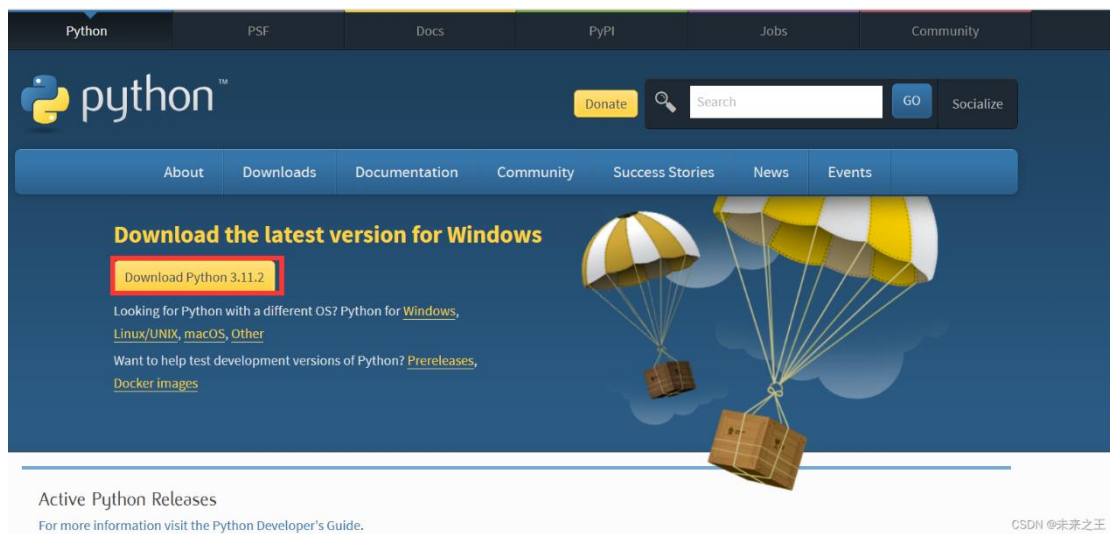# Installation jupyter

I. Download jupyter (install in Python environment)

It is not possible to install Jupyter notebook directly without Python installed, you need to install Python 3 in advance.
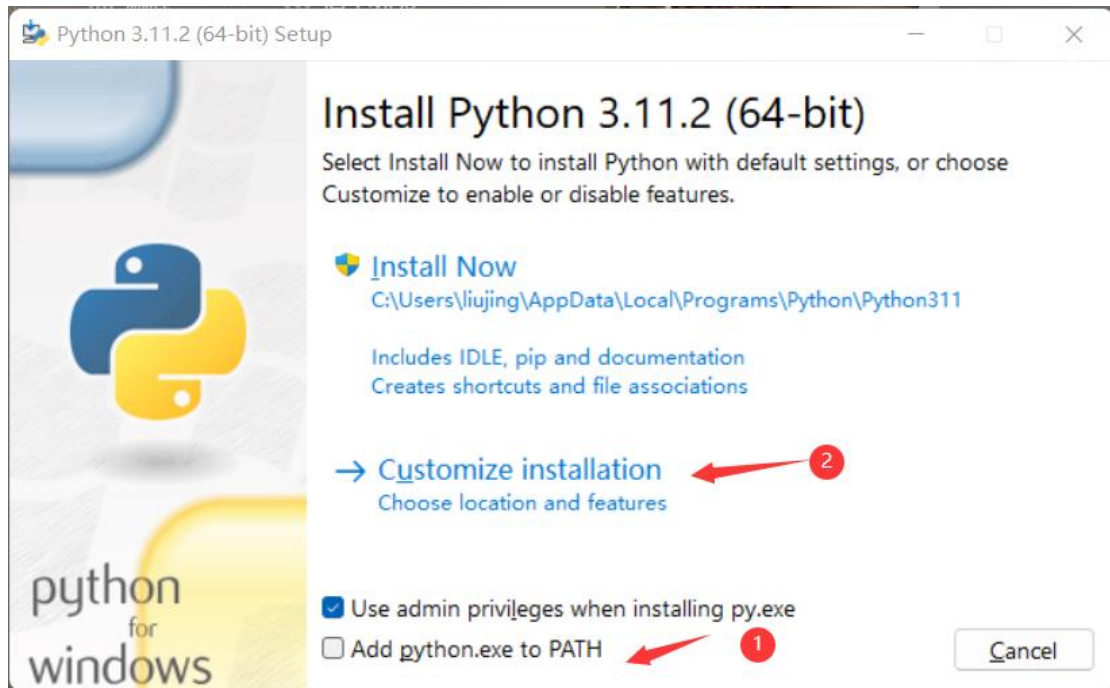
1. python3 installation

step1：Download the python installation package from the official website Download Python | Python.org
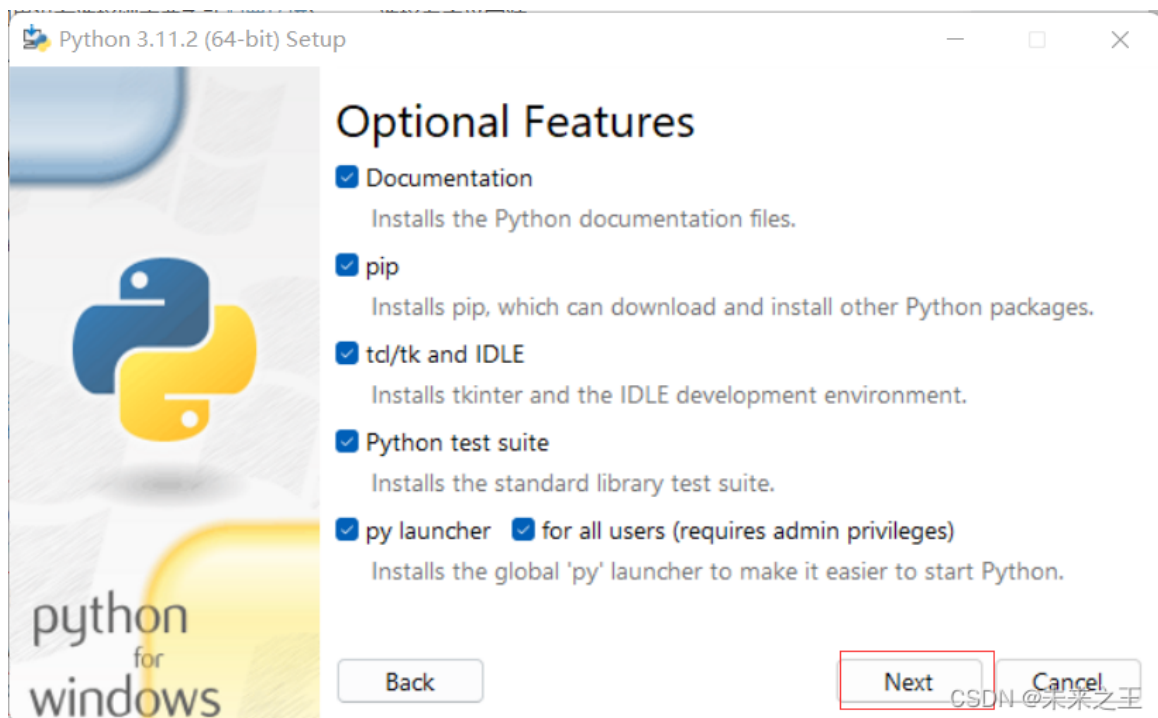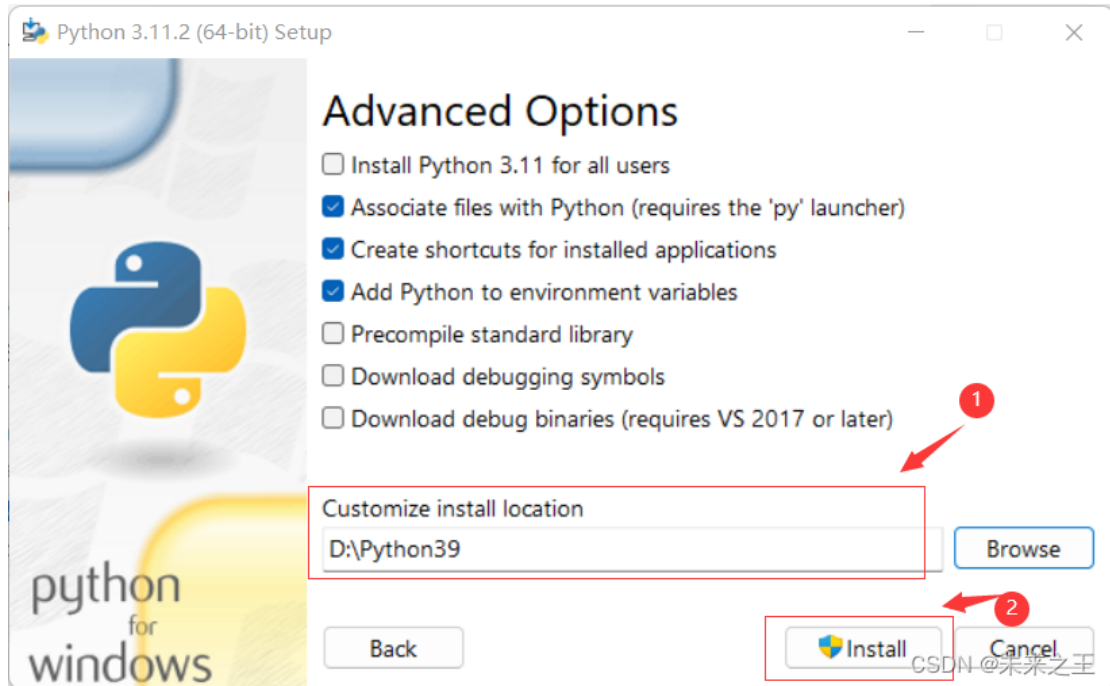

step2：Double-click to open the python installer.

Step3：Select Add Python ---- to PATH (configure the PATH environment, if you do not select it, you need to configure the environment manually) ===> select custom installation.

Step4：Default click Next

Step5：Select the path to install, click Next. (Here it is recommended to install python not on the default disk, but on disk D or E.)

Step6：Click Close

2.Download jupyter

Either for Windows OS or MacOS, open the terminal (command line window opened by 'cmd' under Windows, MacOS opens the terminal directly) .Windows shortcut: win+R , in the pop-up box type 'cmd'and OK.

Step1：Check the python version to see if python is successfully installed.

python -V or python --version

Step2: If you have Python3 installed, make sure pip is upgraded to the latest version.

pip3 install --upgrade pip -i https://pypi.doubanio.com/simple/

```
C:\Users\...>python --version
Python 3.9.6

C:\Users\...>pip3 install --upgrade pip -i https://pypi.doubanio.com/simple/
Looking in indexes: https://pypi.doubanio.com/simple/
Requirement already satisfied: pip in d:\python39\lib\site-packages (21.1.3)
Collecting pip
  Downloading https://pypi.doubanio.com/packages/07/51/2c0959c5adf988c44d9e1e0d940f5b074516e
23.0.1-py3-none-any.whl (2.1 MB)
                                             2.1 MB 1.1 MB/s
```

Step3：Use the domestic mirror to download Jupyter notebook, enter the following command.

pip install Jupyter notebook -i https://pypi.doubanio.com/simple/

```
C:\Users\...>pip install Jupyter notebook -i https://pypi.doubanio.com/simple/
Looking in indexes: https://pypi.doubanio.com/simple/
Requirement already satisfied: Jupyter in d:\python39\lib\site-packages (1.0.0)
Requirement already satisfied: notebook in d:\python39\lib\site-packages (6.5.2)
Requirement already satisfied: qtconsole in d:\python39\lib\site-packages (from Jupyter) (5.
Requirement already satisfied: jupyter-console in d:\python39\lib\site-packages (from Jupyte
Requirement already satisfied: ipywidgets in d:\python39\lib\site-packages (from Jupyter) (8
Requirement already satisfied: nbconvert in d:\python39\lib\site-packages (from Jupyter) (7.
```

To test if the installation was successful, continue in the command line window by typing.

jupyter notebook

```
C:\Users\...>jupyter notebook
[I 16:12:47.820 NotebookApp] Writing notebook server cookie secret to C:\Users\...\AppData\Roaming\jupyter\runtime
otebook_cookie_secret
[I 16:12:53.446 NotebookApp] Serving notebooks from local directory: C:\Users\...
[I 16:12:53.447 NotebookApp] Jupyter Notebook 6.5.2 is running at:
[I 16:12:53.448 NotebookApp] http://localhost:8888/?token=3b41977324458592d7863b5e7089c6272b49a30945ae22a6
[I 16:12:53.449 NotebookApp]  or http://127.0.0.1:8888/?token=3b41977324458592d7863b5e7089c6272b49a30945ae22a6
[I 16:12:53.454 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 16:12:53.728 NotebookApp]

    To access the notebook, open this file in a browser:
        file:///C:/Users/.../AppData/Roaming/jupyter/runtime/nbserver-6868-open.html
    Or copy and paste one of these URLs:
        http://localhost:8888/?token=3b41977324458592d7863b5e7089c6272b49a30945ae22a6
     or http://127.0.0.1:8888/?token=3b41977324458592d7863b5e7089c6272b49a30945ae22a6
```

then the following web page will pop up.

II Configure the startup path of the notebook

If you don't want to save all the documents written in Jupyter Notebook directly in the startup directory, you need to modify the file storage path of Jupyter Notebook. This can be done by following the steps below.
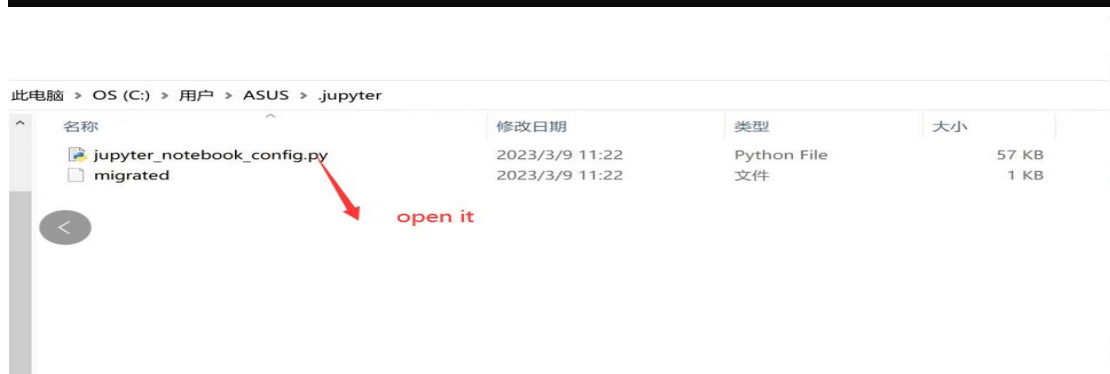
1.windows system

Step1：Create a folder

Windows users create a new folder jupyter_file in the disk where you want to store Jupyter Notebook files; double-click it to enter the folder, and then copy the path in the address bar.

Step2：Find the original configuration file path

jupyter notebook --generate-config

Follow the file path to find the file, open it, next look for the full text, find the statements as shown below and make changes to them, including uncommenting and setting the path to the file path from step 1.

Step3：test jupyter

jupyter notebook

Generate a new web page as follows.
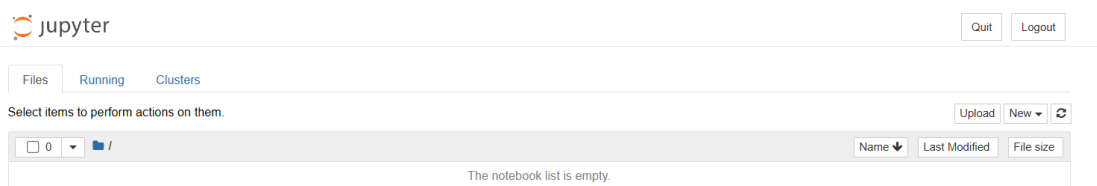
2.MacOS System

Step1：Create a folder

MacOS users create a directory in the location where you want to store Jupyter Notebook files and name the directory, the command to create a new directory is:

mkdir jupyter_file; enter the directory by the command: cd jupyter_filee, enter the command pwd to view the path of the directory, copy the directory path.

Step2：Find the original configuration file path.

Use vi to edit, you can also use Sublime, etc. only the path where the configuration file is located. jupyter is a hidden path is not convenient to view
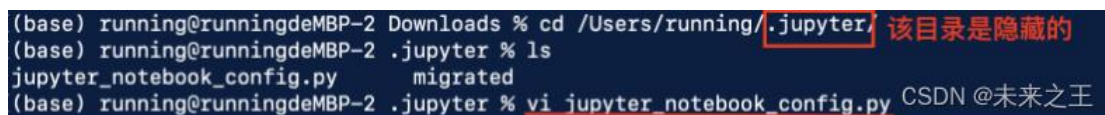
jupyter notebook --generate-config

jupyter is a hidden path is not convenient to view, use vi to edit:
cd /Users/iujing/.jupyter/

ls

vi jupyter_notebook_config.py

After you find the content, uncomment it and change it to the specified directory, press lowercase i to enter edit mode, and "--INSERT--" appears at the bottom to indicate that you have successfully entered edit mode. In c.NotebookApp.notebook_dir=' add the path copied from step 1 '.

After that, press esc to exit from edit mode and go back to command mode. Then type :wq directly in English half-angle (note: the colon must be there and is English half-angle), enter that is successfully saved and exit the configuration file.

Step3：test jupyter

jupyter notebook

III Problems that maybe encountered.

1. 'pip' is not an internal or external command, nor is it a runnable program or batch file.

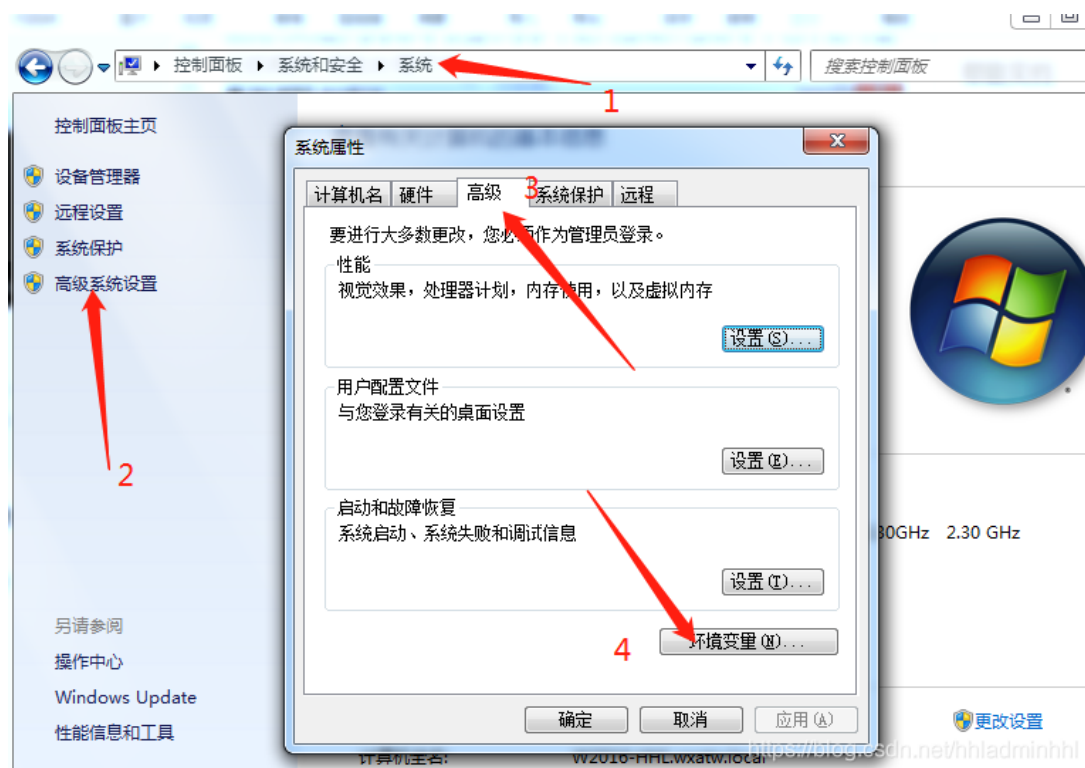The reason for the problem: Usually the system environment variables are not configured properly.
Problem Solving:

Step1：Right-click "Control Panel/System and Security/System" → "Advanced System Settings" → "Advanced" → "Environment Variables ".

Step2：select system-variables-path and click edit.

Add the directory of the python installation files to it. (including the python installation path and Scripts path)

python if the default installation path is usually：
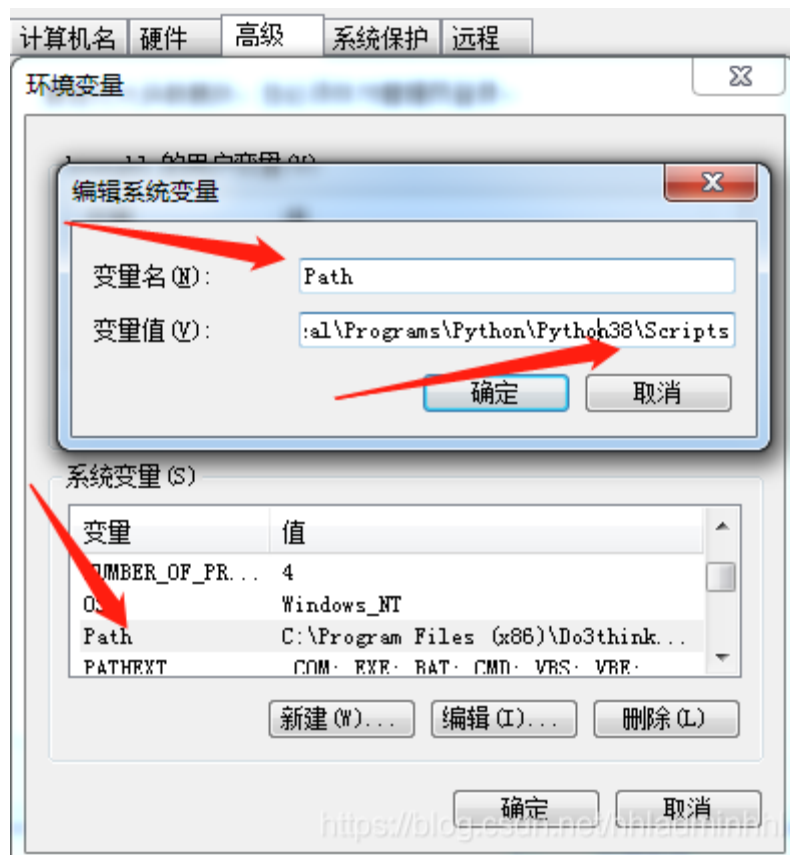
C:\Users\xxx\AppData\Local\Programs\Python\Python38

C:\Users\xxx\AppData\Local\Programs\Python\Python38\Scripts

(Here it is recommended to install python not on the default disk, but on disk D or E.

e.g. D:\Python\Python38, D:\Python38\Scripts.)

Add these two paths to the system environment variable path.

Step3：Once set up, it's time to use python, pip or pip3 commands in cmd again.