

Anaconda, Tensorflow, keras環境安裝

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密技

- 初學沒事就用colab吧!
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- 很重要，所以講三次



環境設定

- 安裝anaconda
 - <https://www.anaconda.com/products/distribution>
 - 目前是用 ([Anaconda3-2022.05-Windows-x86_64](#))
- 如果你是初學，強烈建議安裝時：
 - 以一般個人user環境安裝，不要用all user
 - 安裝時，讓他幫你加入path

○ Anaconda3 2022.05 (64-bit) Setup

○ ANACONDA. Advanced Installation Options
Customize how Anaconda integrates with Windows

可以的話，給他【V】打勾起來

Advanced Options

不要忘了他

☐ Add Anaconda3 to my PATH environment variable

Not recommended. Instead, open Anaconda3 with the Windows Start menu and select "Anaconda (64-bit)". This "add to PATH" option makes Anaconda get found before previously installed software, but may cause problems requiring you to uninstall and reinstall Anaconda.

☒ Register Anaconda3 as my default Python 3.9

This will allow other programs, such as Python Tools for Visual Studio, PyCharm, Wing IDE, PyDev, and MSI binary packages, to automatically detect Anaconda as the primary Python 3.9 on the system.

Colab的套件版本

```
[1] import tensorflow  
     print(tensorflow.__version__)
```

2.8.2

```
[ ] import tensorflow.keras as ks
```

```
[ ] ks.__version__
```

'2.8.0'

```
[2] !python --version
```

Python 3.7.14

```
D:\教學\中華成教_2022_08_人工智慧\2022-08-24_教材整理\KH20220820_Python_ML_DL\W05>conda create --name py37tf28cv
Collecting package metadata (current_repodata.json): done
Solving environment: done

==> WARNING: A newer version of conda exists. <==
  current version: 4.10.3
  latest version: 4.14.0

Please update conda by running

  $ conda update -n base -c defaults conda

## Package Plan ##

  environment location: C:\Users\X270\anaconda3\envs\py37tf28cv

Proceed ([y]/n)? y

Preparing transaction: done
Verifying transaction: done
Executing transaction: done
#
# To activate this environment, use
#
#     $ conda activate py37tf28cv
#
# To deactivate an active environment, use
#
#     $ conda deactivate
```

環境設定(跟colab同版次)

- 打開【終端機】
- 查conda版本
 - `conda -V`
- 查有幾個conda的虛擬環境
 - `conda env list`
- 建立新環境
 - `conda create --name py37tf python=3.7.1`
- 啟用虛擬環境
 - `conda activate py37tf`
- 直接安裝需要的套件
 - `pip install tensorflow==2.8.2 pandas==1.3.5 statsmodels matplotlib jupyter`
- 安裝完成後，啟動jupyter notebook開始開發程式
 - `jupyter-notebook`
- 離開目前的conda env (回到base)
 - `conda deactivate`

`python=3.7`

不指定小版次，conda會幫你找最新的，目前是安裝3.7.13

改為

`pip install tensorflow==2.8.2 pandas matplotlib jupyter`

刪除環境

`conda env remove --name myenv`

環境設定

- 未來開啟程式都這樣做:
- 打開【終端機】
- `conda activate py37tf`
- `jupyter-notebook`
- 如果沒有自動在瀏覽器執行jupyter，請複製這一段，自行貼到瀏覽器上

```
[I 2022-08-19 09:23:46.346 ServerApp] 01 http://127.0.0.1:8889/lab?token=03fa5abd69da02bfb9f043488d7718f77495eb770bcc1f97
97
[I 2022-08-19 09:23:46.346 ServerApp] Use Control-C to stop this server and shut down all kernel
ation).
[C 2022-08-19 09:23:46.450 ServerApp]

To access the server, open this file in a browser:
    file:///C:/Users/X270/AppData/Roaming/jupyter/runtime/jpserver-8432-open.html
Or copy and paste one of these URLs:
    http://localhost:8889/lab?token=03fa5abd69da02bfb9f043488d7718f77495eb770bcc1f97
    or http://127.0.0.1:8889/lab?token=03fa5abd69da02bfb9f043488d7718f77495eb770bcc1f97
[W 2022-08-19 09:23:54.079 LabApp] Could not determine jupyterlab build status without nodejs
```

常見的問題

- 電腦是公司的，**MIS**鎖很多，安裝過程有因為權限問題裝不起來，造成環境有問題
- **MIS**安裝權限給予不足，安裝過程一下子切到高權限，裝完再切到一般權限，結果一般使用者權限不足，跑不出來
- 使用Macbook
- 使用macbook M1
- 使用Linux環境

==== 我是分隔線 ====



早期設定方式(去年)

- 以下為早期設定tensorflow
- Python3.7
- Tensorflow2.0
- Opencv4
- (可以配合yolo....)
-總之很混亂的大戰XD



環境設定

- 安裝anaconda
- 在console下指令，三行就搞定
 - `conda create -n mlenv python=3.7`
 - `activate mlenv`
 - `pip install -r requirements.txt`

Keras 環境設定

- “requirements.txt”的內容：
 - numpy==1.17.3
 - matplotlib==3.1.1
 - Cython==0.29.13
 - opencv-contrib-python==4.1.1.26
 - opencv-python==4.1.1.26
 - h5py==2.10.0
 - jupyter==1.0.0
 - pandas==0.25.2
 - scikit-learn==0.21.3
 - scipy==1.3.1
 - seaborn==0.9.0
 - tensorflow==2.0.0
 - Keras==2.3.1