

Computer Vision

Instruction of installation

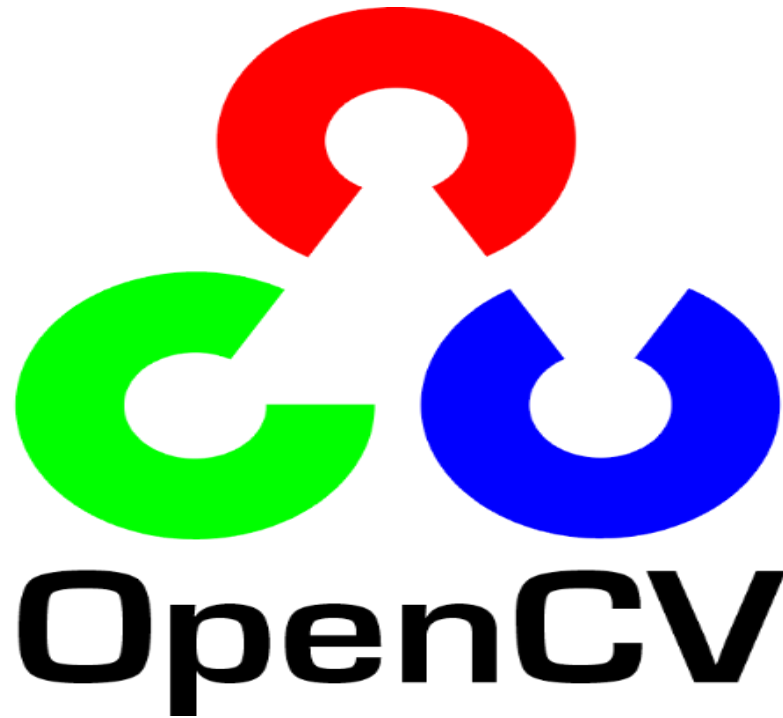
Prof. Po-Yueh Chen (陳伯岳)

E-mail: pychen@cc.ncue.edu.tw

Ext: 8440

NCUE CSIE

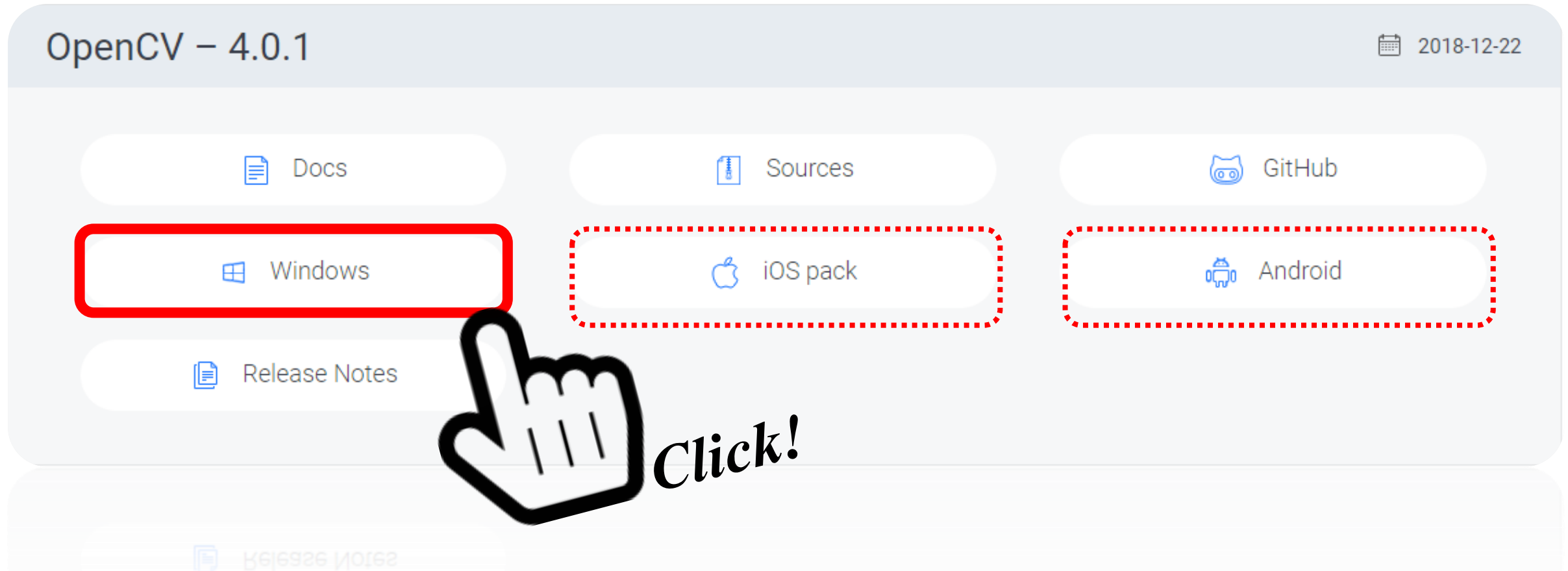
OpenCV



Website: <https://opencv.org/releases/>

Install OpenCV (1/10)

Website: <https://opencv.org/> → **OpenCV 4.0.1**

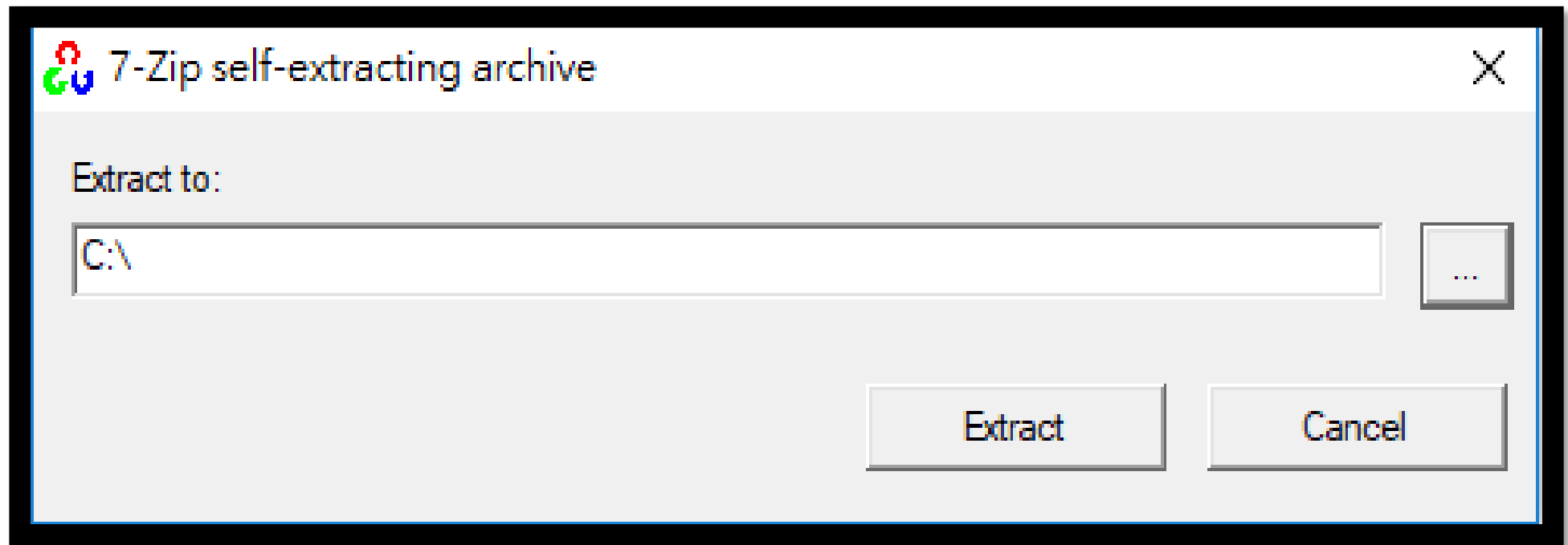


Install OpenCV (2/10)

➤ Windows 10

Install OpenCV (3/10)

Install in "**C:**" root directory.

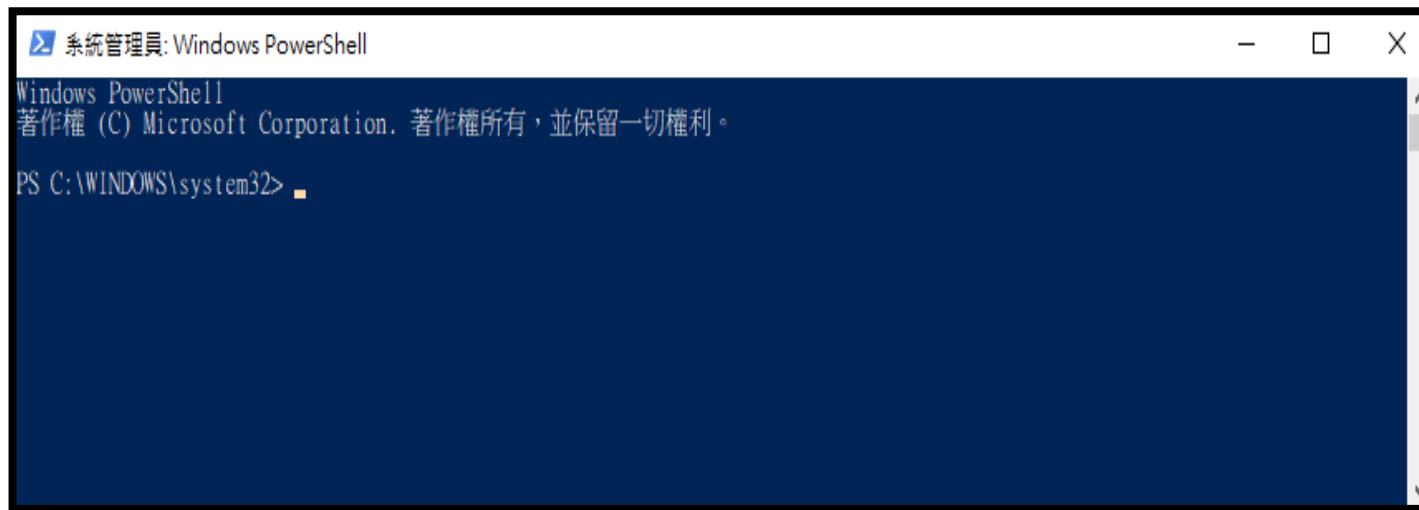


Install OpenCV (4/10)

➤ Establish the environment variable.

Step 1: Hot Key - "Window + X"

Step 2: Keyboard - "A"



Step 2.



Install OpenCV (5/10)

Step 3: Key in-

Note: Visual Studio must be shutdown before you doing this step.

`[System.Environment]::SetEnvironmentVariable("PATH", $Env:Path + ";C:\opencv\build\x64\vc15\bin", "Machine")`



```
系統管理員: Windows PowerShell
Windows PowerShell
著作權 (C) Microsoft Corporation. 著作權所有，並保留一切權利。
PS C:\WINDOWS\system32> [System.Environment]::SetEnvironmentVariable("PATH", $Env:Path + ";C:\opencv\build\x64\vc15\bin", "Machine")
PS C:\WINDOWS\system32>
```

Step 4: Key in-

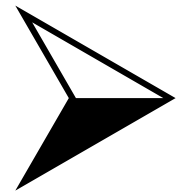
`[environment]::GetEnvironmentVariable("PATH", "Machine")`



```
選取 系統管理員: Windows PowerShell
Windows PowerShell
著作權 (C) Microsoft Corporation. 著作權所有，並保留一切權利。
PS C:\WINDOWS\system32> [System.Environment]::SetEnvironmentVariable("PATH", $Env:Path + ";C:\opencv\build\x64\vc15\bin", "Machine")
PS C:\WINDOWS\system32>
PS C:\WINDOWS\system32> [environment]::GetEnvironmentVariable("PATH", "Machine")
C:\Program Files (x86)\Common Files\Oracle\Java\javapath;D:\Programing tools\Python 3.6.5\Scripts\;D:\Programing tools\Python 3.6.5\;C:\Windows\system32;C:\Windows;C:\Windows\System32\Wbem;C:\Windows\System32\WindowsPowerShell\v1.0\;C:\Program Files (x86)\NVIDIA Corporation\PhysX\Common;C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Wbem;C:\WINDOWS\System32\WindowsPowerShell\v1.0\;C:\Program Files (x86)\Common Files\Ulead Systems\MPEG;C:\Program Files (x86)\QuickTime\QTSystem\;D:\Programing tools\Matlab R2017a x64\Matlab R2017a\runtime\win64;D:\Programing tools\Matlab R2017a x64\Matlab R2017a\bin;C:\WINDOWS\System32\OpenSSH\;C:\Program Files\NVIDIA Corporation\NVIDIA NvDLISR;C:\MinGW\bin;C:\Program Files\Microsoft VS Code\bin;C:\Programing tools\Anaconda;D:\Programing tools\Anaconda\Library\mingw-w64\bin;D:\Programing tools\Anaconda\Library\usr\bin;D:\Programing tools\Anaconda\Library\bin;D:\Programing tools\Anaconda\Scripts;C:\Users\E106_Adam\Anaconda3;C:\Users\E106_Adam\Anaconda3\Library\mingw-w64\bin;C:\Users\E106_Adam\Anaconda3\Library\usr\bin;C:\Users\E106_Adam\Anaconda3\Library\bin;C:\Users\E106_Adam\Anaconda3\Scripts;C:\Users\E106_Adam\AppData\Local\Microsoft\WindowsApps;C:\opencv\build\x64\vc15\bin;C:\opencv\build\x64\vc15\bin
PS C:\WINDOWS\system32>
```

Check this!

Install OpenCV (6/10)



Windows 7

Install OpenCV (7/10)

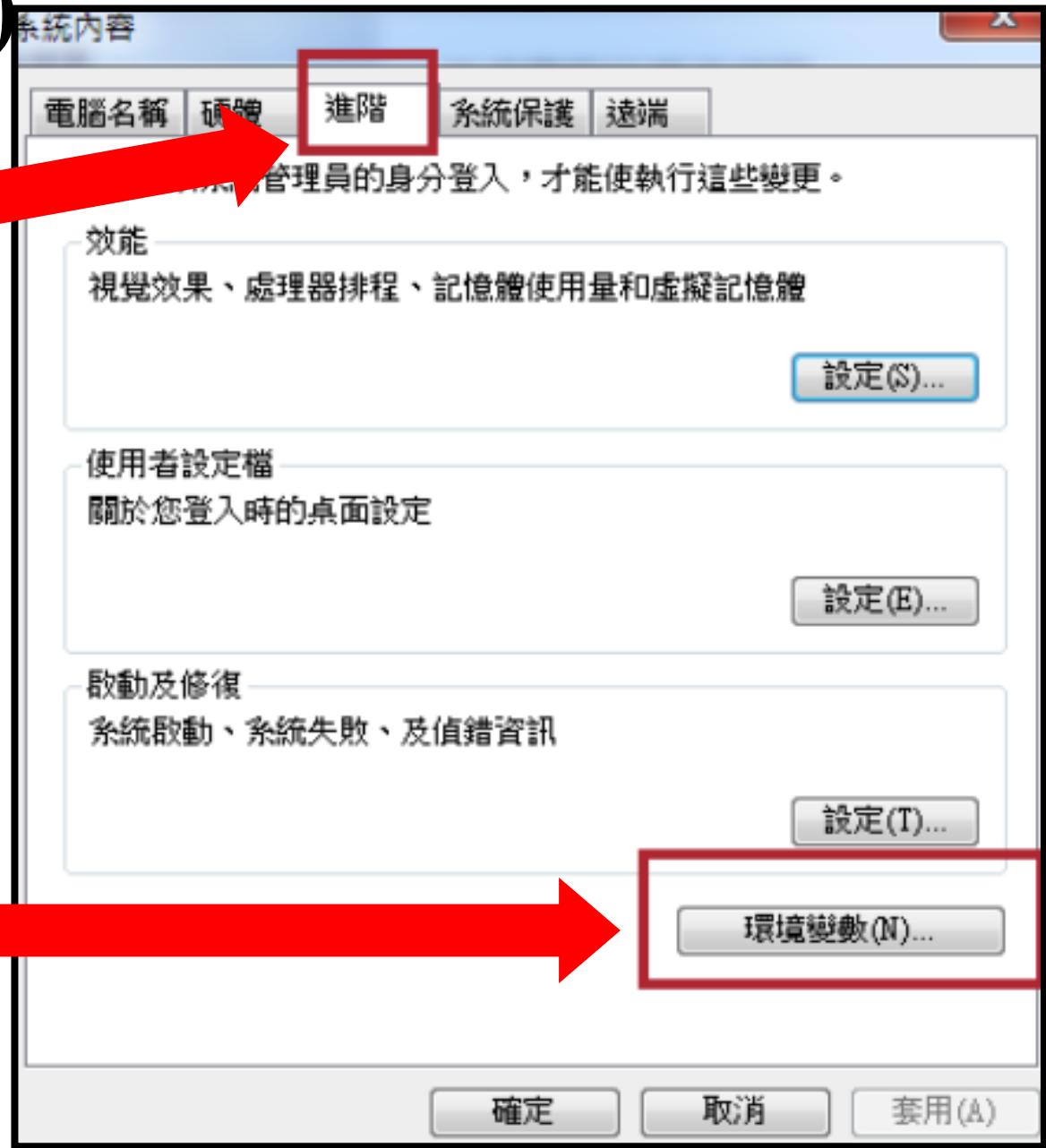
Step 1.



Install OpenCV (8/10)

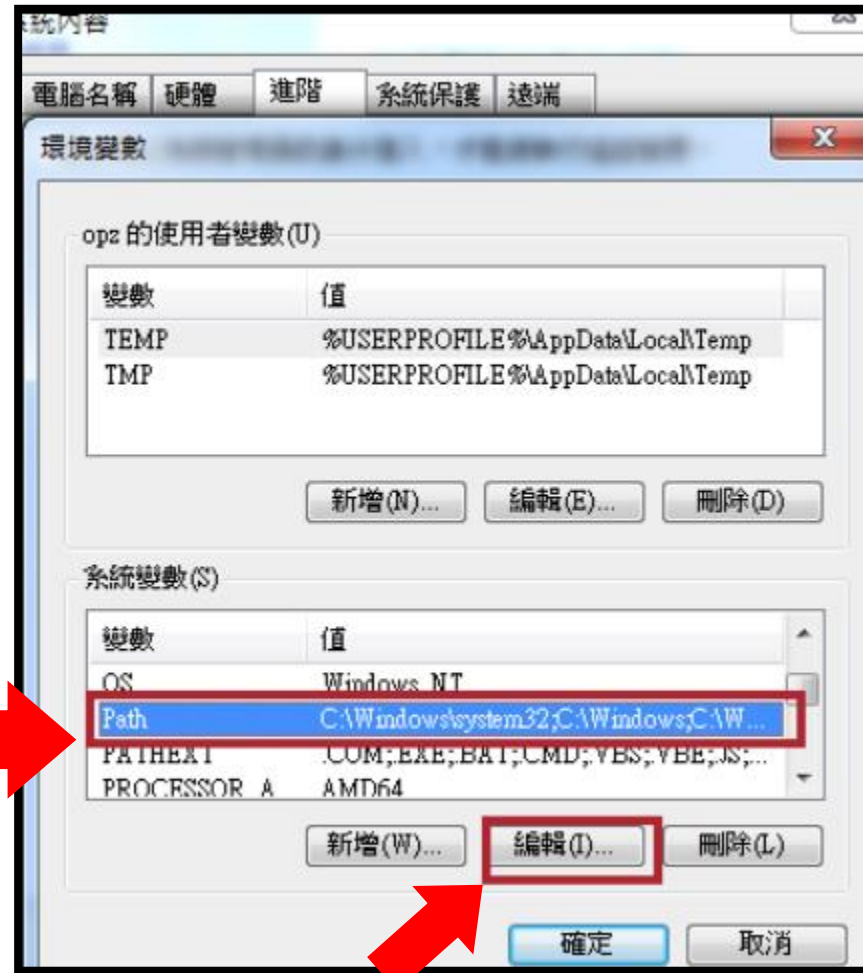
Step 2.

Step 3.



Install OpenCV (9/10)

Step 4.



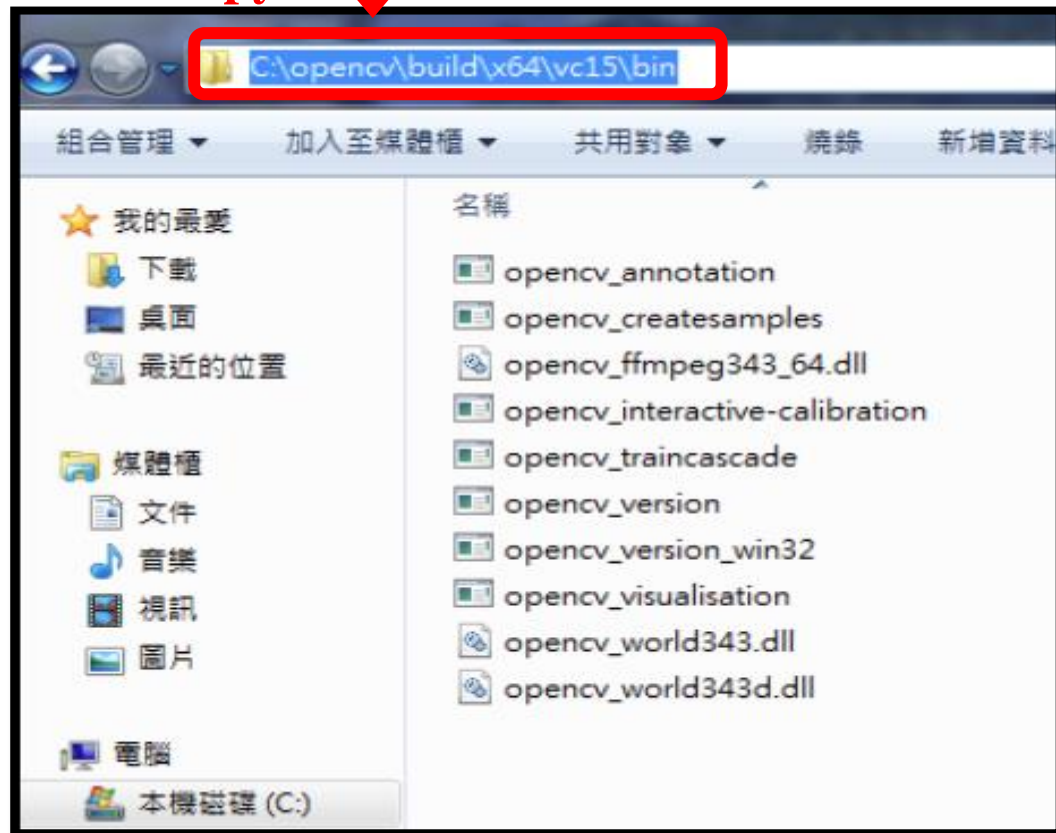
Step 5.

Install OpenCV (10/10)

Step 6.

Go to C:\opencv\build\x64\vc15\bin

Double Click and copy



Note: Step 8. " ; " is necessary in the end of path link.





Website: <https://visualstudio.microsoft.com/zh-hant/vs/>

Install VS 2019 (1/2)



版本：16.1
[版本資訊](#)

[比較版本](#)
[如何離線安裝](#)

Visual Studio 2019

功能完善的整合式開發環境 (IDE)，適用於 Android、iOS、Windows、Web 及雲端

Community


功能強大的 IDE，學生、開放原始碼參與者及個人均可免費使用

免費下載 

[下載預覽 >](#)

Professional

Professional IDE 最適合小型小組

免費試用 

[下載預覽 >](#)

Enterprise

可調整的端對端解決方案，適用於任何規模的小組

免費試用 

[下載預覽 >](#)



Install VS 2019 (2/2)

正在修改 - Visual Studio Community 2019 - 16.1.6

工作負載

個別元件

語言套件

安裝位置

Web 與雲端 (4)



ASP.NET 與網頁程式開發

使用 ASP.NET、ASP.NET Core、HTML/JavaScript 及容器 (包括 Docker 支援)，建置 Web 應用程式。



Python 開發

對 Python 進行編輯、偵錯、互動式開發及原始檔控制。



Azure 開發

Azure SDK、工具及專案，可用於開發雲端 App、建立資源及建置包含 Docker 支援的容器。



Node.js 開發

使用非同步的事件驅動 JavaScript 執行階段 Node.js 建置可調整的網路應用程式。



Windows (3)



.NET 桌面開發

使用 C#、Visual Basic 及 F# 建置 WPF、Windows Forms 與主控台應用程式。



使用 C++ 的桌面開發

使用 Microsoft C++ 工具組、ATL 或 MFC 建置 Windows 傳統型應用程式。



通用 Windows 平台開發

使用 C#、VB 或選用 C++，來建立適用於通用 Windows 平台的應用程式。



安裝詳細資料

> Visual Studio 核心編輯器 *

> Python 開發 *

> 使用 C++ 的桌面開發 *

✓ 個別元件

☒ C++/WinRT



Create a project (1/2)



Create a project (2/2)



Attributes Manager (1/8)

➤ **Project environment variable set up.**

Attributes Manager (2/8)

Step 1:

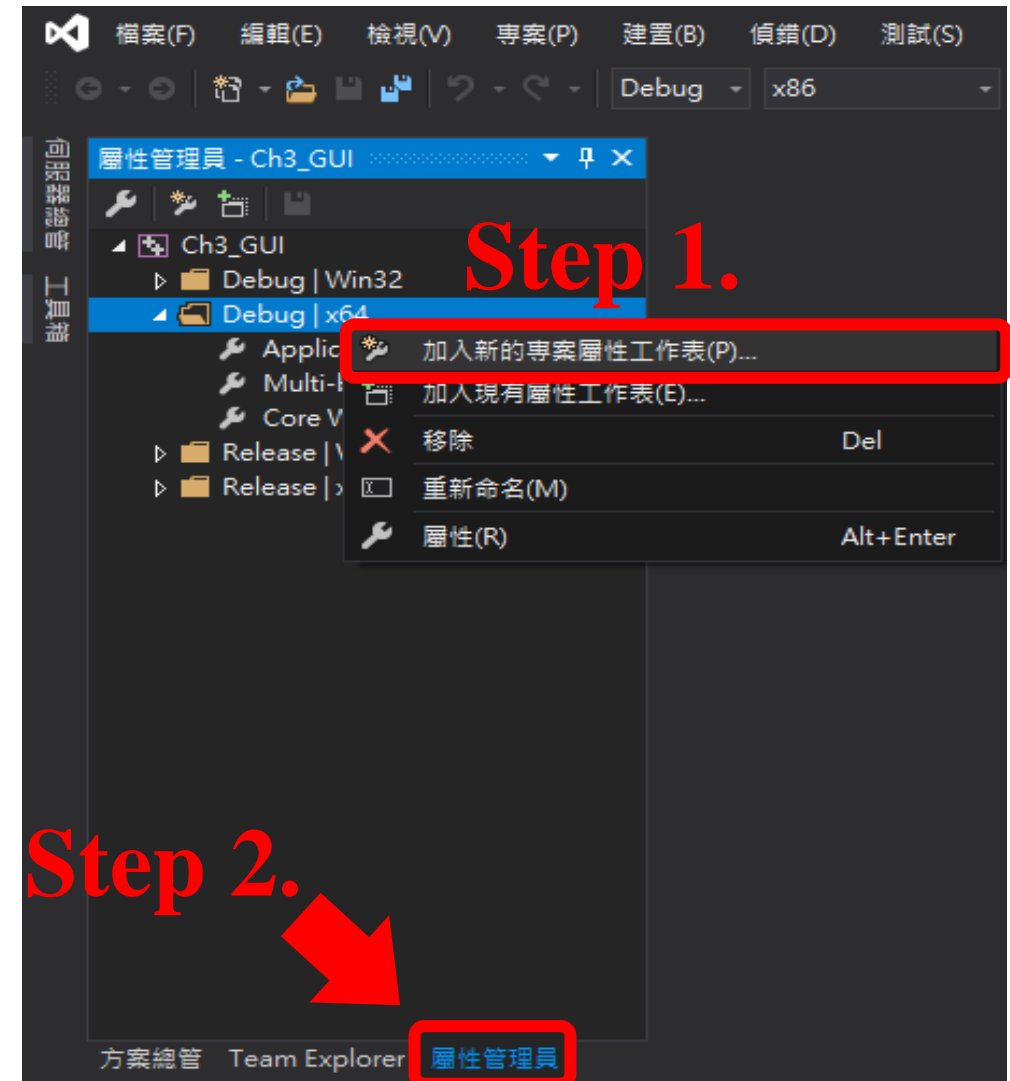
Open the Attributes Manager.

Step 2:

Right-click and add new project attribute task.

Note:

Search keyword "Manager", If the attributes manager doesn't show on the file table.



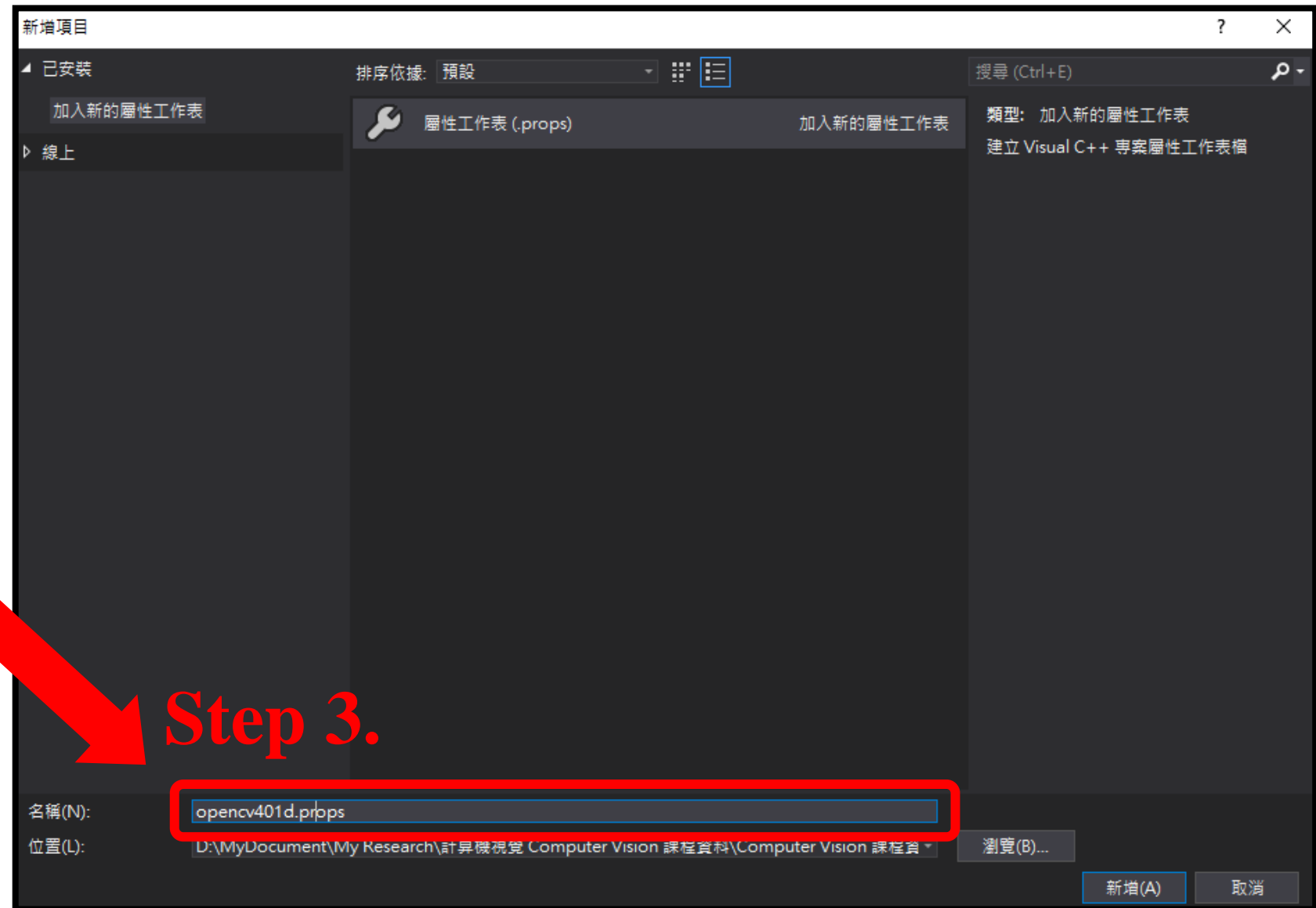
Attributes Manager (3/8)

Step 3:

Give the name

✓ **opencv401d.props**

Step 3.



Attributes Manager (4/8)

Step 4:

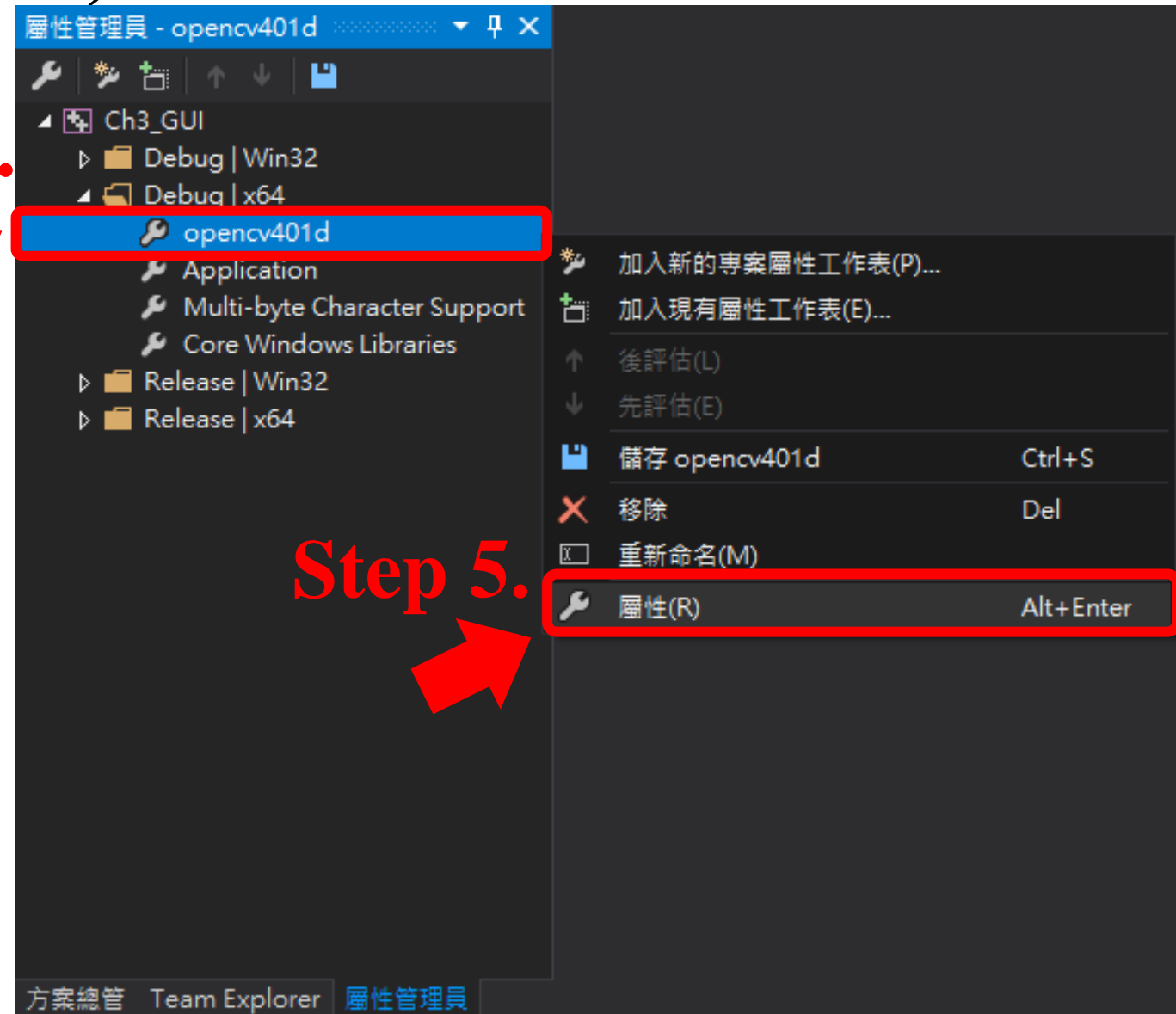
Right-click **opencv401d.props**

Step 4.

Step 5:

Select attribute.

Step 5.



Attributes Manager (5/8)

Step 6:

✓ C/C++



✓ Normal

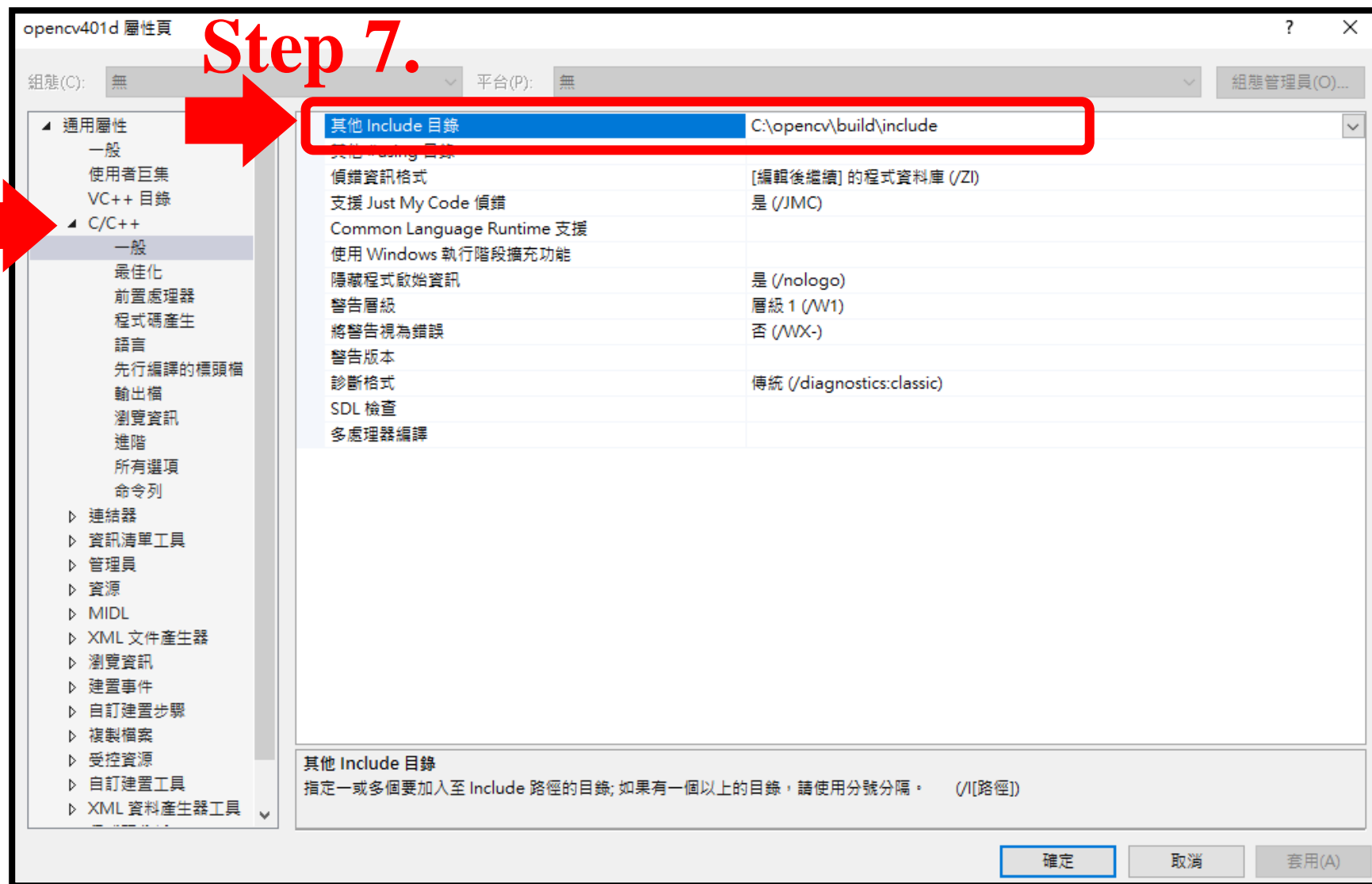
Step 6.

Step 7.

Step 7:

Add path

C:\opencv\build\include



Attributes Manager (6/8)

Step 8:

✓ Connector

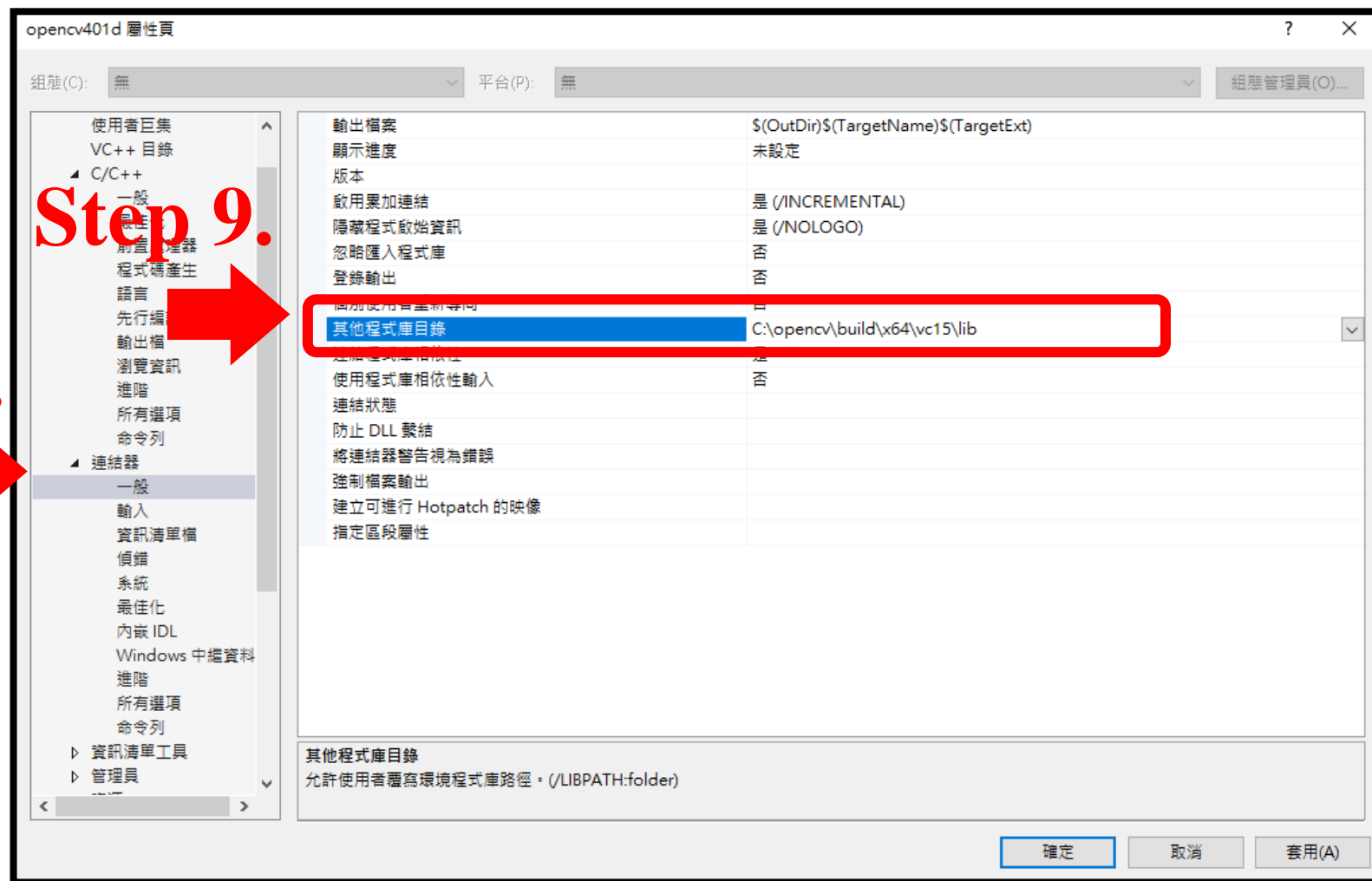
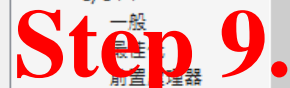
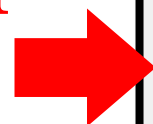


✓ Normal

Step 9:

Add path

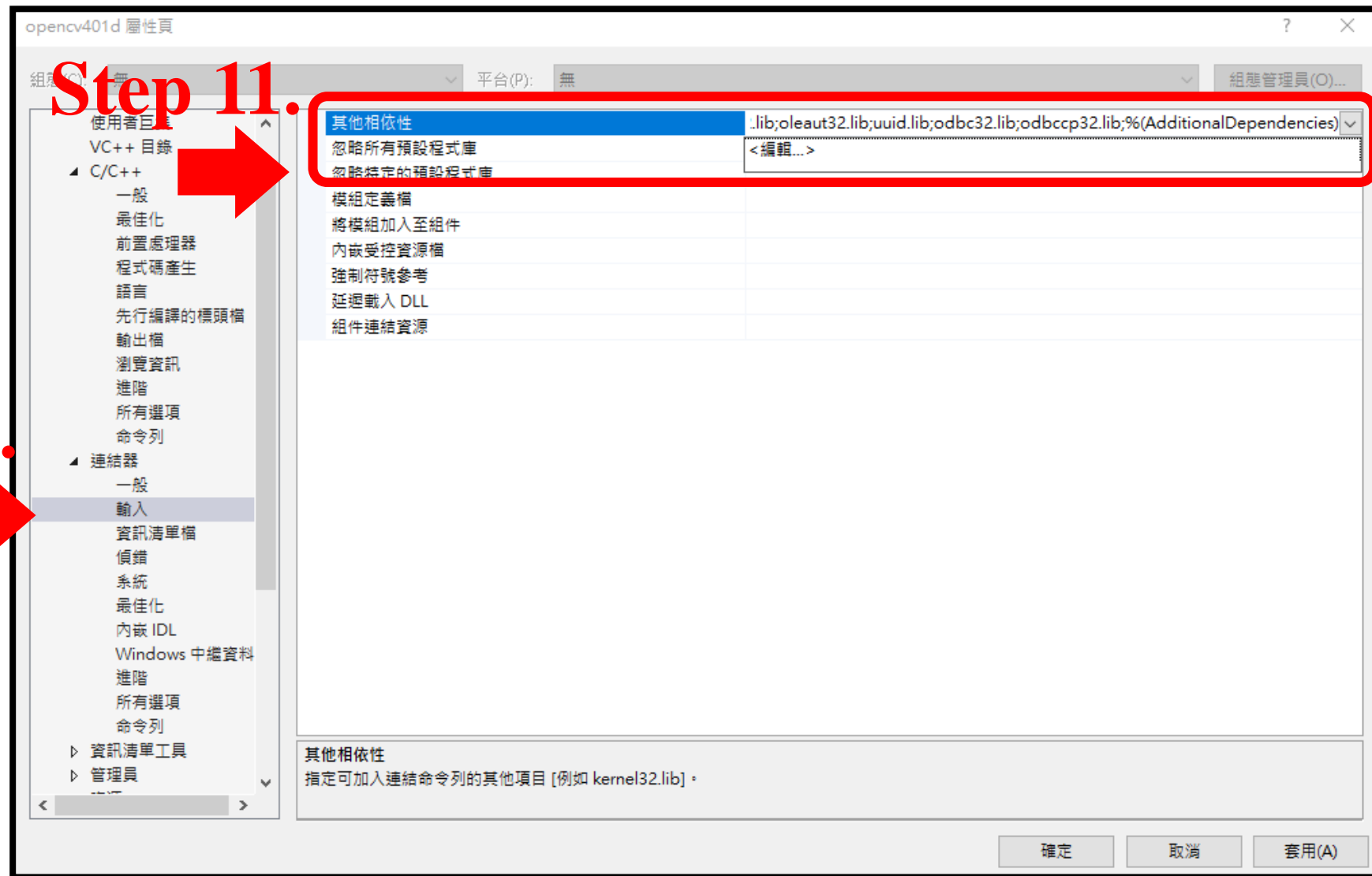
C:\opencv\build\x64\vc15\lib



Attributes Manager (7/8)

Step 10:
Select Input

Step 11:
Click "edit..." once.



Attributes Manager (8/8)

Step 12:

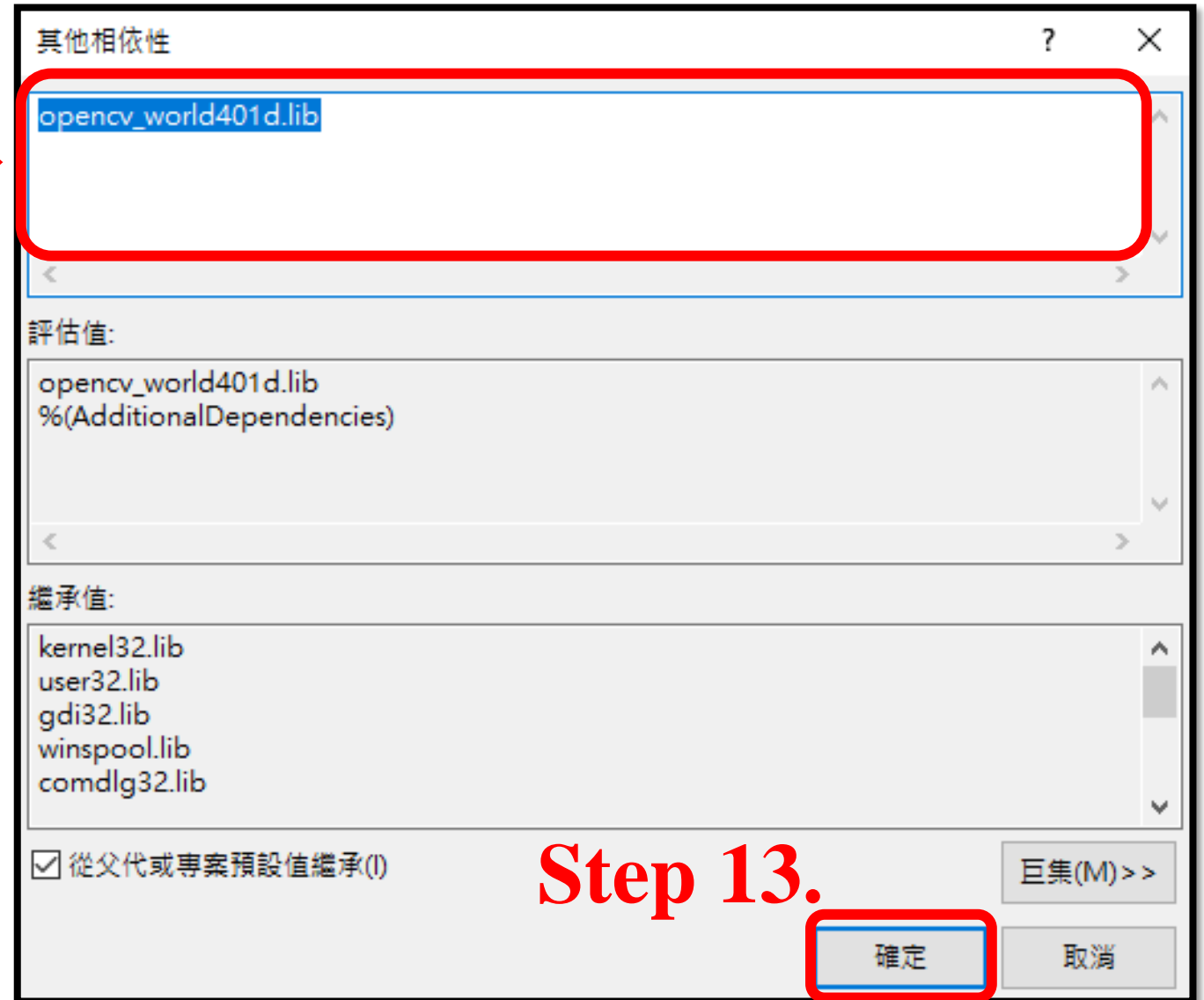
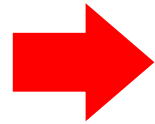
And add

✓ **opencv_world401d.lib**

Step 13:

Confirm

Step 12.



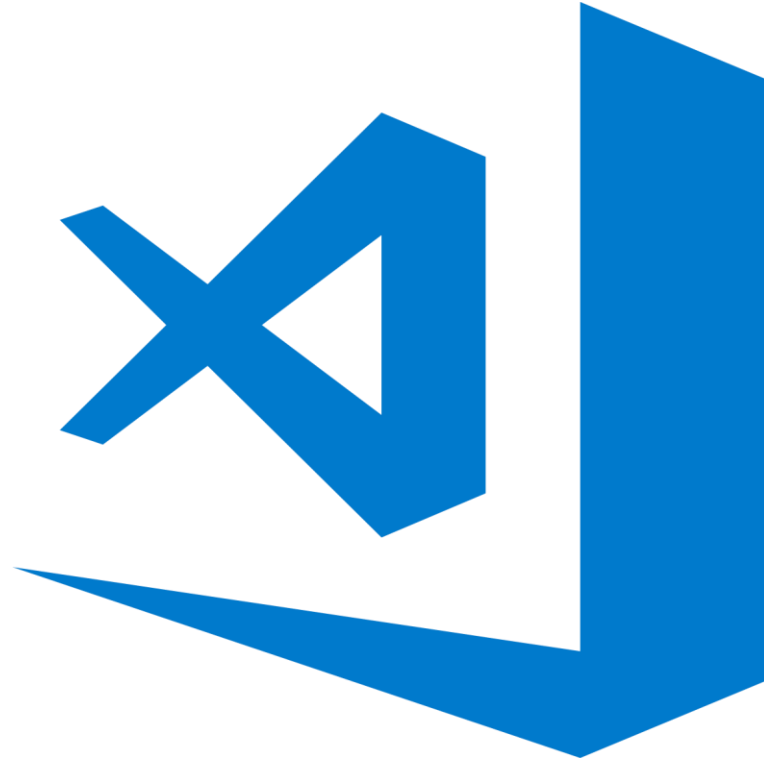
Step 13.

Basic Installation

Done !

Installation instruction : <https://youtu.be/iaFmm3PobBs>

Visual Studio Code



Website: <https://code.visualstudio.com/>

Anaconda



ANACONDA[®]

Website: <https://www.anaconda.com/products/individual>

Python

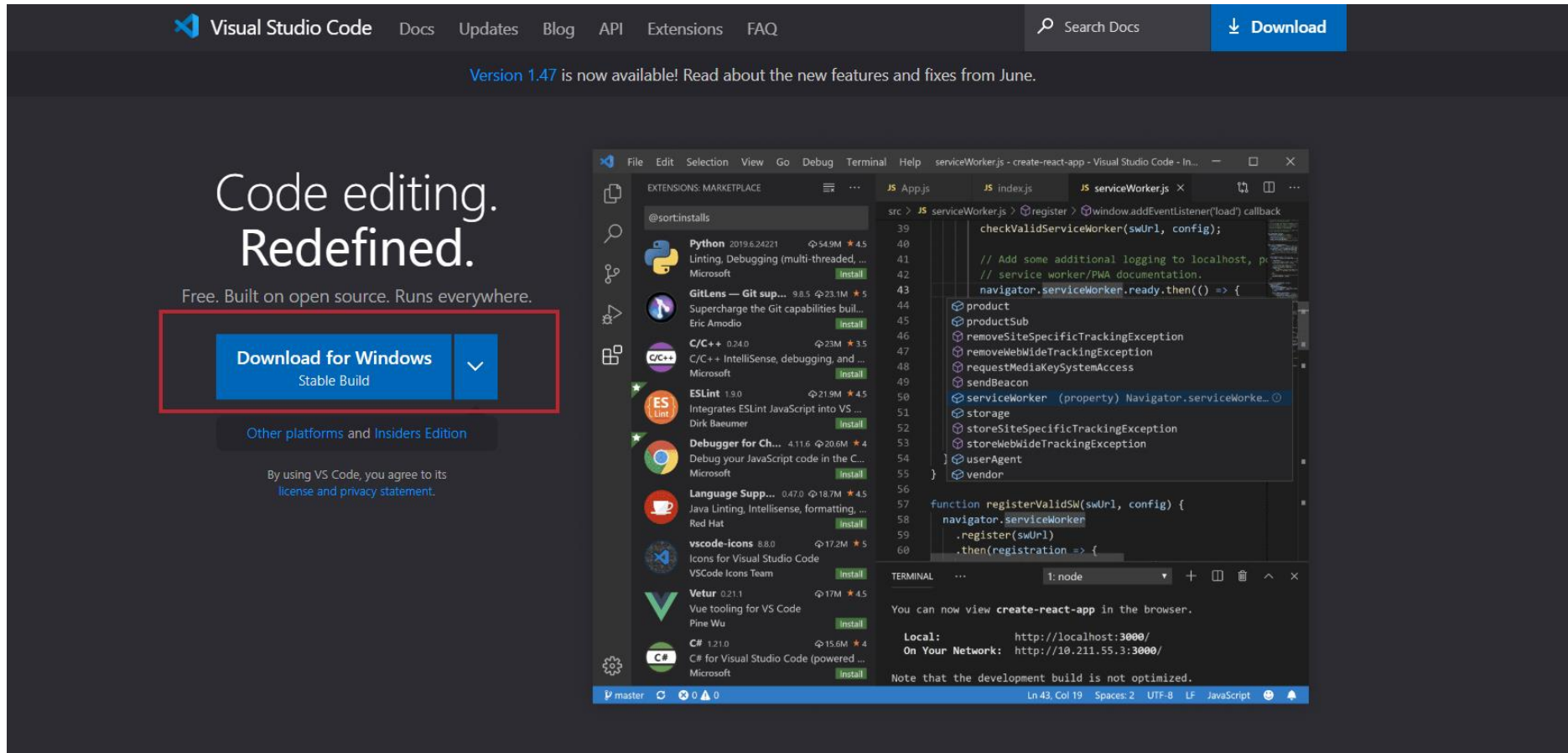


Website: <https://www.python.org/downloads/>

Install Visual Studio Code

Website: <https://code.visualstudio.com/>

Step 1.



IntelliSense



Run and Debug

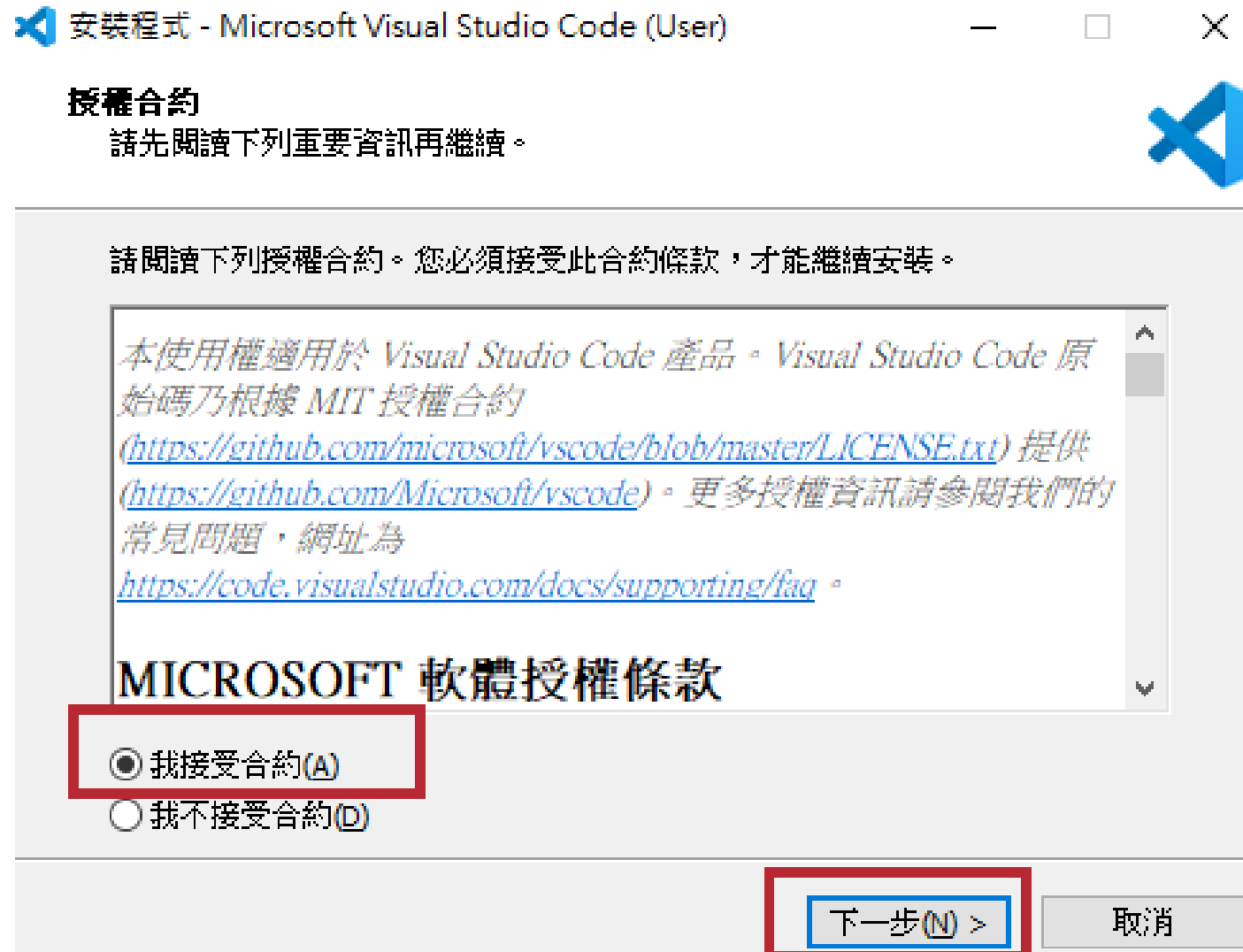


Built-in Git



Extensions

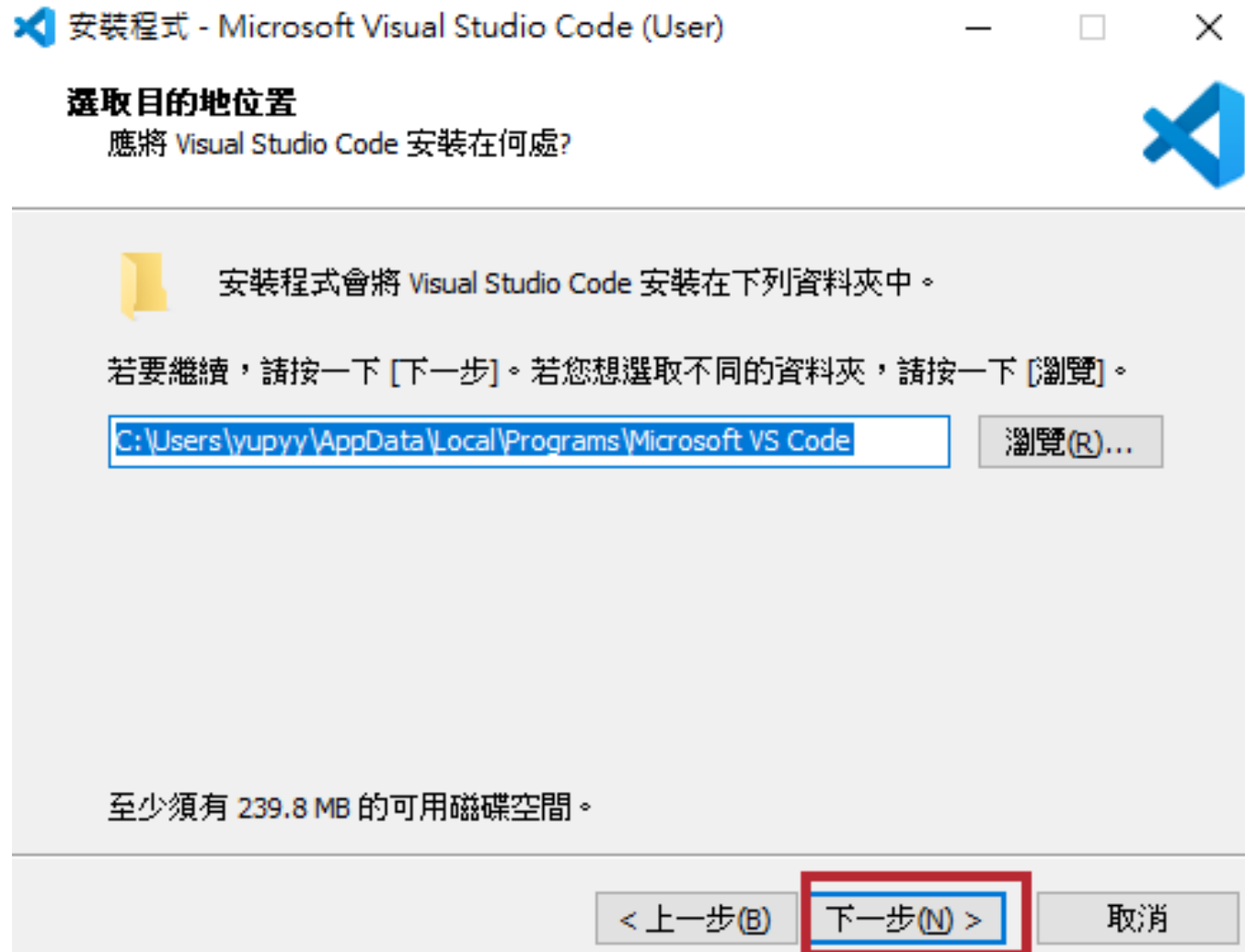
Install Visual Studio Code



Step 2.

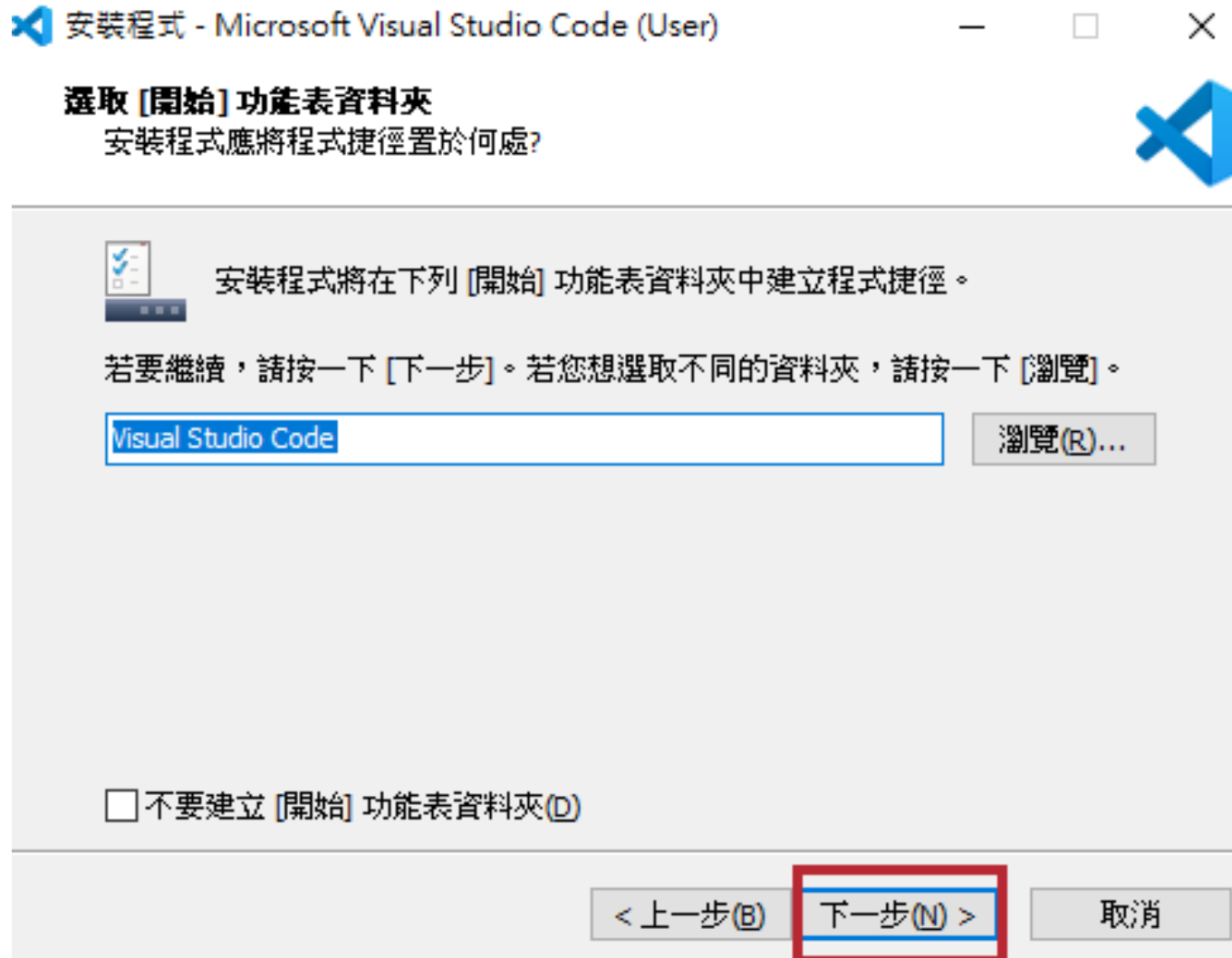
Step 3.

Install Visual Studio Code



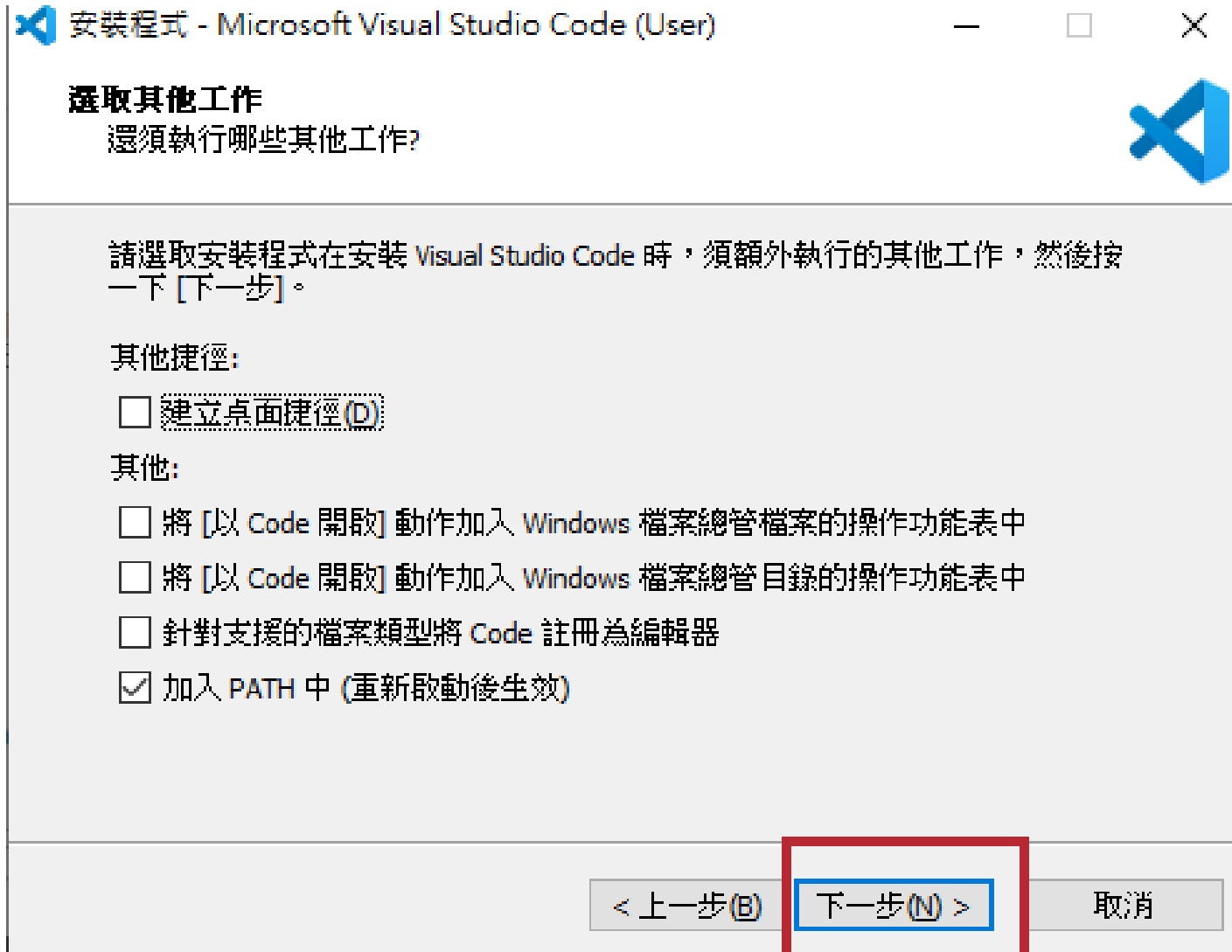
Step 4.

Install Visual Studio Code



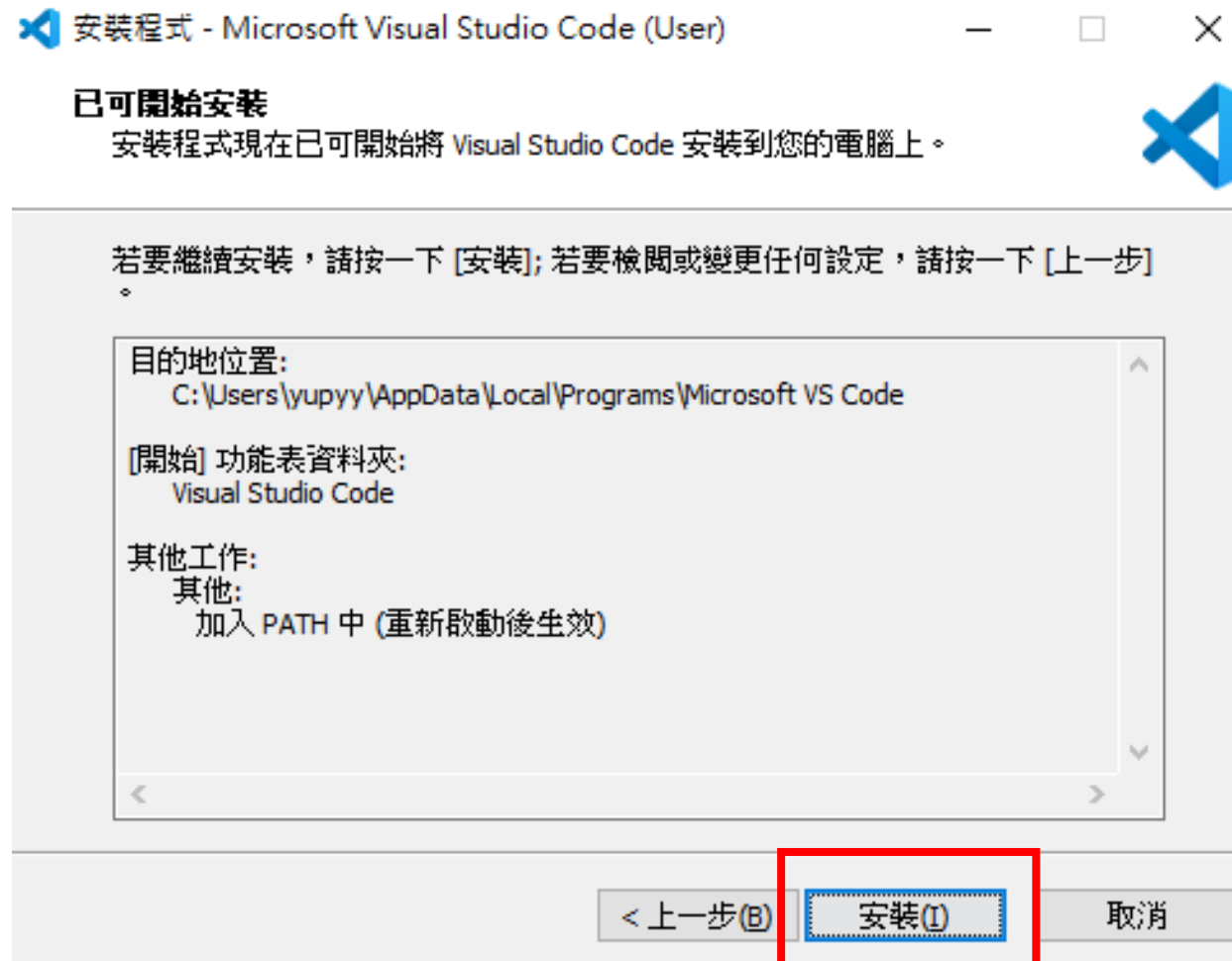
Step 5.

Install Visual Studio Code



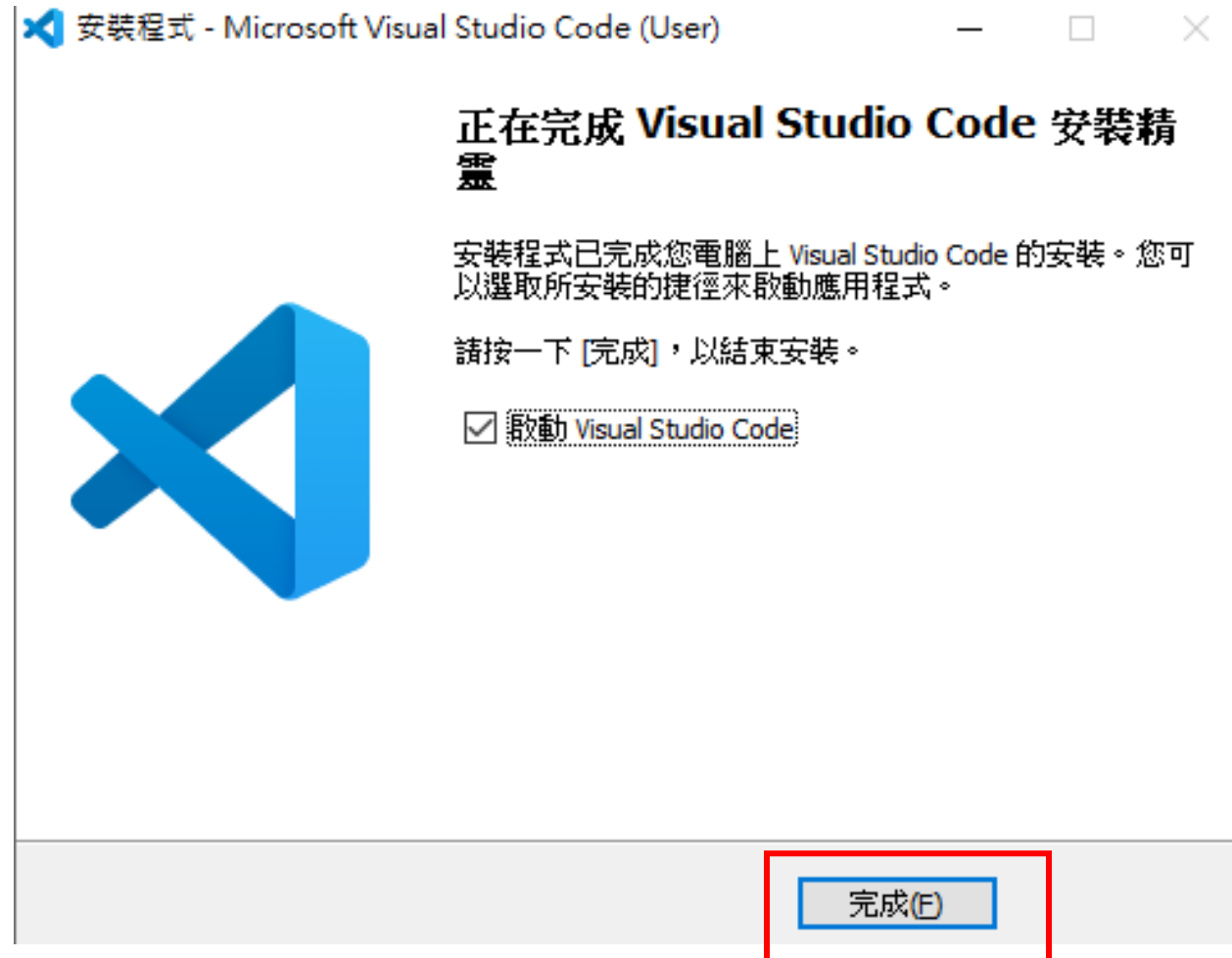
Step 6.

Install Visual Studio Code



Step 7.

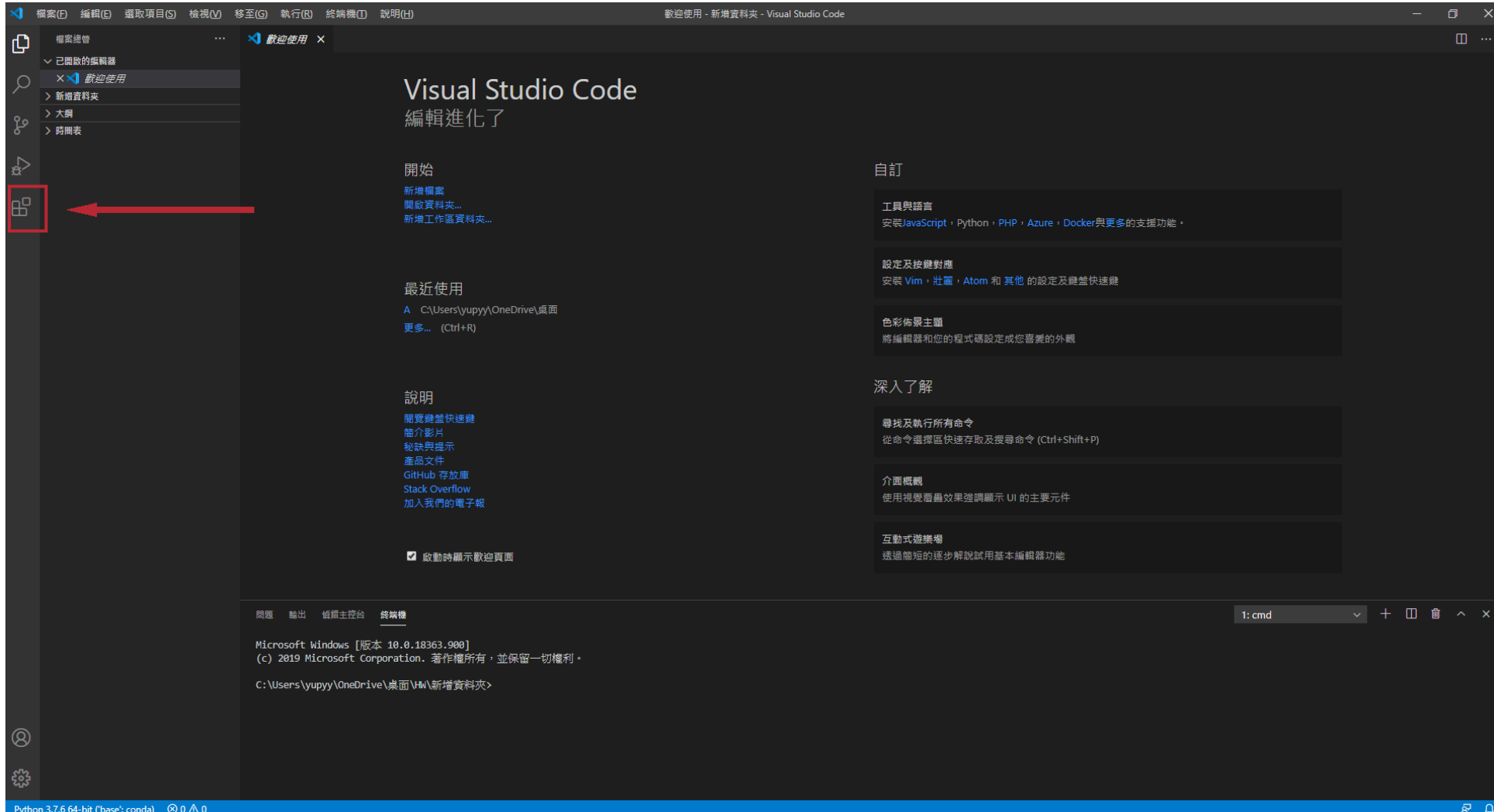
Install Visual Studio Code



Step 8.

Install Visual Studio Code

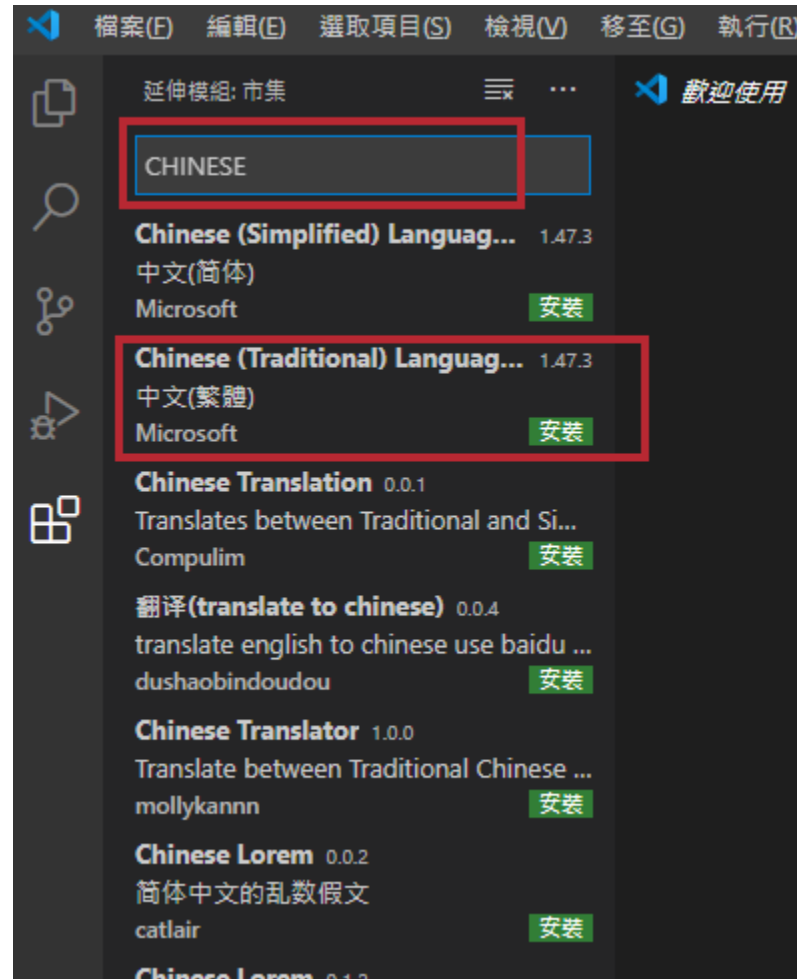
Step 9.



Install Visual Studio Code

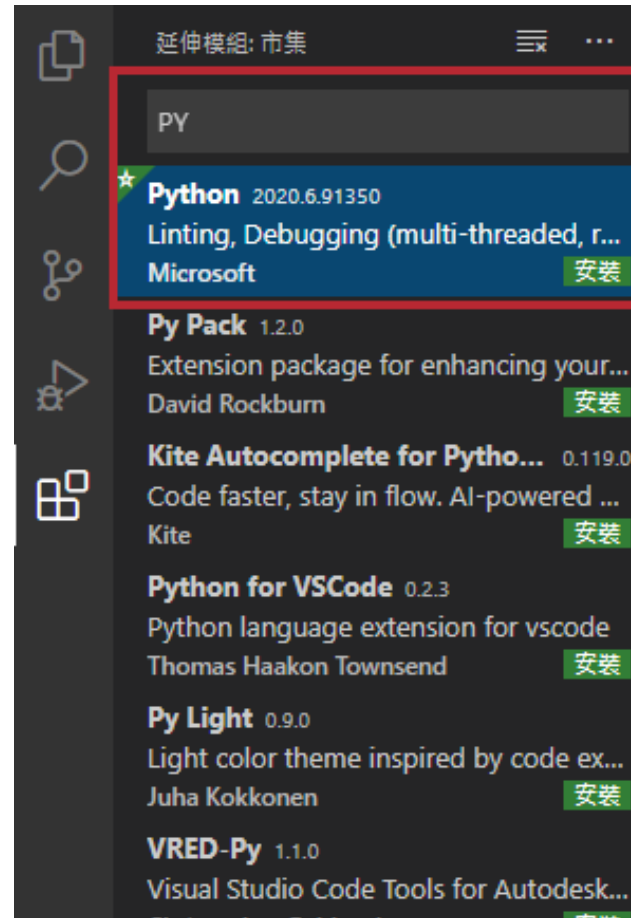
Step 10.

Step 11.



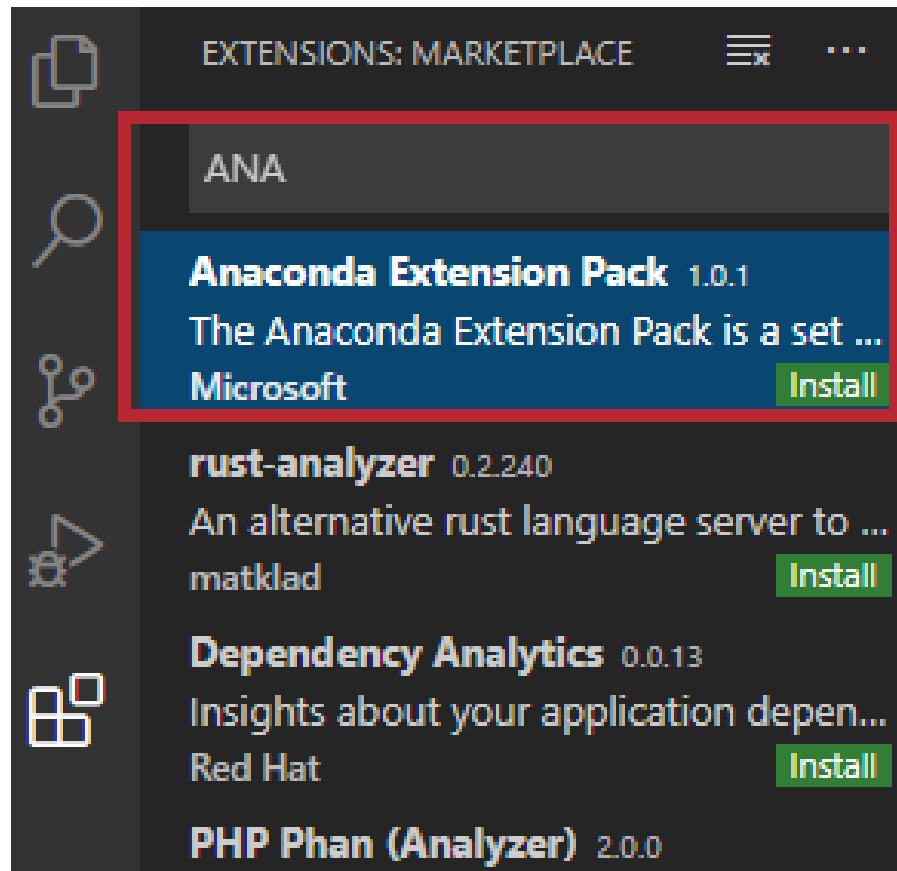
Install Visual Studio Code

Step 12.



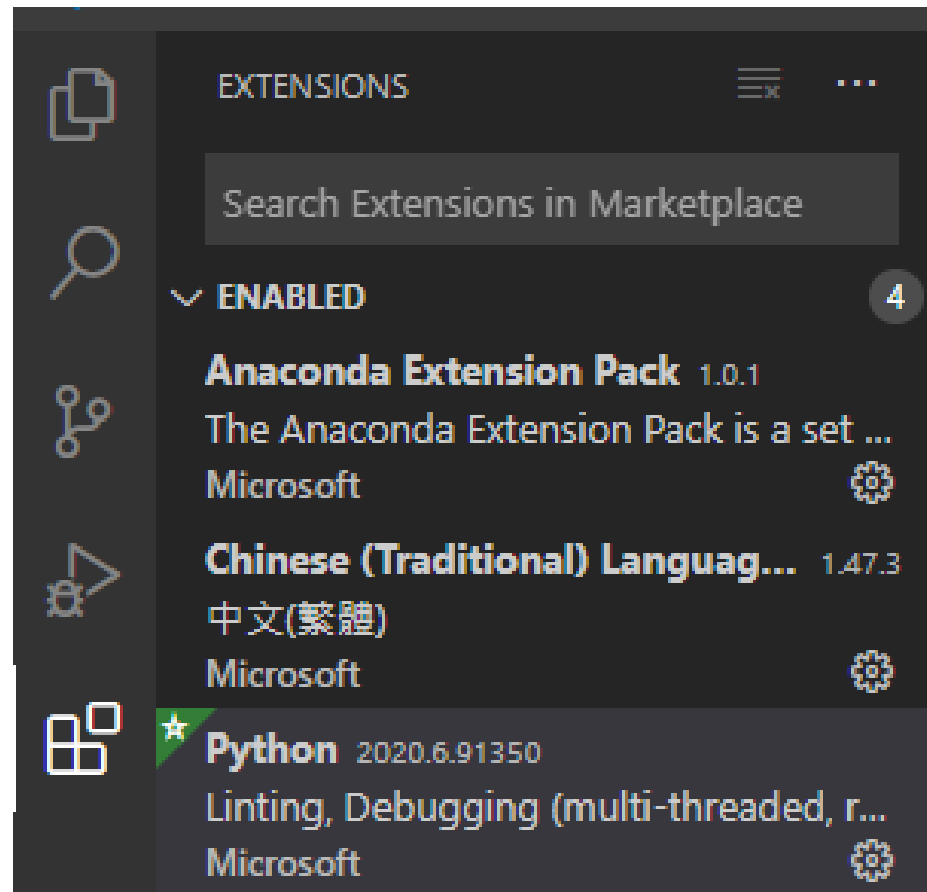
Install Visual Studio Code

Step 13.



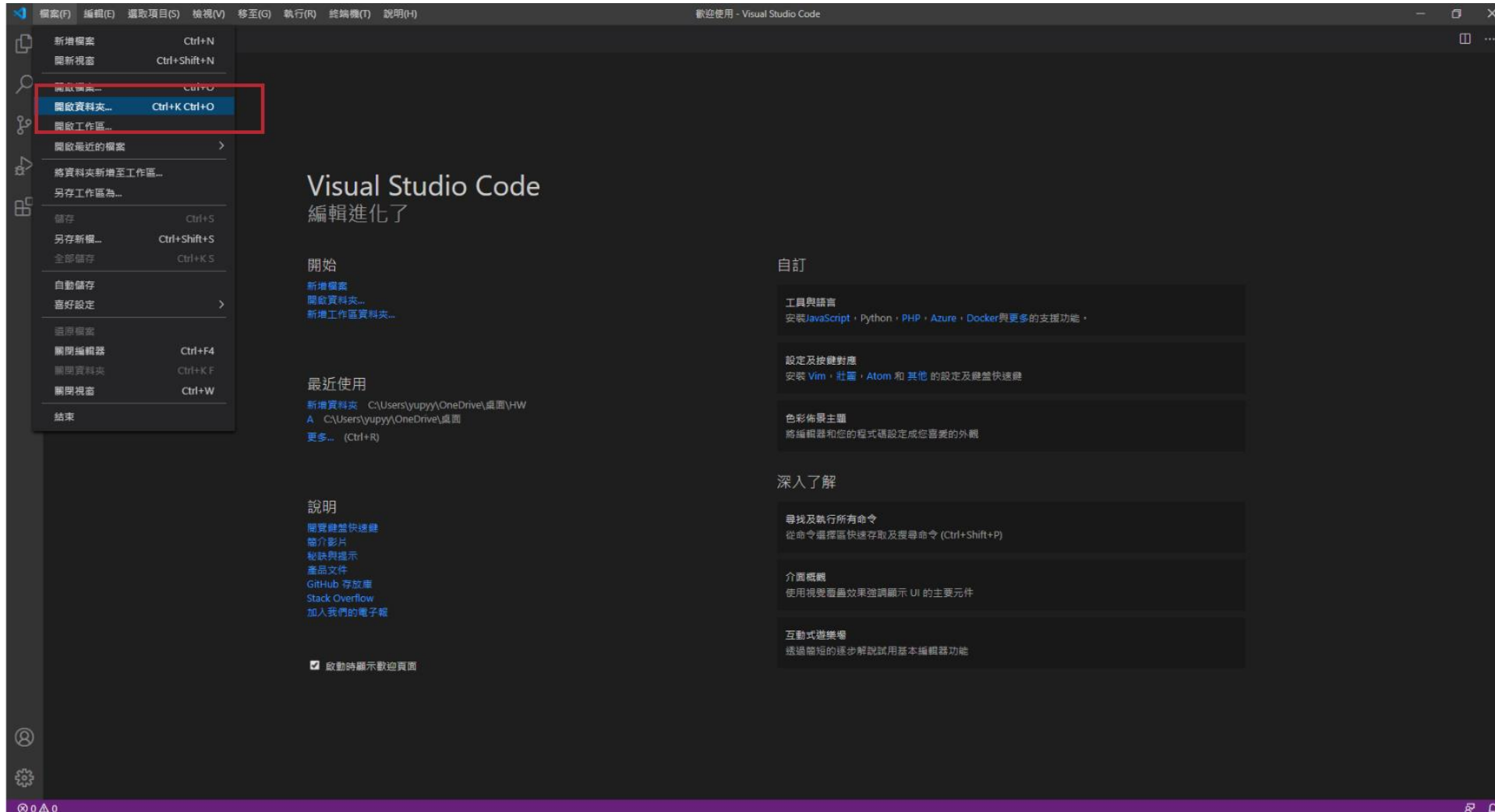
Install Visual Studio Code

Finish.



Open Folder

Step 1.



Adding a Folder

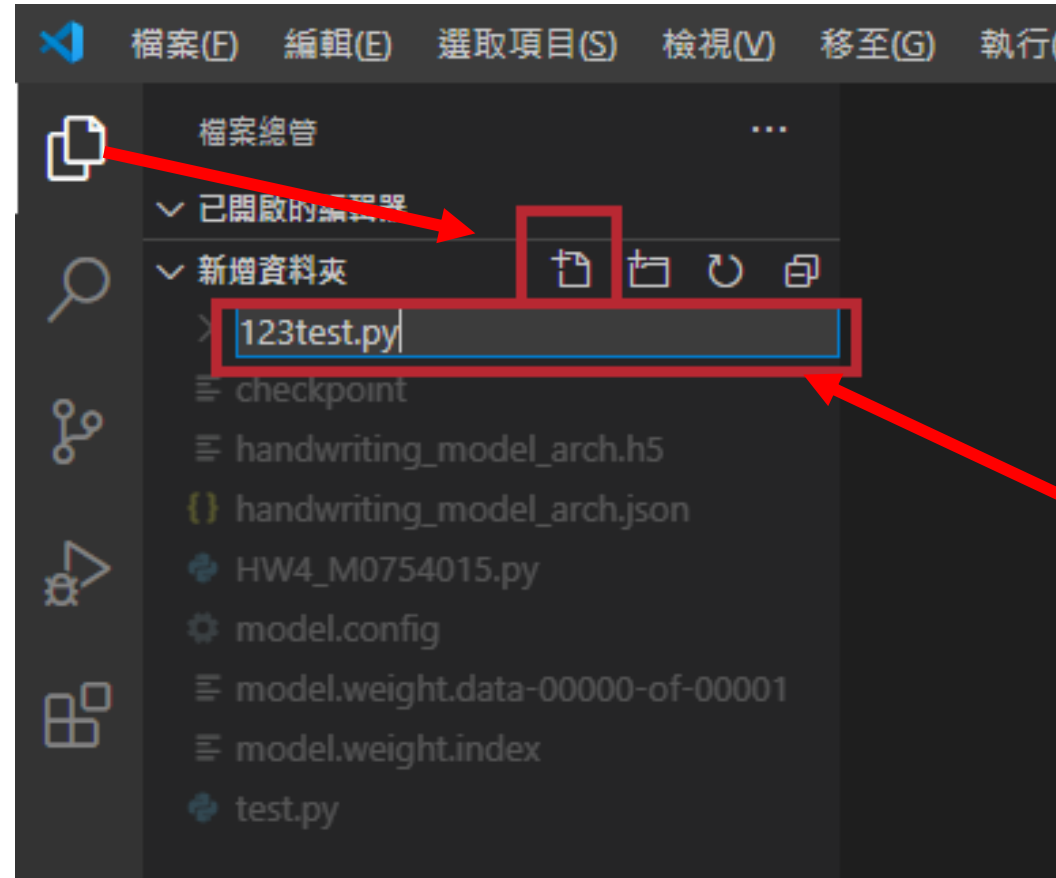
opencv	2020/1/31 下午 05:14	檔案資料夾
PAPER	2020/6/11 下午 07:39	檔案資料夾
高等計算機結構	2020/1/31 下午 05:14	檔案資料夾
新增資料夾	2020/7/14 下午 05:08	檔案資料夾
資料探勘HW	2020/1/31 下午 05:14	檔案資料夾
類神經網路	2020/1/31 下午 05:14	檔案資料夾



Step 2.

Adding a Python file

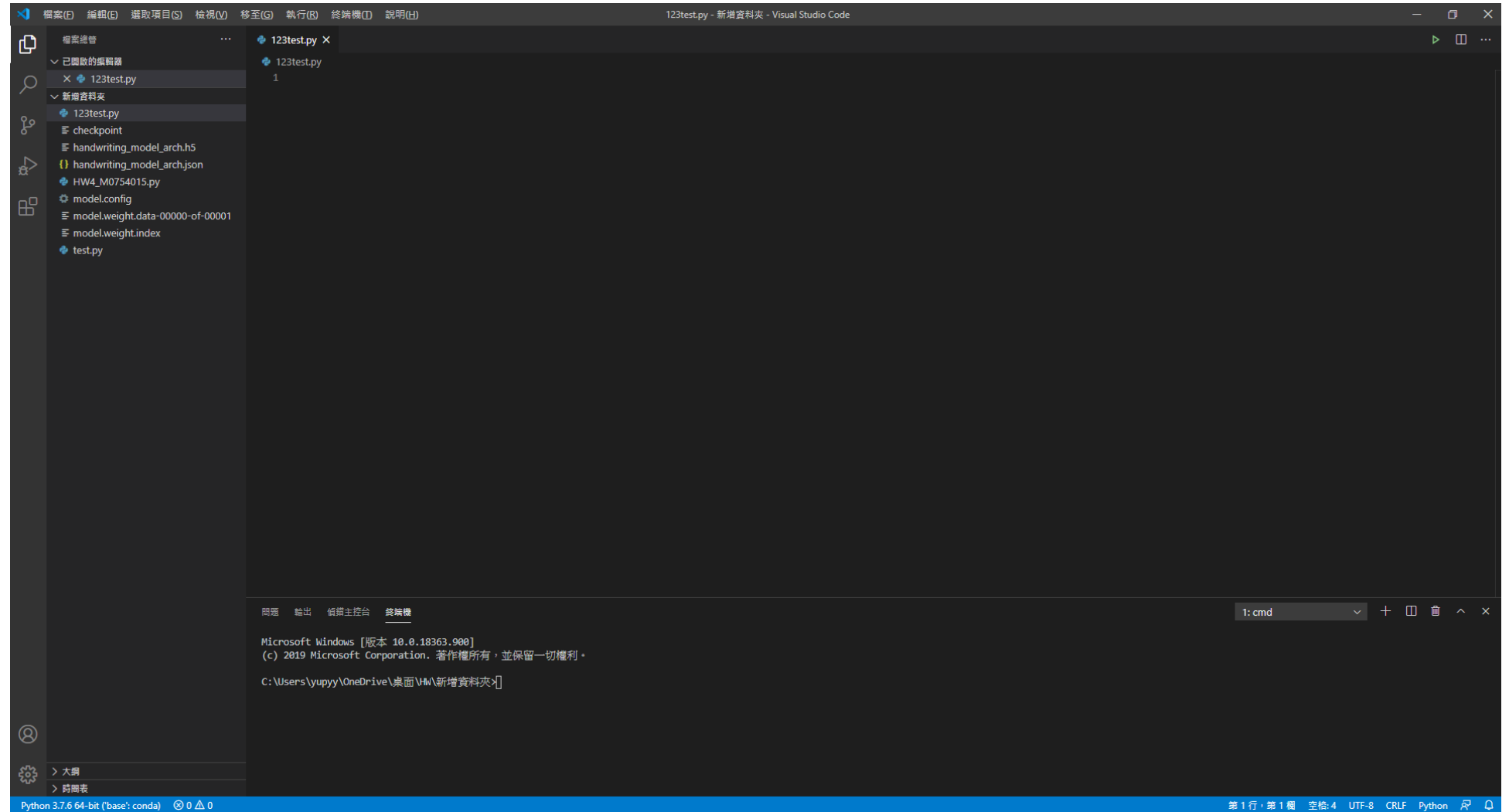
Step 3.



Step 4.
Name.py

Adding a Python file

Finish.



Installation

Done !

Installation instruction :

https://www.youtube.com/watch?v=pbSmxKygsAo&feature=emb_title

Thanks!

Any questions?