



東吳大學X理律學堂

Python基礎Set1

李香瑩 助教

github註冊





1. github用途

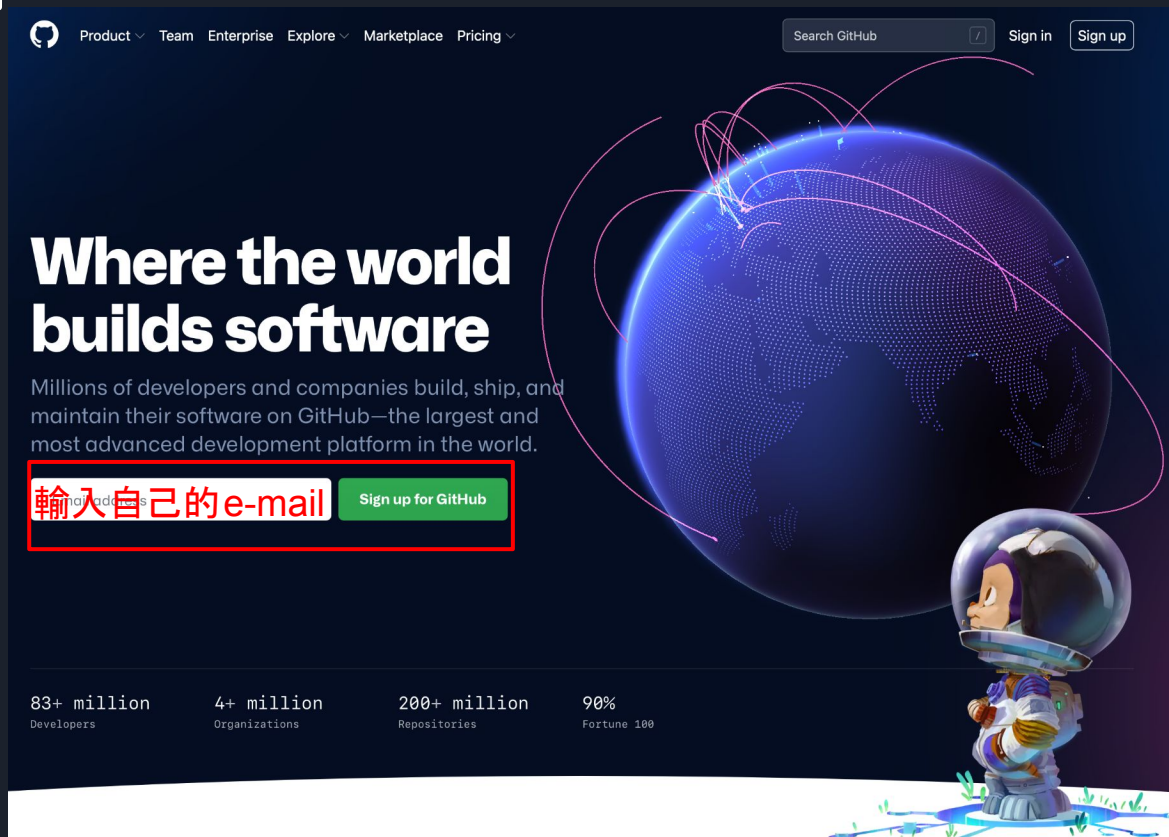
Github是一個版本控制系統的平台，平台額外提供了網存空間，容易看懂的網頁介面!在裡面可以上傳自己所做的專案或與他人協作的專案。

而github也是社交平台(network)，將對程式設計有興趣的人聚集在一起！

2. github註冊

搜尋github 或

<https://github.com>



2. github註冊

```
Welcome to GitHub!  
Let's begin the adventure
```

Enter your email

email

Create a password

密碼

Enter a username

暱稱

Would you like to receive product updates and announcements via email?

Type "y" for yes or "n" for no

✓ n

Verify your account

信箱認證：

You're almost done!

We sent a launch code to 09170145@gm.scu.edu.tw

→ Enter code

3. github介面介紹

The screenshot shows the GitHub homepage. On the left, the 'Recent Repositories' section is highlighted with a red box. It lists repositories: 'hsiang-ying/109-project', 'hsiang-ying/programming', 'hsiang-ying/09170145', 'jet-c-21/PrettyPaper', and 'iris8191/prettypaper_g2'. A red arrow points from this box to the text '自己與其他入共用的 repo'. In the center, there's a banner for 'Learn Git and GitHub without any code!' with buttons 'Read the guide' and 'Start a project'. Below this is a section 'Introduce yourself' with a code snippet for a README file. A red arrow points from the text '個人github頁面' to the user profile dropdown menu on the right. The dropdown menu is also highlighted with a red box and shows the user is signed in as 'hsiang-ying'. It includes options like 'Set status', 'Your profile', 'Your repositories', 'Your codespaces', 'Your projects', 'Your stars', 'Your gists', 'Upgrade', 'Feature preview', 'Help', 'Settings', and 'Sign out'.

Recent Repositories

Find a repository...

- hsiang-ying/109-project
- hsiang-ying/programming
- hsiang-ying/09170145
- jet-c-21/PrettyPaper
- iris8191/prettypaper_g2

Recent activity

When you take actions across GitHub, we'll provide links to that activity here.

Learn Git and GitHub without any code!

Using the Hello World guide, you'll create a repository, start a branch, write comments, and open a pull request.

Read the guide Start a project

自己與其他入共用的 repo

個人github頁面

Signed in as hsiang-ying

- Set status
- Your profile
- Your repositories
- Your codespaces
- Your projects
- Your stars
- Your gists
- Upgrade
- Feature preview
- Help
- Settings
- Sign out

Latest changes

- 20 hours ago View Dependabot alerts across enterprise
- 23 hours ago DigitalOcean is now a GitHub scanning partner
- 2 days ago Secret scanning: Dry runs for level custom patterns
- 3 days ago Default to PR titles for squash merge commit messages

View changelog →

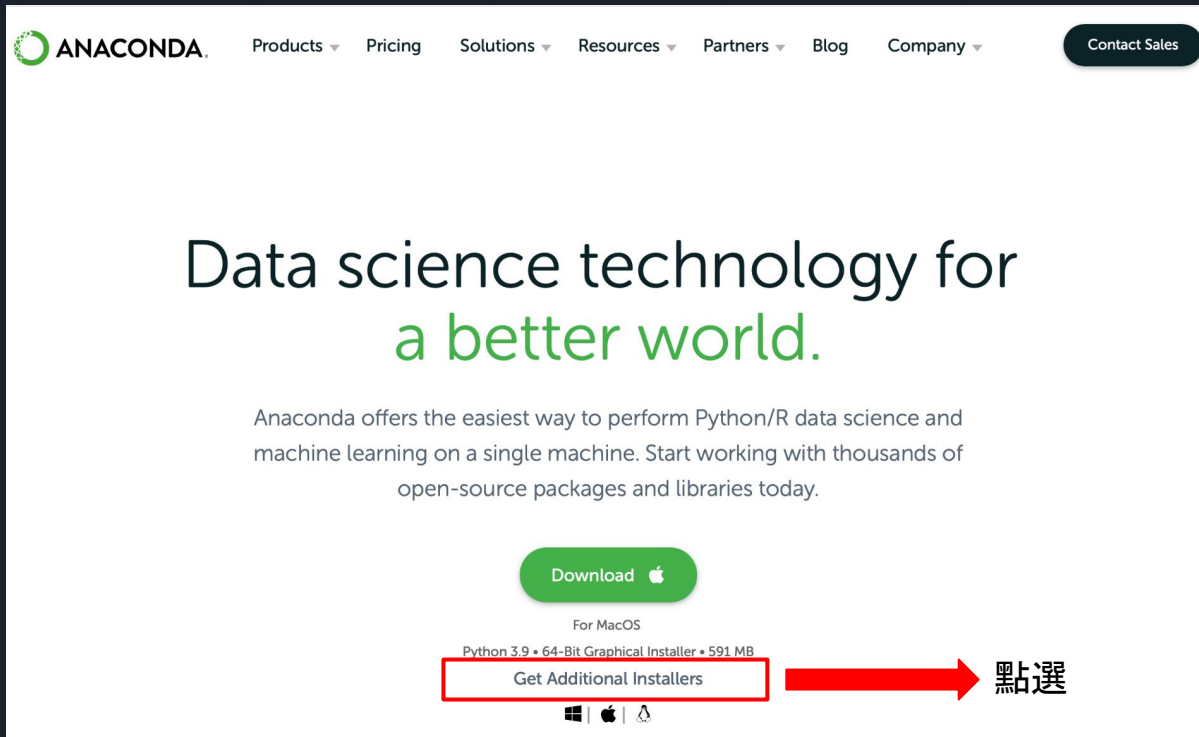
Dismiss this Continue

anacoda 安裝



1. anacoda 安裝

搜尋anacoda 或 <https://www.anaconda.com>




The screenshot shows the Anaconda website homepage. At the top is the Anaconda logo and a navigation bar with links: Products, Pricing, Solutions, Resources, Partners, Blog, Company, and a Contact Sales button. The main heading reads "Data science technology for a better world." Below this is a paragraph: "Anaconda offers the easiest way to perform Python/R data science and machine learning on a single machine. Start working with thousands of open-source packages and libraries today." A green "Download" button with an Apple logo is visible. Below it, text specifies "For MacOS" and "Python 3.9 • 64-Bit Graphical Installer • 591 MB". A red box highlights the "Get Additional Installers" link, with a red arrow pointing from it to the Chinese text "點選". At the bottom are icons for Windows, macOS, and Linux.

ANACONDA. Products ▾ Pricing Solutions ▾ Resources ▾ Partners ▾ Blog Company ▾ Contact Sales

Data science technology for a better world.

Anaconda offers the easiest way to perform Python/R data science and machine learning on a single machine. Start working with thousands of open-source packages and libraries today.




Download 

For MacOS

Python 3.9 • 64-Bit Graphical Installer • 591 MB

Get Additional Installers

點選

1. anaconda 安裝

Anaconda Installers

Windows 

Python 3.9

64-Bit Graphical Installer (594 MB)

32-Bit Graphical Installer (488 MB)

MacOS 

Python 3.9

64-Bit Graphical Installer (591 MB)

64-Bit Command Line Installer (584 MB)

64-Bit (M1) Graphical Installer (428 MB)

64-Bit (M1) Command Line Installer (420 MB)

Linux 

Python 3.9

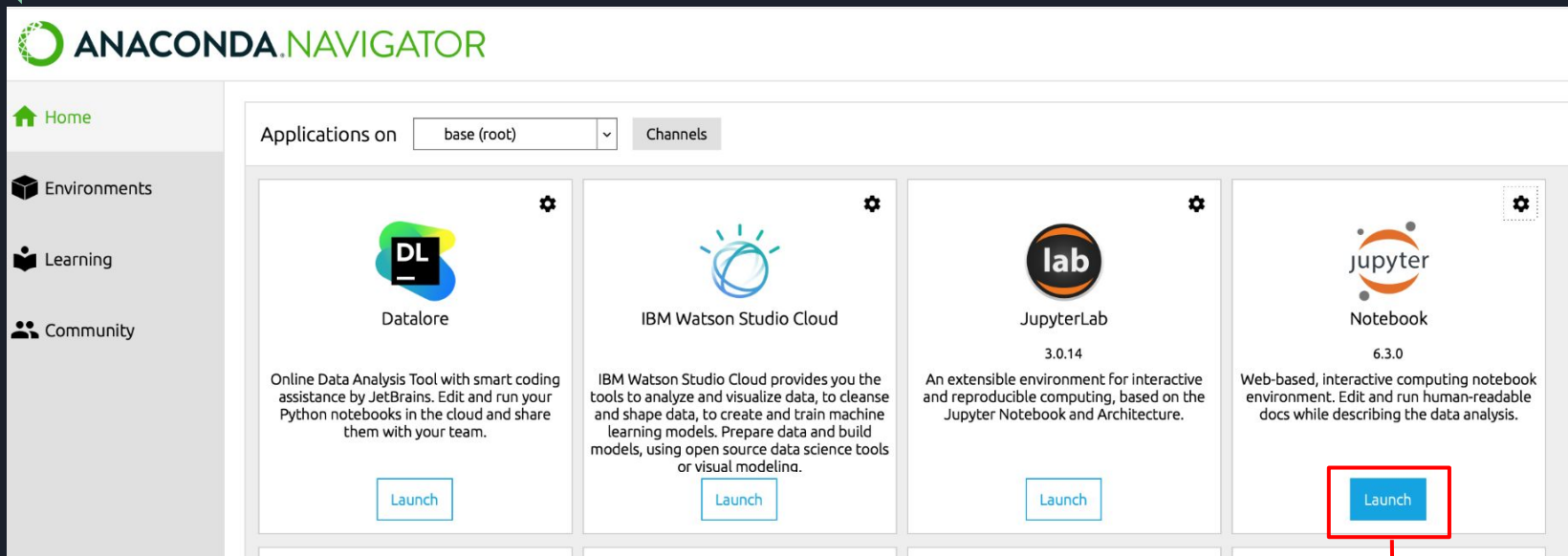
64-Bit (x86) Installer (659 MB)

64-Bit (Power8 and Power9) Installer (367 MB)

64-Bit (AWS Graviton2 / ARM64) Installer (568 MB)

64-bit (Linux on IBM Z & LinuxONE) Installer (280 MB)

2. jupyter notebook 基本操作



按下Launch後，會執行終端機開啟jupyter

2. jupyter notebook 頁面介紹

The screenshot displays the Jupyter Notebook web interface. At the top left is the Jupyter logo. To the right are 'Quit' and 'Logout' buttons. Below the logo are tabs for 'Files', 'Running', and 'Clusters'. A message 'Select items to perform actions on them.' is shown. The file browser shows a directory structure with folders like Applications, Desktop, Documents, Downloads, Movies, and Music. A red bracket on the left side of the file browser indicates the '所有檔案' (All Files) view. The 'New' button is highlighted with a red box, and its dropdown menu is open, showing options for creating new files and folders. The dropdown menu includes a 'Notebook' section with 'Python 3' (labeled '程式檔' in red) and an 'Other:' section with 'Text File' (labeled '文字檔' in red), 'Folder' (labeled '資料夾' in red), and 'Terminal' (labeled '終端機' in red). The bottom right of the interface shows a list of recent files with timestamps like '4 小時前', '1 年前', and '9 天前'.

jupyter

Quit Logout

Files Running Clusters

Select items to perform actions on them.

Upload New

0 /

Applications

Applications (Parallels)

Desktop

Documents

Downloads

Movies

Music

Name

Notebook:

Python 3 程式檔

Other:

Text File 文字檔

Folder 資料夾

Terminal 終端機

4 小時前

1 年前

9 天前

所有檔案

3. 建立一個「111理律學堂」資料夾

The image shows the JupyterLab web interface. At the top, there are tabs for 'Files', 'Running', and 'Clusters'. Below these, there are buttons for 'Rename', 'Move', and a trash icon. A red box highlights the 'Rename' button, with a red text label '3. 按Rename並將檔名改為「111理律學堂」' next to it. Below the buttons, there is a list of files and folders. A red box highlights the 'Untitled Folder' at the bottom of the list, with a red text label '2. 將Untitled Folder勾選起來' next to it. To the right of the file list, there is a dropdown menu with options: 'Notebook: Python 3', 'Other: Text File', 'Folder', and 'Terminal'. A red box highlights the 'Folder' option, with a red text label '1. 創建一個資料夾' next to it.

jupyter

Quit Logout

Files Running Clusters

Rename Move 3. 按Rename並將檔名改為「111理律學堂」


Upload New

1. 創建一個資料夾

2. 將Untitled Folder勾選起來

Untitled Folder

4. 建立一個程式檔



The image shows the JupyterLab web interface. At the top left is the Jupyter logo. To the right are 'Quit' and 'Logout' buttons. Below the logo are tabs for 'Files', 'Running', and 'Clusters'. A red text overlay reads: '進入111理律學堂資料夾後, 按 New-Python3新增一個程式檔'. Below this is a message: 'Select items to perform actions on them.' The main area shows a file browser with a dropdown menu open, displaying '0' and a folder icon. The folder path is '/ 111理律學堂'. The dropdown menu is open, showing 'Notebook:' with 'Python 3' selected (highlighted with a red box), and 'Other:' with options 'Text File', 'Folder', and 'Terminal'. The message 'The notebook list is empty.' is visible at the bottom.

jupyter

Quit Logout

Files Running Clusters

進入111理律學堂資料夾後, 按 New-Python3新增一個程式檔

Select items to perform actions on them.

Upload New ↻

0 / 111理律學堂

..

The notebook list is empty.

Notebook:
Python 3

Other:
Text File
Folder
Terminal

資料型態

變數、運算子





什麼是變數？

具有名稱和值(一些資料) 的記憶體位置, **變數**具有唯一的名稱

原處分認原告確有「汽車駕駛人拒絕接受酒精濃度測試之檢定」之違規行為, 而依道路交通管理處罰條例第35條第4項、第67條, 裁處原告罰鍰90,000元, 吊銷駕駛執照, 3年內不得考領駕駛執照、並應參加道路安全講習, 並無違誤。原告訴請撤銷原處分, 為無理由, 應予駁回。

Q.如何將裁處的罰鍰和觸犯法條以變數呈現？

`fine=90000`

`violate_law="道路交通管理處罰條例第35條第4項、第67條"`



變數命名規則：

(1)只能由英文字母、數字、底線或中文字所組成，建議使用英文字母

(2)英文字母大小寫是有差異的

Ex.Fine與fine是兩個不同的變數

(3)不能是保留字或內建函數名稱

Ex.保留字(int,float),內建函數(bool,set)

(4)變數名稱不能有空白，空白可用底線代替

Ex.violate_law



變數型態認識：

Python表示式	型態	Example
int	整數	罰款金額
float	浮點數	判賠比例
str	字串	法律條文
bool	布林值	True&False(成立&不成立)

int,float實例：

如果今日有一判決結果為「相對人於民國一百零六年三月二十一日簽發之本票 內載憑票交付聲請人新臺幣陸萬參仟捌佰伍拾貳元, 及自民國一百零六年三月二十一日起至清償日止, 按年息百分之十六計算之利息得為強制執行。

Q.如果此人在民國一一零年三月二十一日清償完全部, 他總共要繳納的金額為多少？

```
In [11]: 1 #如果今日有一判決結果為「相對人於民國一百零六年三月二十一日簽發之本票
2 money=63852
3 year=4
4 rate=0.16
5 total_money=money*(1+rate)**year
6 print(type(money))
7 print(type(rate))
8 print("總共要繳納的金額：",int(total_money),"元")
```

```
<class 'int'>
```

```
<class 'float'>
```

```
總共要繳納的金額： 115612 元
```

str實例：

請到裁判家的網站找一篇判決書
並將其完整內容(格式)列印出來
裁判家

: <https://www.lawplus.com.tw>

```
In [15]: 1 #str example
2 date="2019/04/27"
3 topic="支付命令"
4 print("日期:",date,"\n判決內容:",topic)
5 print("判決書內容:",'''
6 臺灣高雄地方法院民事裁定          98年度司促字第10569號
7
8 債 權 人  台北富邦商業銀行股份有限公司
9
10 法定代理人  韓蔚廷
11
12
13 債 務 人  蘇千瑞即蘇佳龍
14
15
16 上債權人聲請對債務人蘇佳龍發支付命令事件，本件裁定如下：
17 主 文
18 本院於民國九十八年三月十日以九十八年度司促字第10569號
19 事件對債務人所發之支付命令撤銷。
20 聲請駁回。
21 聲請程序費用由債權人負擔。
22 理 由
23 一、按人之權利能力，始於出生，終於死亡；有權利能力者，始
24 有當事人能力，民法第6條、民事訴訟法第40條第1項，分
25 別定有明文。本件經核債務人蘇千瑞即蘇佳龍已於民國97年
26 12月1日死亡，有戶籍謄本影本在卷可稽，則債務人既已死
27 亡，即無權利能力及當事人能力，聲請人於民國98年3月6
28 日始向本院請求核發支付命令，本院如主文所示之支付命令
29 誤為核發，自應予撤銷，又其聲請自非適法，應予駁回。
30 四、依非訟事件法第21條第1項前段、民事訴訟法第95條、第78
31 條，裁定如主文。
32
33 中 華 民 國 98 年 4 月 27 日
34
35 臺灣高雄地方法院民事庭
36
37 司法事務官 黃思瑜
38
39 一、正本證明與原本無異。
40 二、如不服裁定應於送達後10日內以書狀向本院司法事務官提出
41 異議。
42
43 中 華 民 國 98 年 4 月 27 日
44
45 書記官 林同啟'''
```

bool實例：

今日給你一個字串["有酒駕","無酒駕","有酒駕","有酒駕","無酒駕"], 請你用布林值判斷, 有酒駕結果將呈現 True, 無酒駕結果為 False。

```
In [19]: 1 String_list=["有酒駕","有酒駕","無酒駕","有酒駕"]
          2 #第一種方法
          3 for event in String_list:
          4     if event=="有酒駕":
          5         print(bool(String_list))
          6     else:
          7         print("False")
          8 #第二種方法
          9 boolean_list=[ele=="有酒駕" for ele in String_list]
         10 print(boolean_list)
```

```
True
True
False
True
[True, True, False, True]
```

題目1: 判賠比例金額

在一行車糾紛中, 雙方都有違規, 所以雙方皆有過失責任, 判決結果為雙方依判賠比例賠償, 判賠比例為 7:3(被告:原告), 而一開始賠償總額為 25688元

Q.請將原告及被告個別需分擔的賠償金額算出來? (取整數)

```
In [7]: 1 #判賠比例
        2 event="車禍肇事判賠"
        3 sum_money=25688
        4 a_rate=0.3
        5 b_rate=0.7
        6 a_money=sum_money*a_rate
        7 b_money=sum_money*b_rate
        8 print("事件:", event)
        9 print("原告需賠償金額:", int(a_money), "元")
       10 print("被告需賠償金額:", int(b_money), "元")
```

事件： 車禍肇事判賠

原告需賠償金額： 7706 元

被告需賠償金額： 17981 元

題目2:

被告丁○○應給付原告新台幣壹萬壹仟捌佰零伍元，及自民國九十五年一月十九日起至清償日止按日息萬分之五計算之利息，並自九十五年一月十九日起，延滯第一個月當月給付違約金新台幣壹佰伍拾元，延滯第二個月當月給付違約金新台幣參佰元，延滯第三個月當月給付違約金新台幣肆佰伍拾元，延滯第四個月當月給付違約金新台幣陸佰元，延滯第五個月當月給付違約金新台幣柒佰伍拾元，延滯第六個月當月給付違約金新台幣玖佰元。

Q.丁○○於九十五年三月十九日才清償完債務，請問包括利息和違約金總共償還了多少錢？

```
In [21]: 1 #題目2
          2 money=11805
          3 day_rate=0.0005
          4 month1=150
          5 month2=300
          6 month3=450
          7 sum_money=money*(1+day_rate)**90+month1+month2+month3
          8 print("總共償還金額：:",int(sum_money),"元")
```

總共償還金額：： 13248 元

題目3: 與使用者的互動

在行車糾紛中，會依雙方有無違反交通法規，去判賠償比例

Q.請讓使用者輸入被告闖紅燈、原告闖紅燈、被告原告皆闖紅燈，並顯示出各項判 賠比例(如果使用者沒輸入任何訊息或其他無關語句，請顯示「請輸入有效訊息」)

輸入: 被告闖紅燈

原告闖紅燈

被告原告皆闖紅燈

空白或無關語句



顯示: 被告賠100%

原告多被告少

原告50%被告50%

請填入有效訊息

提示: 需用到input()和if&else函數

Ans3:

In [28]:

```
1 #題目3
2 event=input("請輸入案件:")
3
4 if event == "被告闖紅燈":
5     print("被告賠100%")
6 elif event == "原告闖紅燈":
7     print("原告多被告少")
8 elif event == "被告原告皆闖紅燈":
9     print("原告50%被告50%")
10 else:
11     print("請填入有效訊息")
```

請輸入案件:被告闖紅燈
被告賠100%

請輸入案件:原告闖紅燈
原告多被告少

請輸入案件:被告原告皆闖紅燈
原告50%被告50%

請輸入案件:
請填入有效訊息