\jupyterlab
[I] 2023-01-07 17:45:13.312 LabApp] JupyterLab application directory is C:\Users\jcran\.pyenv\pyenv-win\versions\3.11.1\s
hare\jupyter\lab
[I] 2023-01-07 17:45:13.312 ServerApp] jupyterlab | extension was successfully loaded.
[I] 2023-01-07 17:45:13.327 ServerApp] nbclassic | extension was successfully loaded.
[I] 2023-01-07 17:45:13.327 ServerApp] Serving notebooks from local directory: C:\jupyter-labs
[I] 2023-01-07 17:45:13.327 ServerApp] Jupyter Server 2.0.6 is running at:
[I] 2023-01-07 17:45:13.327 ServerApp] http://localhost:8888/lab?token=0ad76e1390e67495ca0fc6be59c65952bd4c36526667b9fe
[I] 2023-01-07 17:45:13.327 ServerApp] or http://127.0.0.1:8888/lab?token=0ad76e1390e67495ca0fc6be59c65952bd4c36526667b9fe
[I] 2023-01-07 17:45:13.327 ServerApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 2023-01-07 17:45:13.374 ServerApp]

To access the server, open this file in a browser:
  file:///C:/Users/jcran/AppData/Roaming/jupyter/runtime/jpserver-46796-open.html
Or copy and paste one of these URLs:
  http://localhost:8888/lab?token=0ad76e1390e67495ca0fc6be59c65952bd4c36526667b9fe
  or http://127.0.0.1:8888/lab?token=0ad76e1390e67495ca0fc6be59c65952bd4c36526667b9fe
[I] 2023-01-07 17:45:14.612 LabApp] Generating new user for token-authenticated request: c91da9f7ba2d4bfd8578359d99e1a0a1

0.00s - Debugger warning: It seems that frozen modules are being used, which may
0.00s - make the debugger miss breakpoints. Please pass -Xfrozen_modules=off
0.00s - to python to disable frozen modules.
0.00s - Note: Debugging will proceed. Set PYDEVD_DISABLE_FILE_VALIDATION=1 to disable this validation.
[I] 2023-01-07 17:45:18.803 LabApp] Build is up to date

```



**Documentation:**

<https://docs.jupyter.org/en/latest/start/index.html>

**Tutoriel rapide du lab:**

<https://jupyter.org/try-jupyter/lab/>

<https://mybinder.org/v2/gh/jupyterlab/jupyterlab-demo/HEAD?urlpath=lab/tree/demo>

**Installation sur MAC:**

Suivre les instruction sur :

<https://londonappdeveloper.com/installing-python-on-macos-using-pyenv/>









