

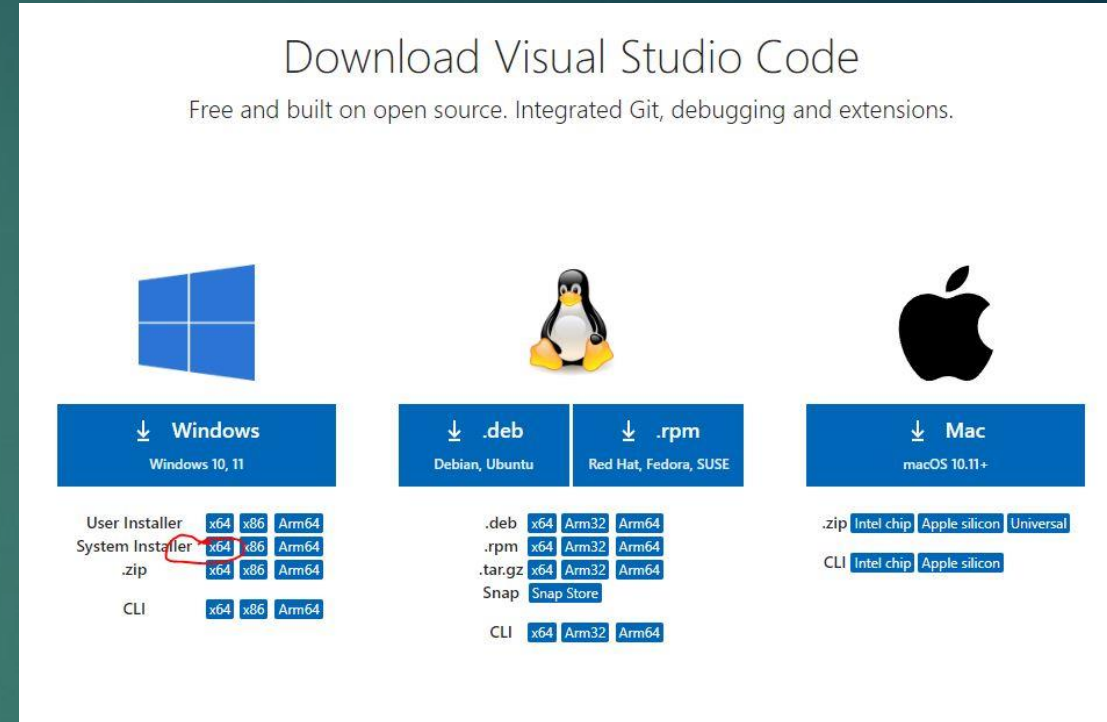
Windows 下安裝opencv

# download anaconda & visual studio code

- ▶ <https://www.anaconda.com/download>
- ▶ <https://code.visualstudio.com/download>
- ▶ <https://gitforwindows.org/>

Download Visual Studio Code

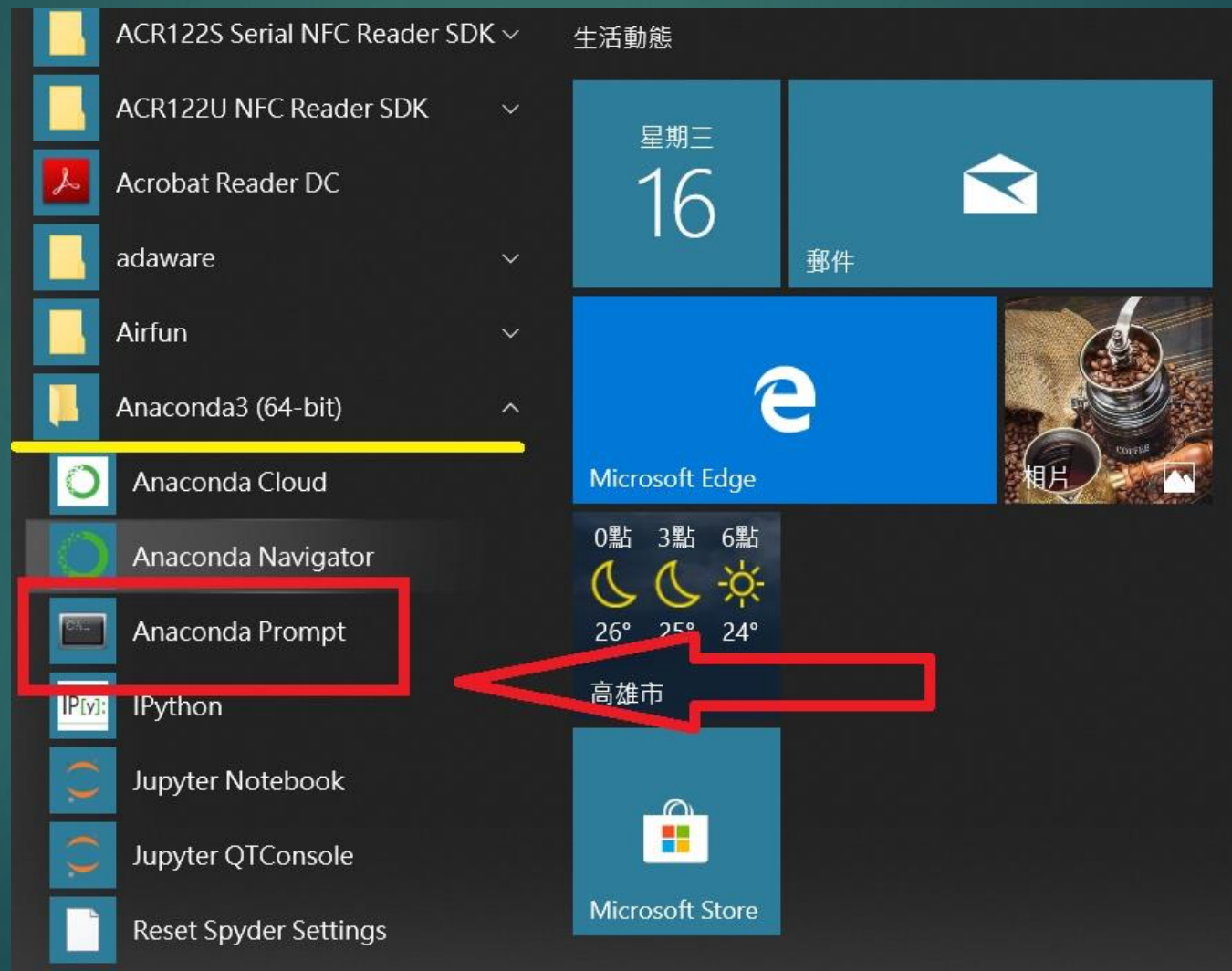
Free and built on open source. Integrated Git, debugging and extensions.



The image shows the Visual Studio Code download page. It features three main sections for Windows, Linux, and Mac. Each section has a download button and a list of available installers. The Windows section has a 'Windows' button and lists 'User Installer', 'System Installer', '.zip', and 'CLI'. The Linux section has '.deb' and '.rpm' buttons and lists '.deb', '.rpm', '.tar.gz', 'Snap', and 'CLI'. The Mac section has a 'Mac' button and lists '.zip' and 'CLI'. The 'System Installer' link in the Windows section is circled in red.

Platform	Download Button	Available Installers
Windows	Windows (Windows 10, 11)	User Installer (x64, x86, Arm64), System Installer (x64, x86, Arm64), .zip (x64, x86, Arm64), CLI (x64, x86, Arm64)
Linux	.deb (Debian, Ubuntu) and .rpm (Red Hat, Fedora, SUSE)	.deb (x64, Arm32, Arm64), .rpm (x64, Arm32, Arm64), .tar.gz (x64, Arm32, Arm64), Snap (Snap Store), CLI (x64, Arm32, Arm64)
Mac	Mac (macOS 10.11+)	.zip (Intel chip, Apple silicon, Universal), CLI (Intel chip, Apple silicon)

# 1. 開啟 Anaconda Prompt



- ▶ # 安裝虛擬環境及套件, 首先開啟 anaconda prompt
- ▶ conda update conda
- ▶ conda env list
- ▶ conda create --name cv2 python=3.8
- ▶ conda activate cv2
- ▶ pip install opencv-python
- ▶ python -m pip install --upgrade pip
- ▶ pip install matplotlib
- ▶ python --version # check python version
- ▶ python -c "import cv2;print(cv2.\_\_version\_\_)"

```
Anaconda Prompt (miniconda3)

(base) C:\Users\jumbo>conda env list
# conda environments:
#
base                  * C:\Users\jumbo\AppData\Local\miniconda3
cv                    C:\Users\jumbo\AppData\Local\miniconda3\envs\cv

(base) C:\Users\jumbo>conda create --name cv2 python=3.8
Collecting package metadata (current_repodata.json): done
Solving environment: done
```

```
Anaconda Prompt (miniconda3)

# $ conda deactivate

(base) C:\Users\jumbo>conda activate cv2

(cv2) C:\Users\jumbo>pip install opencv-python
Collecting opencv-python
  Obtaining dependency information for opencv-python from https://files.pythonhosted.org/packages/fb/c4/f574ba6f04e6d7bf8c38d23e7a52389566dd7631fee0bcd79ea07ef2dbf/opencv_python-4.8.0.76-cp37-abi3-win_amd64.whl.metadata
  Downloading opencv_python-4.8.0.76-cp37-abi3-win_amd64.whl.metadata (20 kB)
Collecting numpy>=1.17.0 (from opencv-python)
  Obtaining dependency information for numpy>=1.17.0 from https://files.pythonhosted.org/packages/69/65/0d47953afa0ad569d12de5f65d964321c208492064c38fe3b0b9744f8d44/numpy-1.24.4-cp38-cp38-win_amd64.whl.metadata
  Downloading numpy-1.24.4-cp38-cp38-win_amd64.whl.metadata (5.6 kB)
  Downloading opencv_python-4.8.0.76-cp37-abi3-win_amd64.whl (38.1 MB)
----- 38.1/38.1 MB 8.5 MB/s eta 0:00:00
  Downloading numpy-1.24.4-cp38-cp38-win_amd64.whl (14.9 MB)
----- 14.9/14.9 MB 8.8 MB/s eta 0:00:00
Installing collected packages: numpy, opencv-python
Successfully installed numpy-1.24.4 opencv-python-4.8.0.76

(cv2) C:\Users\jumbo>python -m pip install --upgrade pip
```

```
Anaconda Prompt (miniconda3)

lib-3.7.3 packaging-23.1 pillow-10.0.1 pyparsing-3.1.1 python-dateutil-2.8.2 six-1.16.0 zipp-3.17.0

(cv2) C:\Users\jumbo>python --version
Python 3.8.18

(cv2) C:\Users\jumbo>python -c "import cv2;print(cv2.__version__)"
4.8.0

(cv2) C:\Users\jumbo>
```

# Test opencv

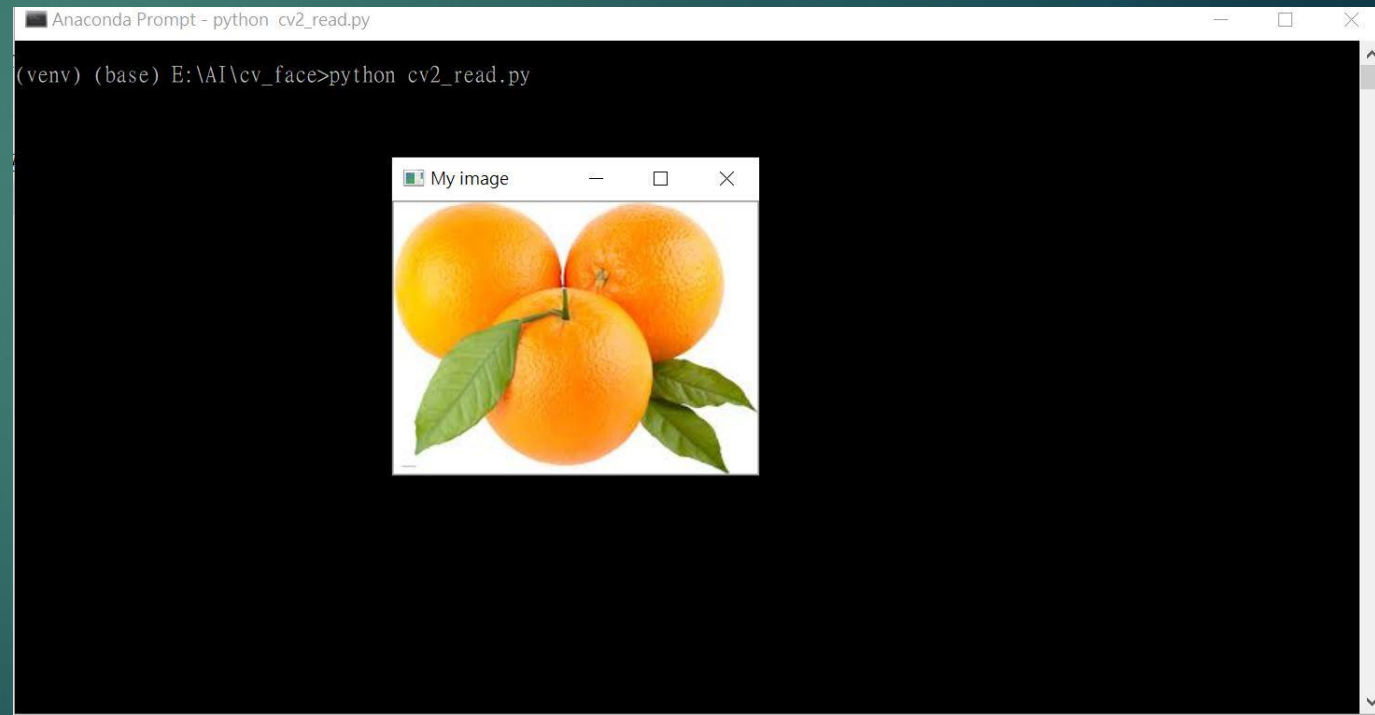
```
import cv2
```

```
img = cv2.imread('orange.jpg')
```

```
cv2.imshow('My image', img)
```

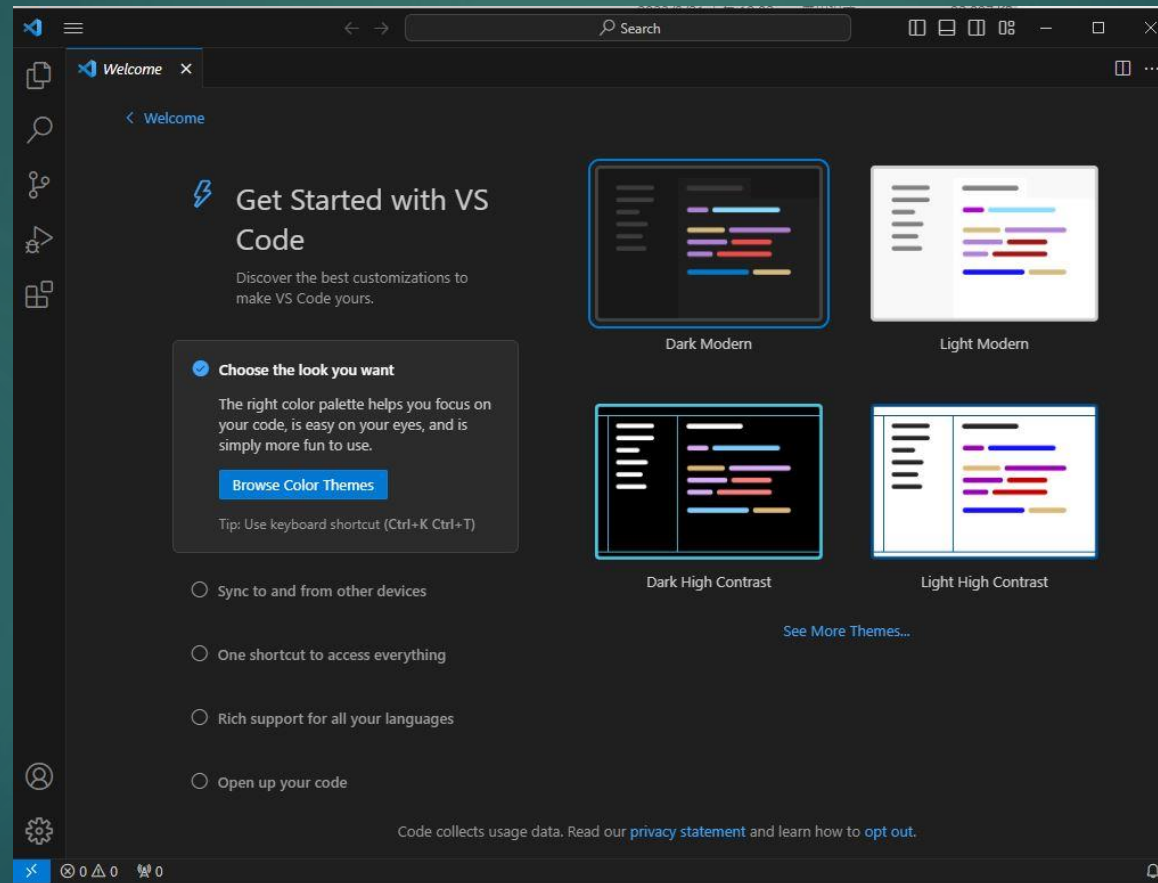
```
cv2.waitKey(0)
```

```
cv2.destroyAllWindows()
```

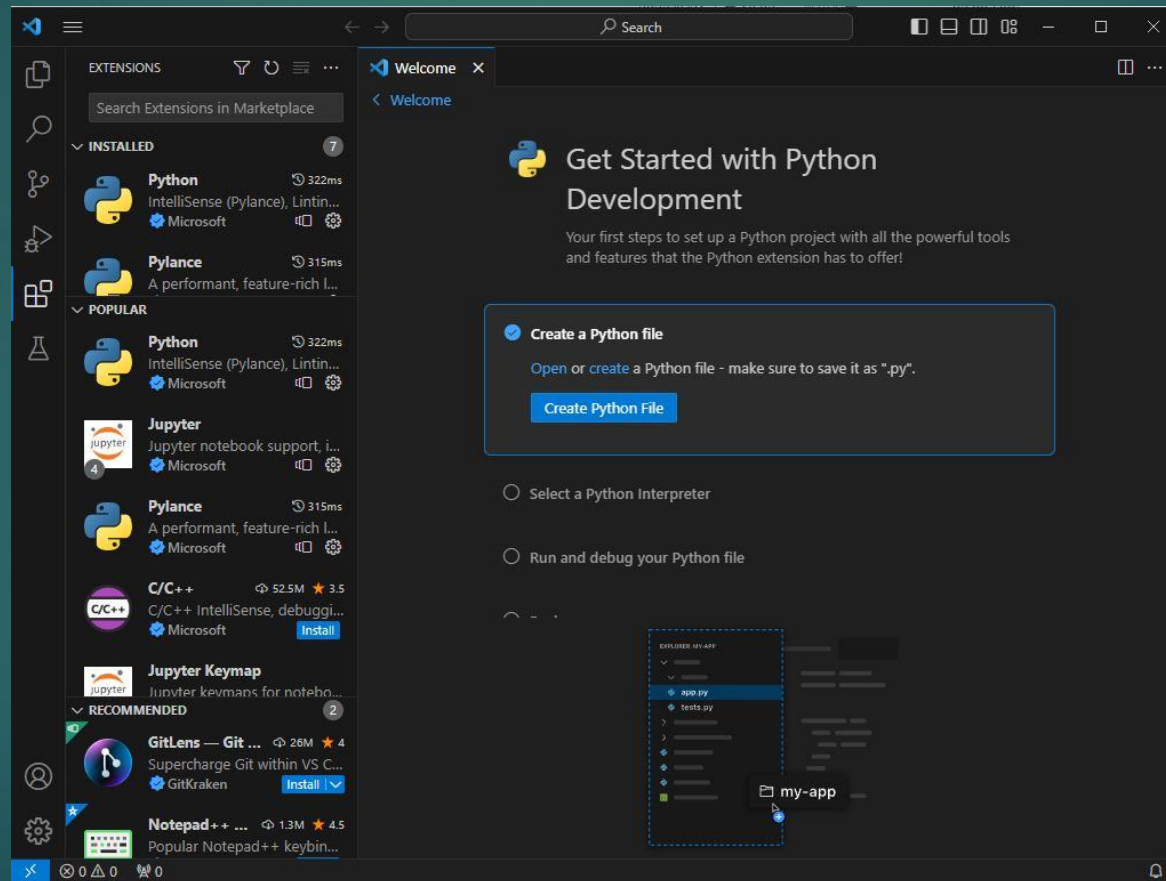




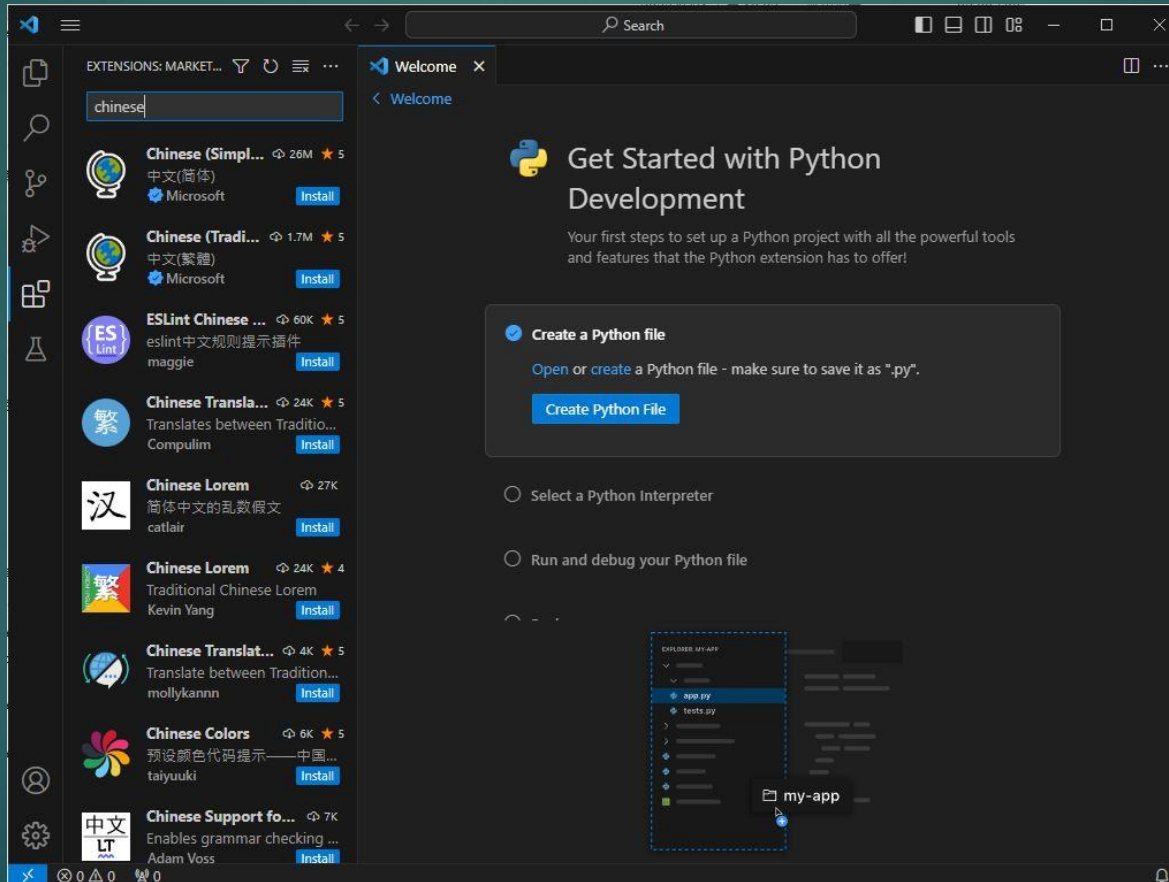
# Install visual studio code



# select python module and install

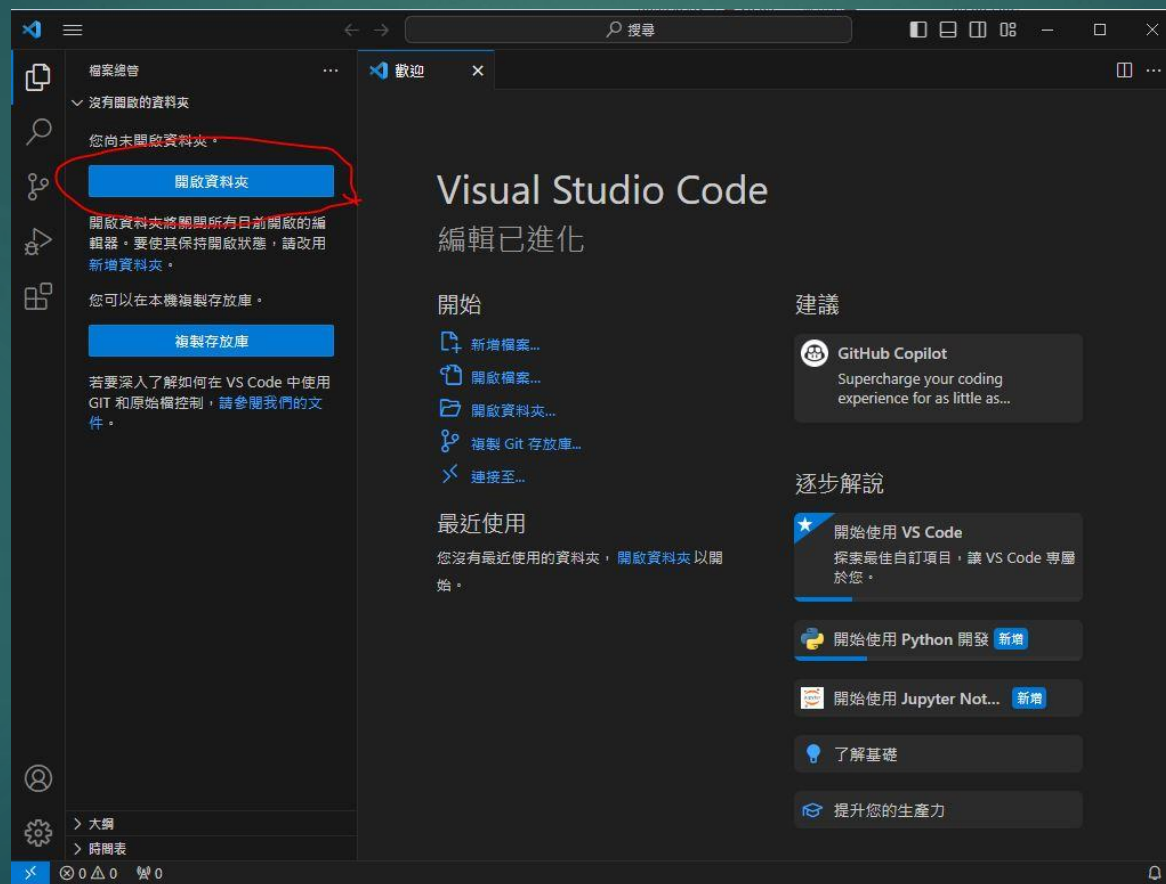


# install Chinese language package

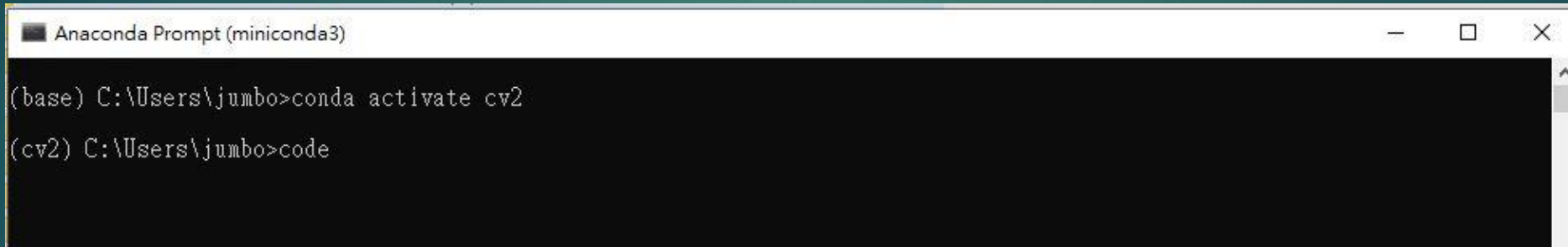




# select working directory



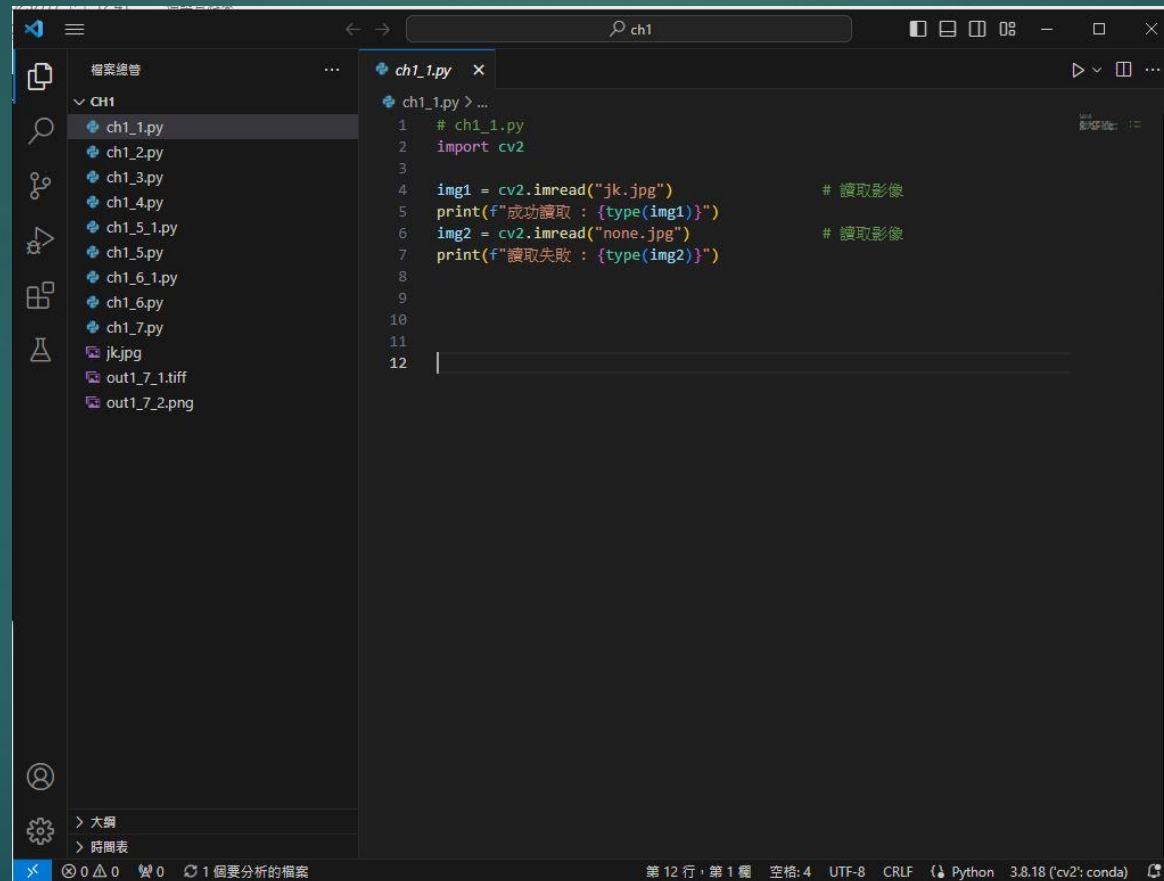
# restart from anaconda prompt



```
Anaconda Prompt (miniconda3)
(base) C:\Users\jumbo>conda activate cv2
(cv2) C:\Users\jumbo>code
```

The image shows a screenshot of an Anaconda Prompt window. The title bar reads "Anaconda Prompt (miniconda3)". The command prompt shows the user activating the "cv2" environment with the command "conda activate cv2", which changes the prompt from "(base)" to "(cv2)". Then, the user enters the command "code", which opens the Visual Studio Code editor.

# running program



The screenshot shows a code editor window with a file explorer on the left and a code editor on the right. The file explorer shows a directory named 'ch1' containing several Python files (ch1\_1.py to ch1\_7.py) and two image files (jk.jpg and out1\_7\_1.tiff). The code editor shows the content of 'ch1\_1.py', which is a Python script using OpenCV to read images. The script imports 'cv2' and attempts to read 'jk.jpg' and 'none.jpg'. Comments in Chinese indicate the purpose of each line: reading the image and printing the type or failure message.

```
1 # ch1_1.py
2 import cv2
3
4 img1 = cv2.imread("jk.jpg")          # 讀取影像
5 print(f"成功讀取 : {type(img1)}")
6 img2 = cv2.imread("none.jpg")        # 讀取影像
7 print(f"讀取失敗 : {type(img2)}")
8
9
10
11
12
```

The status bar at the bottom indicates the current line and column (第 12 行, 第 1 欄), the encoding (UTF-8), the line ending (CRLF), the interpreter (Python 3.8.18), and the environment (conda).

# Get Computer Vision docs & code

- ▶ ## 開啟 git CMD
- ▶ `git clone https://github.com/jumbokh/Computer-Vision`