

# 環境建置



2A. (a)安裝 Anaconda <https://www.anaconda.com/download/>

## Anaconda 5.2 For Windows Installer

Python 3.6 version \*

↓ Download

64-Bit Graphical Installer (631 MB) ?

32-Bit Graphical Installer (506 MB)

Python 2.7 version \*

↓ Download

64-Bit Graphical Installer (564 MB) ?

32-Bit Graphical Installer (443 MB)



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## 2A. (b)建新 Environment 'tensorflow'

Anaconda3 (64bit) -> Anaconda Prompt

```
conda env list
```

```
conda create -n tensorflow pip python=3.5
```

```
conda activate tensorflow
```

```
pip install --ignore-installed --upgrade tensorflow
```

```
pip install opencv-contrib-python --upgrade
```

```
pip install matplotlib
```

```
pip install bleach==1.5.0
```

```
pip install html5lib==0.9999999
```

```
pip install keras
```

```
conda install scikit-learn
```

```
conda install -c conda-forge scikit-image
```

```
conda install -c cogsci pygame
```

# 環境建置



## 2A. (b)建新 Environment 'tensorflow'

Anaconda3 (64bit) -> Anaconda Prompt  
conda env list

安裝Optical Character Recognition (OCR)  
Windows 安裝: <https://digi.bib.uni-mannheim.de/tesseract/>  
設環境變數 path C:\Program Files (x86)\Tesseract-OCR  
tesseract -v

pip install pillow  
pip install pytesseract

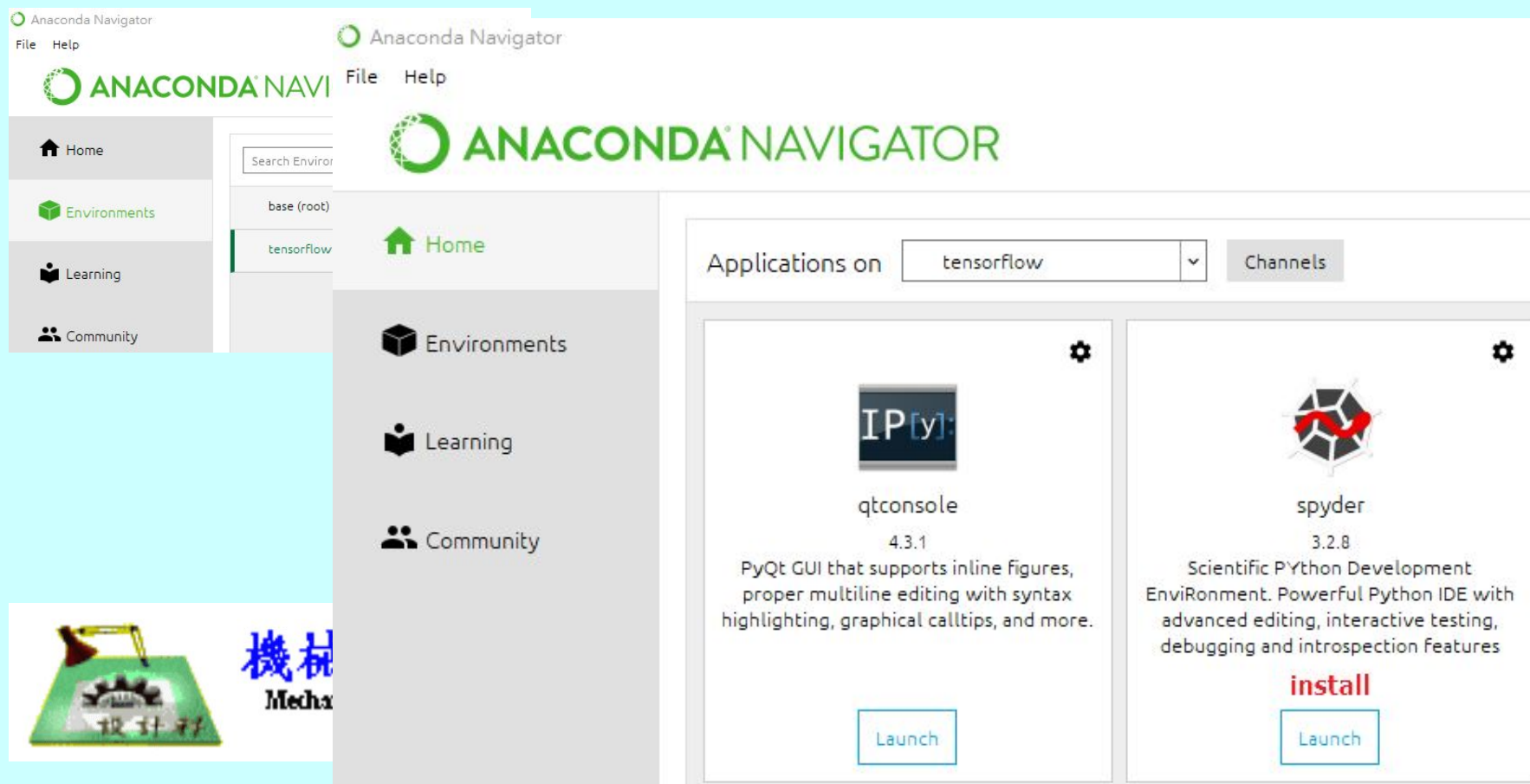
pip install pyzbar // bar code

pip install imgui[full]

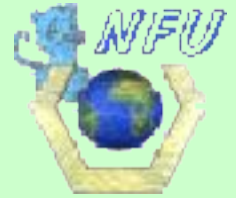
# 環境建置



## 2A. (c)產生 'tensorflow' 的spyder



# 環境建置



2A. (d)範例

git clone <https://github.com/PacktPublishing/Practical-Computer-Vision>

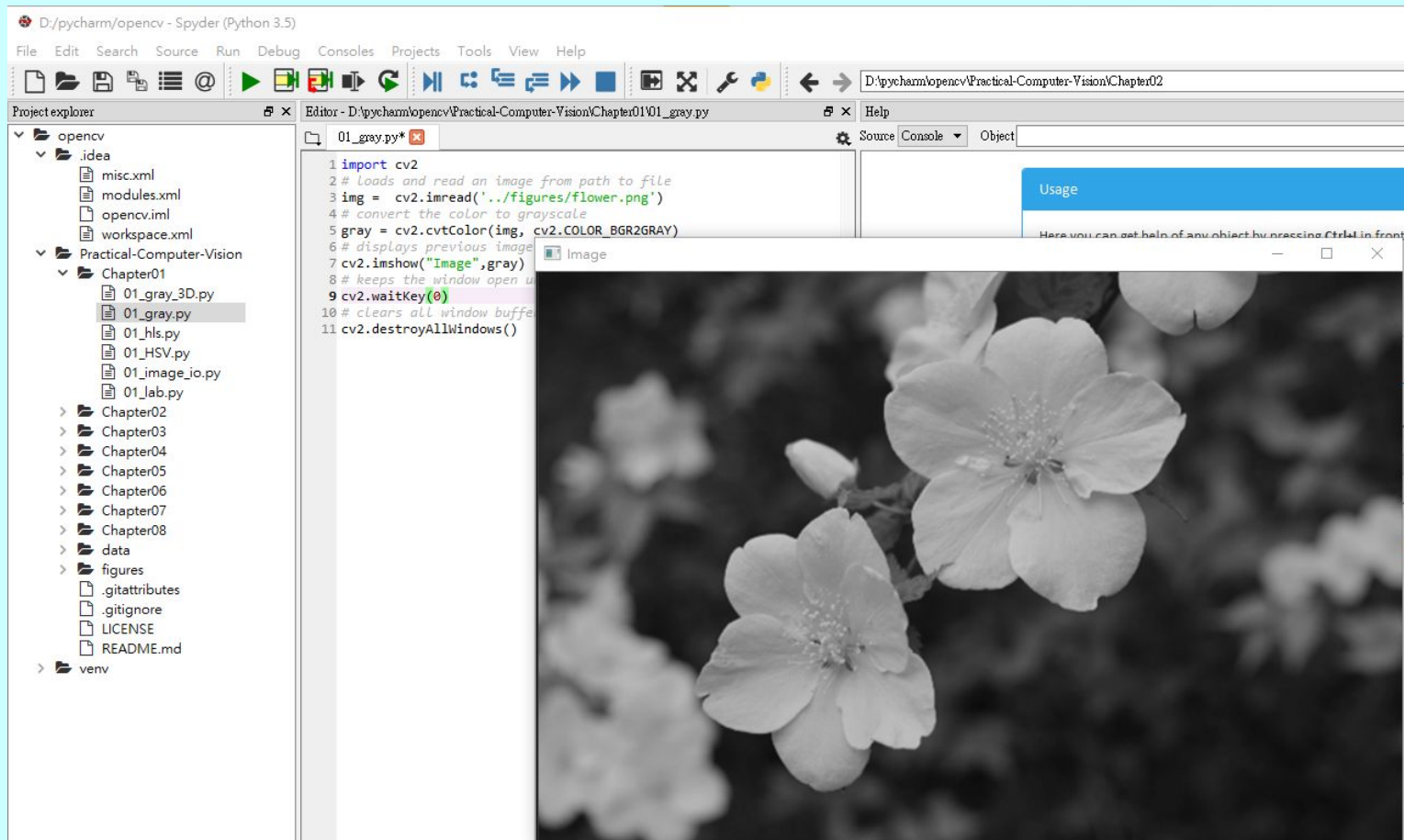


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## 2A. (e)執行 spyder(tensorflow)

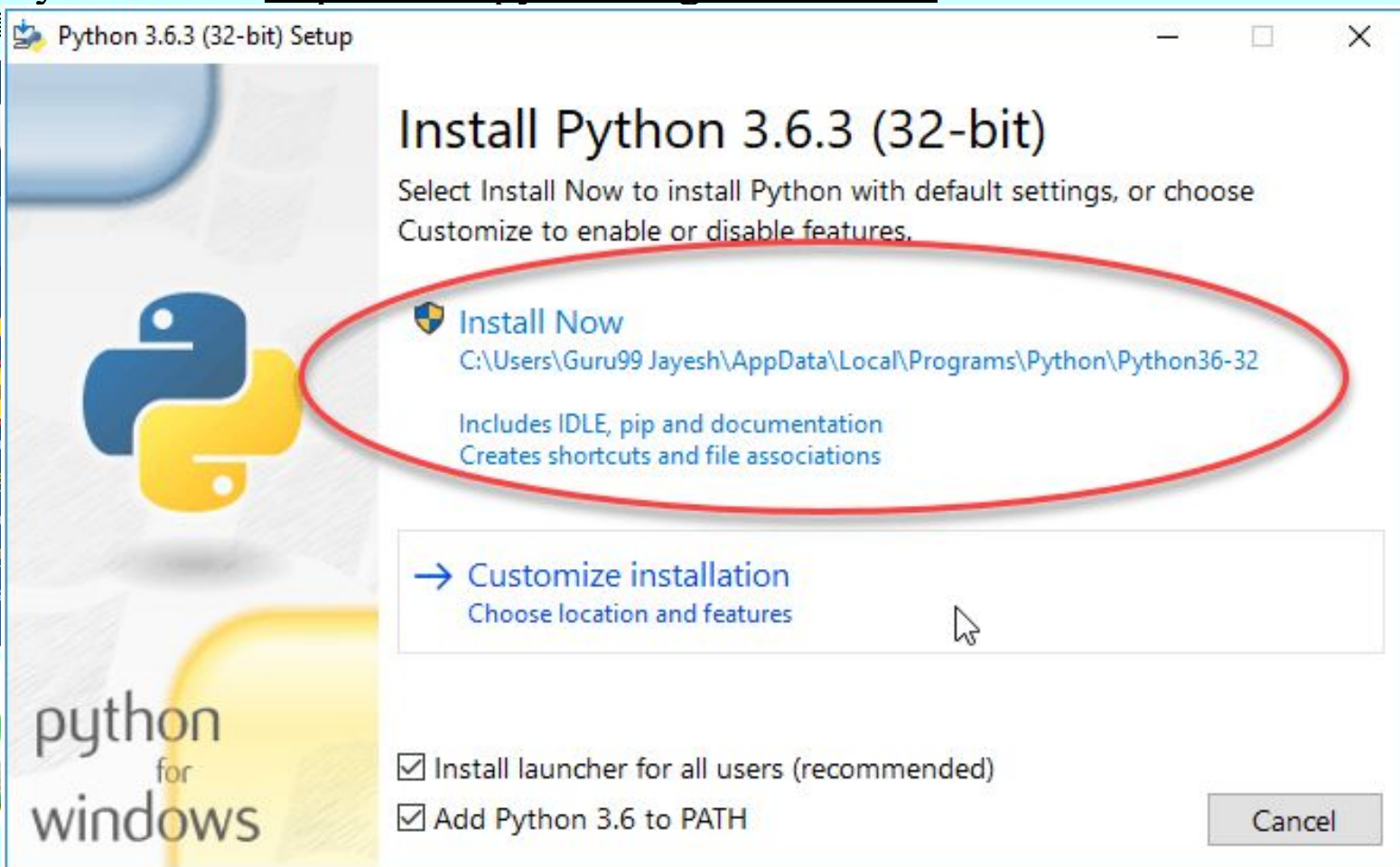


# 環境建置



1. 安裝 Python 3.6.5 <http://www.python.org/downloads/>

以系統管理員





# 環境建置



2. 安裝 PyCharm <https://www.jetbrains.com/pycharm/download/>  
**2018.1.4版跟anaconda不相配**

## Download PyCharm

Windows

macOS

Linux



### Professional

Full-featured IDE  
for Python & Web  
development

DOWNLOAD

Free trial



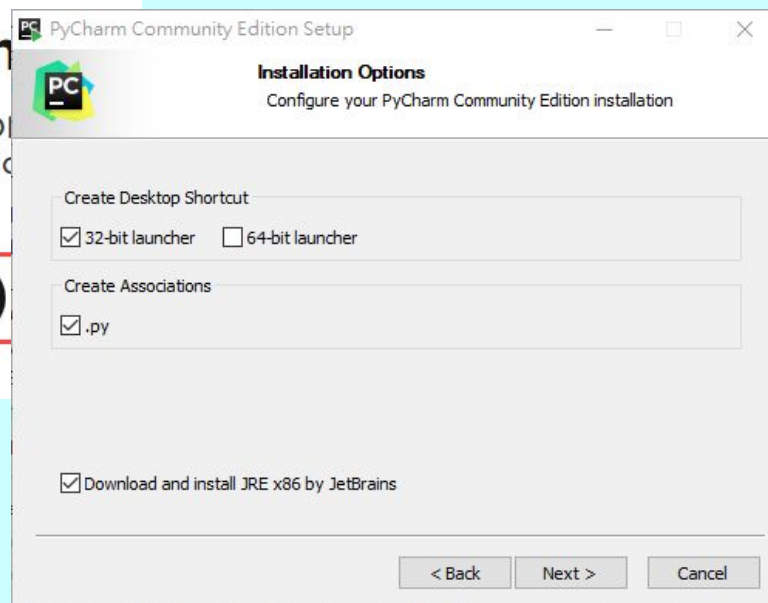
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### Community

Lightweight IDE  
for Python & Sc  
development

DOWNLOAD

Free, open-source






# 環境建置




## 2. 安裝 PyCharm <https://www.jetbrains.com/pycharm/download/> 安裝2017.2.7版



Version: 2018.1.4  
Build: 181.5087.37  
Released: May 31, 2018

[System requirements](#)  
[Installation Instructions](#)  
[Previous versions](#)



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### Download PyCharm

Windows macOS Linux

Version 2017.3 [More updates](#)

#### Professional

Full-featured IDE for Python & Web development

[DOWNLOAD](#)

Free trial

Version 2017.2 [More updates](#)

PYCHARM PROFESSIONAL EDITION	PYCHARM COMMUNITY EDITION
<a href="#">2017.3.6 for Linux (tar.gz)</a>	<a href="#">2017.3.6 for Linux (tar.gz)</a>
<a href="#">2017.3.6 for Mac OS X (dmg)</a>	<a href="#">2017.3.6 for Mac OS X (dmg)</a>
<a href="#">2017.3.6 for Windows (exe)</a>	<a href="#">2017.3.6 for Windows (exe)</a>

Version: 2017.3.6  
Build: 173.4674.57  
Released: May 30, 2018

PYCHARM PROFESSIONAL EDITION	PYCHARM COMMUNITY EDITION
<a href="#">2017.2.7 for Linux (tar.gz)</a>	<a href="#">2017.2.7 for Linux (tar.gz)</a>
<a href="#">2017.2.7 for Mac OS X (dmg)</a>	<a href="#">2017.2.7 for Mac OS X (dmg)</a>
<a href="#">2017.2.7 for Windows (exe)</a>	<a href="#">2017.2.7 for Windows (exe)</a>

Version: 2017.2.7  
Build: 172.4574.37  
Released: May 30, 2018

# 環境建置



## 2. 安裝 PyCharm <https://www.jetbrains.com/pycharm/download/> 設定使用Anaconda建好的opencv, tensorflow環境

Anaconda3 (64bit) -> Anaconda Prompt

conda env list

查出tensorflow環境的位置. (c:\Users\user\AppData\Local\conda\conda\envs\tensorflow\python.exe)

The image shows two overlapping windows from the PyCharm IDE. The background window is the 'Default Settings' dialog, with the 'Project Interpreter' tab selected. It shows a table of installed packages for the 'tensorflow' project.

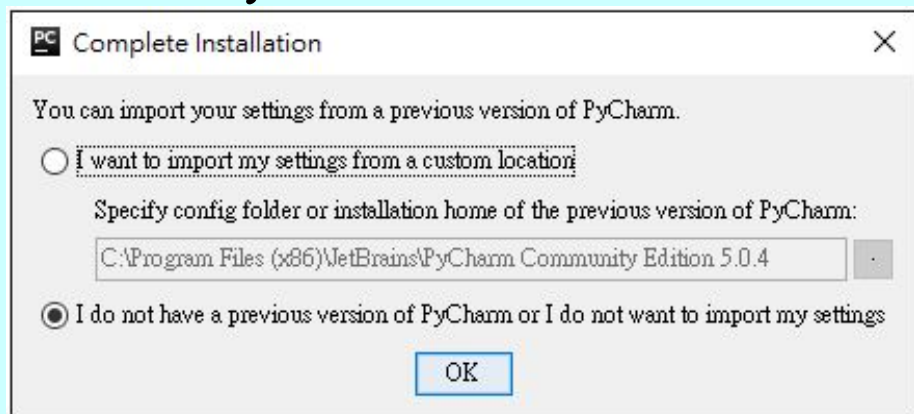
Package	Version	Latest
QtPy	1.4.2	1.4.2
Sphinx	1.7.5	1.7.5
Werkzeug	0.14.1	0.14.1
absl-py	0.2.2	0.2.2
alabaster	0.7.10	0.7.11
asn1crypto	0.24.0	0.24.0
astor	0.6.2	0.6.2
astroid	1.6.5	2.0.0.dev3
backcall	0.1.0	0.1.0
bleach	2.1.3	2.1.3
certifi	2018.4.16	2018.4.16
cffi	1.11.5	1.11.5
chardet	3.0.4	3.0.4
cloudpickle	0.5.3	0.5.3
colorama	0.3.9	0.3.9
cryptography	2.2.1	2.2.2
cycler	0.10.0	0.10.0
decorator	4.3.0	4.3.0
docutils	0.14	0.14
entrypoints	0.2.3	0.2.3
gast	0.2.0	0.2.0
grpcio	1.12.1	1.13.0rc2
h5py	2.8.0	2.8.0rc1
html5lib	1.0.1	1.0.1
idna	2.7	2.7
imageio	1.0.0	1.0.0

The foreground window is the 'Select Python Interpreter' dialog. It shows the path 'C:\Users\user\AppData\Local\conda\conda\envs\tensorflow\python.exe' selected in the search bar. Below the search bar, a list of files is shown, with 'python.exe' highlighted. The 'OK' button is circled in red.

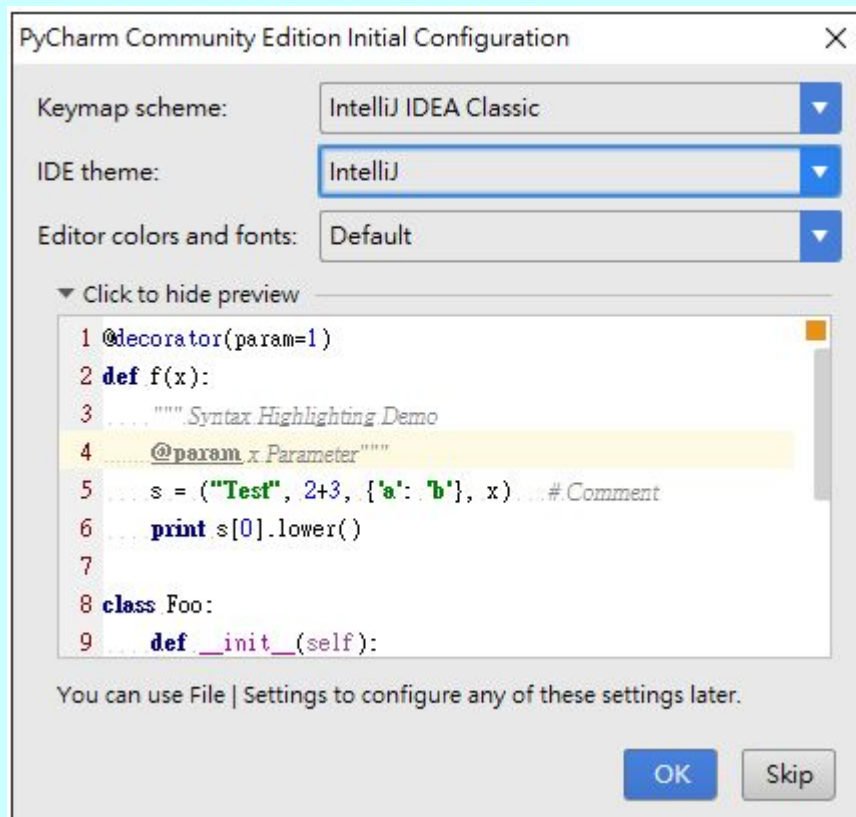
# 環境建置



## 3. 設定PyCharm



## Theme

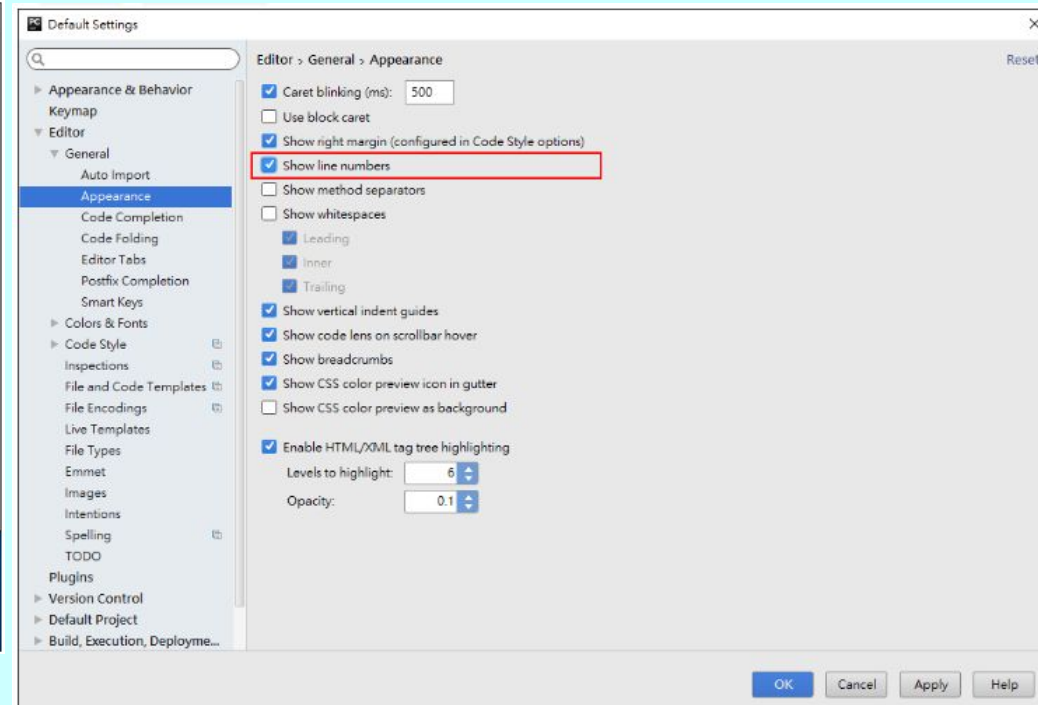
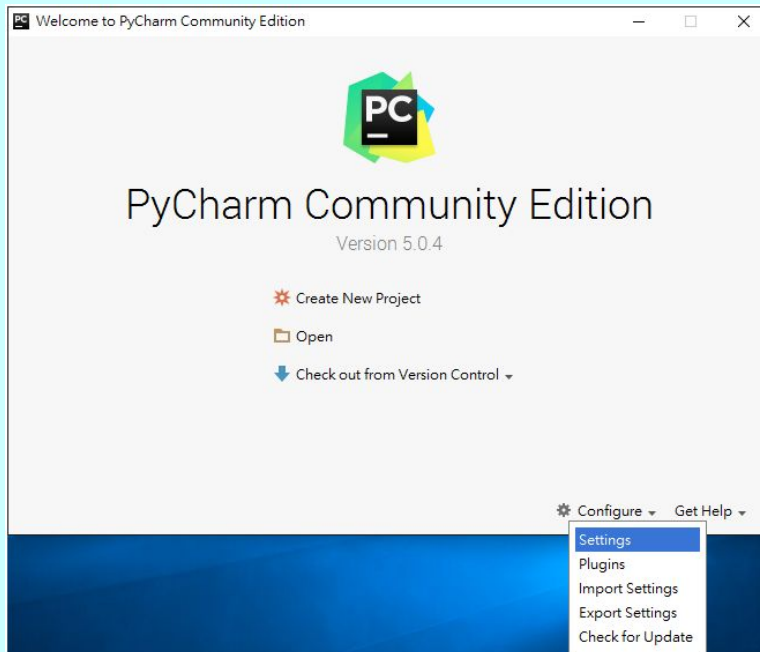


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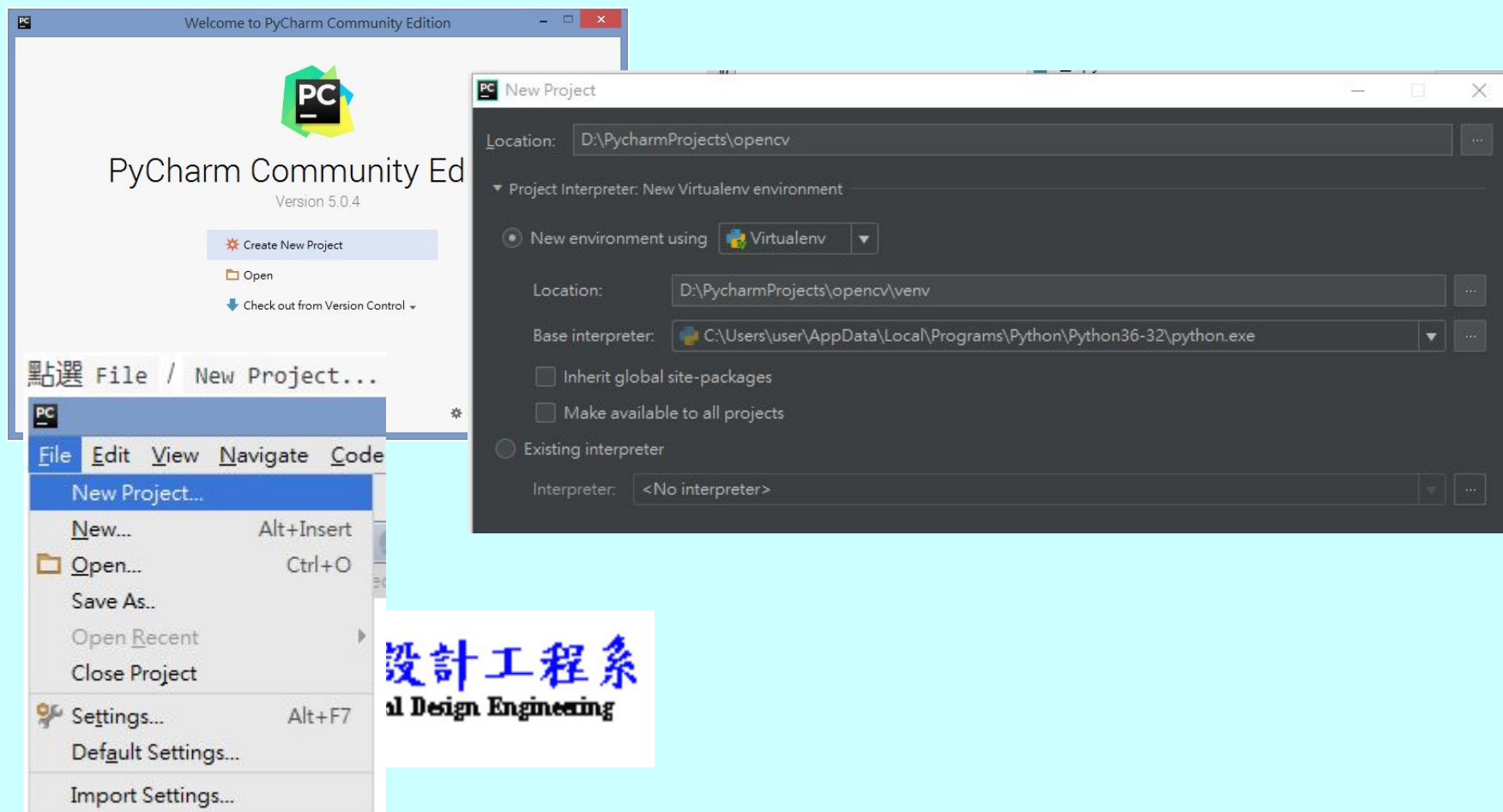
## 3.到Editor / Appearance, 開啟行號



# 環境建置



## 4. 建立 PyCharm 專案





# 環境建置



## 2. 安裝 PyCharm <https://www.jetbrains.com/pycharm/download/>

A screenshot of the PyCharm Community Edition 2017.2.7 interface. The 'Settings' dialog is open, with the 'Project: tensorflow' section selected. Under 'Project: tensorflow', the 'Project Interpreter' option is highlighted. The 'Project Interpreter' field shows '3.5.5 (C:\Users\user\AppData\Local\conda\conda\envs\tensorflow\python.exe)', which is circled in red. Below this, a table lists installed packages and their versions.

tensorflow - [E:\pycharm\tensorflow] - 02\_keras\_cifar10.py - PyCharm Community Edition 2017.2.7

File Edit View Navigate Code Refactor Run Tools VCS Window Help

tensorflow \ openvcode \ Practical-Computer-Vision \ Chapter02 \ 02\_keras\_cifar10.py

Settings

Project: tensorflow > Project Interpreter For current project

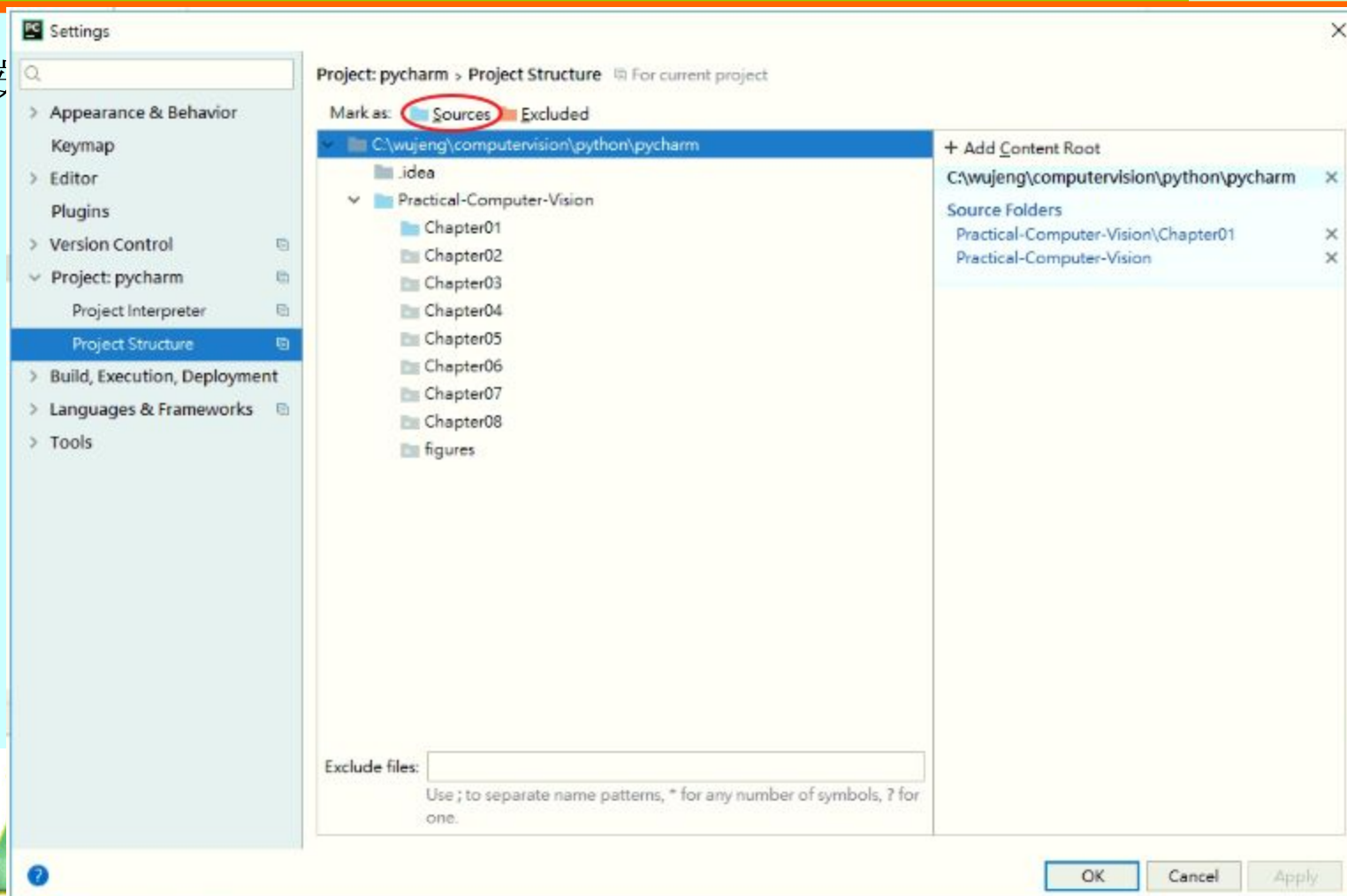
Project Interpreter: 3.5.5 (C:\Users\user\AppData\Local\conda\conda\envs\tensorflow\python.exe)

Package	Version	Lat
Babel	2.6.0	2.6.0
Jinja2	2.10	2.10
Keras	2.2.0	2.2.0
Keras-Applications	1.0.2	1.0.2
Keras-Preprocessing	1.0.1	1.0.1
Markdown	2.6.11	2.6.11
MarkupSafe	1.0	1.0
PySocks	1.6.8	1.6.8
PyYAML	3.12	3.12
Pygments	2.2.0	2.2.0
QtAwesome	0.4.4	0.4.4

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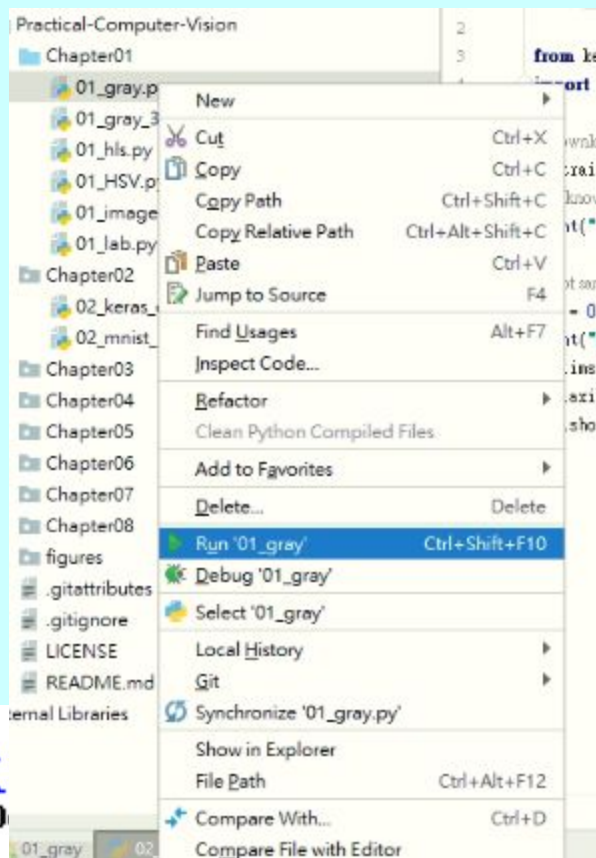




# 環境建置



2. 安裝 PyCharm <https://www.jetbrains.com/pycharm/download/>



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## 5. 安裝程式庫 File/Settings/Project/Project Interpreter

The screenshot shows the PyCharm Settings window with the 'Project Interpreter' tab selected. The 'Project Interpreter' section shows a list of installed packages. The 'Available Packages' window is open, displaying a search for 'numpy'. The 'Install Package' button is highlighted with a red circle.

**Project Interpreter:** Python 3.6 (opencv) C:\Users\...  
For current project

Package	Version
cycler	0.10
kiwisolver	1.0.1
matplotlib	2.2.2
numpy	1.14
opencv-python	3.4.0
pip	9.0.1
pyarsing	2.2.0
python-dateutil	2.7.3
pytz	2018
scipy	1.1.0
setuptools	28.8
six	1.11

**Available Packages:** Search: numpy

Package	Description
BSON-NumPy	
afnumpy	
dicom-numpy	
django-numpy	
django-numpy-json-encoder	
envi2numpy	
gnumpy	
gsn_numpy_util	
hypothesis-numpy	
idx2numpy	
intel-numpy	
mapchete-numpy	
msgpack-numpy	
nose-numpyseterr	
<b>numpy</b>	<b>NumPy: array processing for numbers, strings, records, and objects.</b>
numpy-indexed	
numpy-mkl	
numpy-quadernion	
numpy-stl	
numpy-sugar	
numpy_display	
numpy_groupies	
numpy_ringbuffer	
numpycnn	
numpydoc	
numpyencoder	
numpyane	
numpyson	

**Description for numpy:**  
NumPy: array processing for numbers, strings, records, and objects.  
Version: 1.14.5  
Author: Travis E. Oliphant et al.  
<http://www.numpy.org>

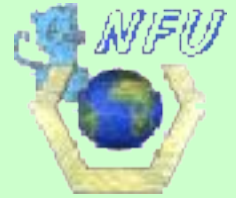
☐ Specify version: 1.14.5  
☐ Options

**Install Package** **Manage Repositories**



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## 5. 安裝程式庫

NumPy

Matplotlib

SciPy

opencv-python

tensorflow

keras



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## 範例

<https://github.com/opencv/opencv> (C++, Python, Java, JavaScript)

<https://github.com/spmallick/learnopencv> (C++, Python)

<https://github.com/makelove/OpenCV-Python-Tutorial> (Python)

<https://github.com/PacktPublishing/OpenCV-3-x-with-Python-By-Example> (Python)

<https://github.com/abidrahmank/OpenCV2-Python-Tutorials> (python)

[https://github.com/oreillymedia/Learning-OpenCV-3\\_examples](https://github.com/oreillymedia/Learning-OpenCV-3_examples) (C++)

<https://github.com/techfort/pycv> (Python)

<https://github.com/sightmachine/SimpleCV> (Python)

<https://github.com/JavaOpenCVBook/code> (Java)

<https://github.com/TadasBaltrusaitis/OpenFace>

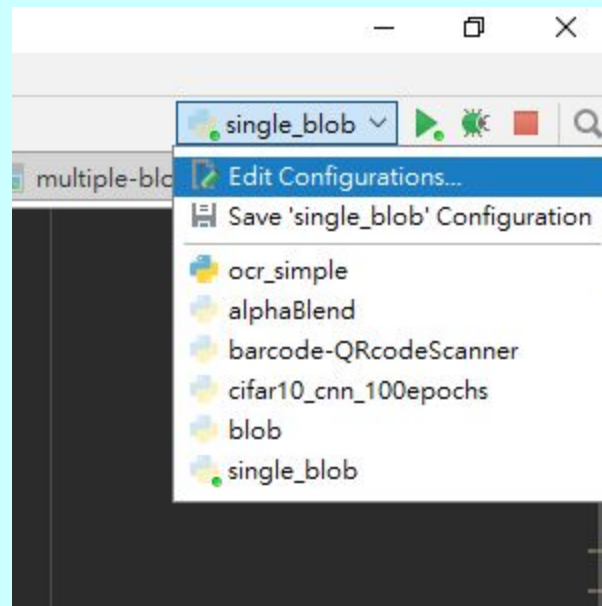
<http://livecv.dinusv.com/>

<https://cv-tricks.com/>

<https://github.com/ocornut/imgui>

<https://github.com/swistakm/pyimgui>

# Pycharm 設定執行命令參數



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