

AI資料科學家

補充專題指導

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Outline

- 本機Python with Jupyter環境建置
 - 環境選擇與安裝
 - L1、L2本機開發快速引導
- 本機架設MySQL伺服器
 - 安裝方式的選擇
 - 啟動伺服器與設定
 - L2課程內容快速複習
- 課後討論

環境的選擇

- 原生Python
 - 優：Windows安裝簡單、Mac與Linux系統內建
 - 缺：套件管理不易、許多套件需要自行處理相容性問題
- 整合式環境Anaconda
 - 優：可針對不同的專案建立專屬環境、自動處理套件相依的問題
 - 缺：系統資源佔用較大

Anaconda的安裝

- <https://www.anaconda.com/>

Anaconda Installers

Windows 

MacOS 

Linux 

Python 3.8

64-Bit Graphical Installer (457 MB)

32-Bit Graphical Installer (403 MB)

Python 3.8

64-Bit Graphical Installer (435 MB)

64-Bit Command Line Installer (428 MB)

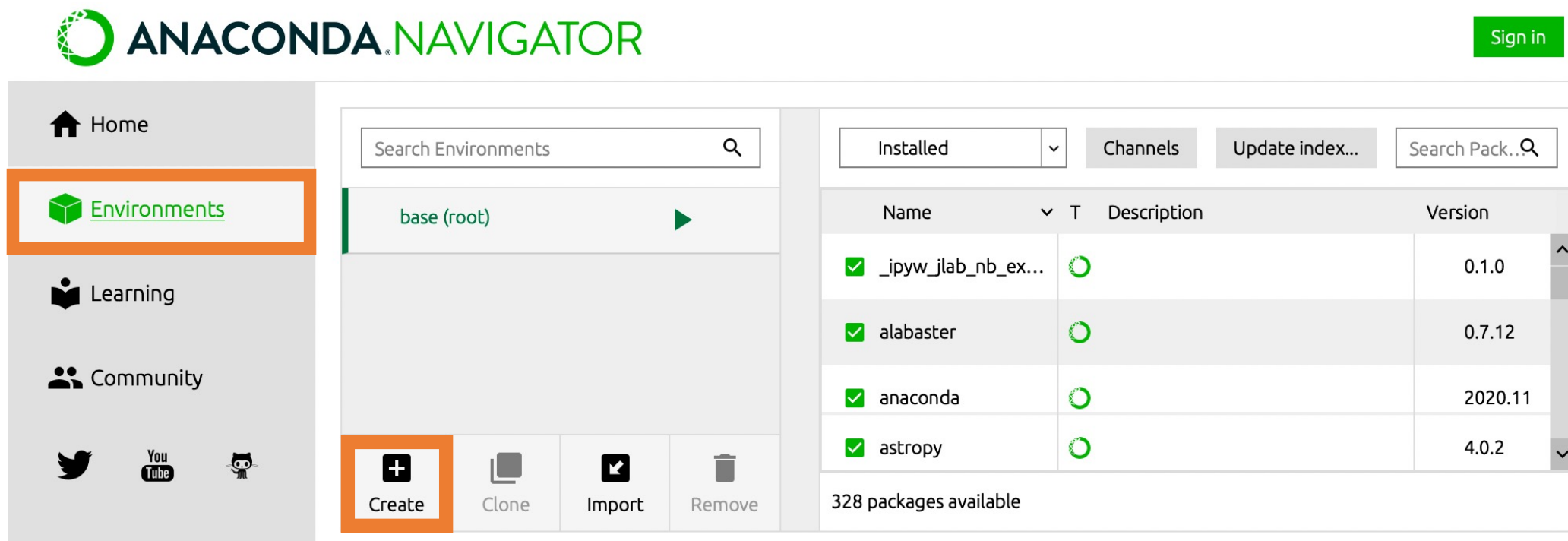
Python 3.8

64-Bit (x86) Installer (529 MB)

64-Bit (Power8 and Power9) Installer (279 MB)

環境建置

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



The screenshot displays the Anaconda Navigator web interface. The top navigation bar includes the Anaconda Navigator logo and a 'Sign in' button. The left sidebar contains links to 'Home', 'Environments' (highlighted with an orange box), 'Learning', and 'Community', along with social media icons for Twitter, YouTube, and GitHub. The main content area is divided into two panels. The left panel shows a search bar for environments and a list of environments, with 'base (root)' selected. The right panel shows a table of installed packages, with a 'Create' button highlighted in the bottom left corner.

ANACONDA.NAVIGATOR Sign in

Home **Environments** Learning Community

Search Environments

base (root)

Created Clone Import Remove

Installed Channels Update index... Search Pack...

Name	T	Description	Version
✓ _ipyw_jlab_nb_ex...	○		0.1.0
✓ alabaster	○		0.7.12
✓ anaconda	○		2020.11
✓ astropy	○		4.0.2

328 packages available

環境建置

Create new environment X

Name:

Location: */Users/jerry/opt/anaconda3/envs/L1*

Packages: ☒ Python ▼

☐ R ▼

Cancel Create

Jupyter的安裝與使用

Search Environments

base (root)

L1

+

Create

Clone

Import

Remove

Not installed

Channels

Update index...

jupyter

Name	T	Description	Version
<input type="checkbox"/> hdijupyterutils			0.18.0
<input checked="" type="checkbox"/> jupyter			1.0.0
<input type="checkbox"/> jupyter_console			6.4.0

12 packages available matching "jupyter" 1 package selected

Apply

Clear

Jupyter的安裝與使用

Install Packages

X

22 packages will be installed

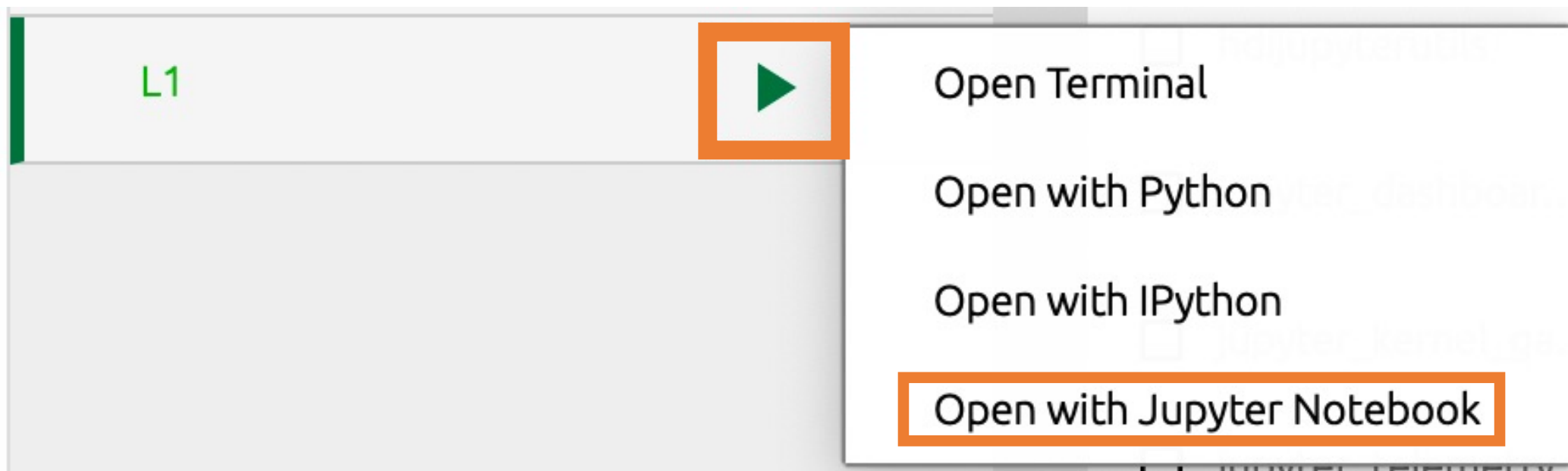
	Name	Unlink	Link	Channel	
1	jupyter	-	1.0.0	pkgs/main	^
2	*dbus	-	1.13.18	pkgs/main	
3	*expat	-	2.3.0	pkgs/main	
4	*gettext	-	0.21.0	pkgs/main	
5	*glib	-	2.68.1	pkgs/main	
6	*icu	-	58.2	pkgs/main	v

* indicates the package is a dependency of a selected package

Cancel

Apply

Jupyter的安裝與使用



L1、L2本機開發快速引導

- 將課程檔案放置在“使用者”資料夾中
- 從Jupyter中去開啟課程檔案

安裝MySQL伺服器方式的選擇

- 直接安裝
- 透過整合的套裝安裝包 – XAMPP (較建議Windows下使用)
- 透過容器技術直接啟動 (適用於Windows與Mac)

Docker desktop

- 適用於Windows、Mac
- <https://www.docker.com/products/docker-desktop>

Docker desktop

- 測試指令 `docker`
- 測試指令 `docker-compose`

定義容器

- docker-compose.yml

version: '3.1'

services:

db:

image: mysql:5.7.33

command: --default-authentication-plugin=mysql_native_password

restart: always

volumes:

- ./db_data:/var/lib/mysql

ports:

- 3306:3306

environment:

MYSQL_ROOT_PASSWORD: 123456

adminer:

image: adminer

restart: always

ports:

- 8080:8080


啟動容器

- 終端機切換到docker-compose.yml的目錄
- 啟動指令 `docker-compose up -d`

開啟MySQL網頁操作介面

- `http://localhost:8080/`
- OR
- `http://127.0.0.1:8080/`

於Python中安裝MySQL連線套件

Not installed		Channels	Update index...	PyMySQL X
Name	✓ T	Description	Version	
<input type="checkbox"/> pymysql			1.0.2	