

Conda

conda used only for containerized environments and pip for install packages

1 - Create and activate a conda environment

- conda create --name myenv } → Switch from base Conda env to myenv
- conda activate myenv

2 - Install pip using conda

- conda install pip } → To install my packages on current environment .
pip is specific with Python packages only, but Conda not .

3 - Install jupyterlab

- pip install jupyterlab ----> by default includes jupyter notebook

4 - install ipykernel

- pip install ipykernel } → the backend of Jupyter which handle the execution of code sent to notebook

5 - Add the environment to jupyter } → for each env, we create its own kernel in Jupyter

- python -m ipykernel install --user --name=myenv --display-name "Python (myenv)"

6 - Launch jupyterlab or jupyter_notebook

- jupyter-lab } → launch a notebook
- jupyter notebook
- by default installing jupyterlab includes jupyterlab and jupyter notebooks
so you can run any one of them without install jupyter notebook separately

Create cloned environment

1 - conda create --name newenv --clone oldenv

الميزة أنك لن تحتاج الـ packages التي كانت في oldenv لأنك ستقوم بنسخها من oldenv وليس هناك حاجة لتثبيتها ثانية

2 - conda activate newenv

3 - python -m ipykernel install --user --name=newenv --display-name "Python (newenv)"

بمجرد أن يكون الـ newenv جاهزاً، يمكنك إنشاء kernel الخاصة به في Jupyter

4 - jupyter-lab OR jupyter notebook

- select the kernel for this newenv in jupyter

لما تفتح notebook من الـ web، يمكنك اختيار الـ Python (newenv) kernel من الخيارات

- ليعمل الخطوة رقم (٣) على مبدأ الـ isolation، يكون الـ 100% من الـ environments وبيئاتها independent
- لو عندي 1, 2, 3, 4, 5, 6 envs و الـ JupyterLab، كل env له kernel خاص به وأما الـ kernel
ممكن ويستخدم الـ kernel من الـ 1 env لما أنا جاري العمل في الـ 1 env، another env و الـ kernel من الـ 1 env مستعمل
فبالتالي الـ JupyterLab الـ env يكون له kernel خاص به

- * `conda env list` --> list all your conda environments
- * `conda list` --> list all packaged installed for current environment
- * `conda deactivate` --> switch to base conda environment
- * `conda remove --name myenv --all` --> delete myenv

1- install miniconda from conda website and install it using "bash installer_path" and reboot the terminal

2- when open the terminal again , by default it is open on base conda

3- from the base you can create environments and switch between them

- create new environment " `conda create --name <env_name>` "
- activate an environment " `conda activate <env_name>` "

4- after activation we switched to another environment and has no packages

5- setup our environment to use it

- "`conda install pip`" --> for installing all my packages for each environment
- "`conda install jupyter ipykernel`" --> the backend of notebooks to run and debug it
- "`python -m ipykernel install --user --name=myenv --display-name "Python (myenv)"`"
 - replace myenv with my current environment name
 - so we can choose it from the kernel options in the notebook
- "jupyter notebook" --> to create new notebook
- this setup is made for every new environment "isolated"

6 - we can clone a new environment with all packages from another

