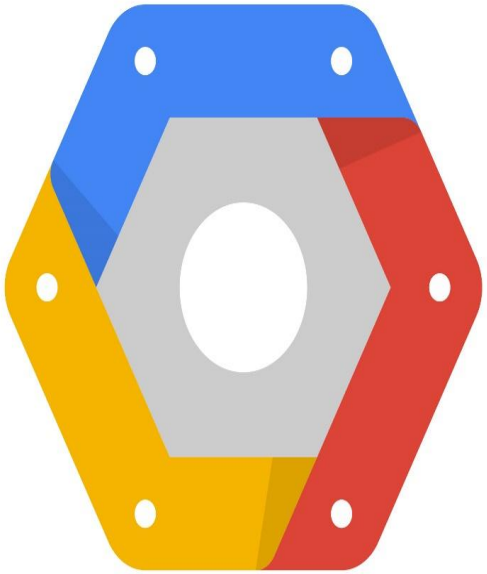
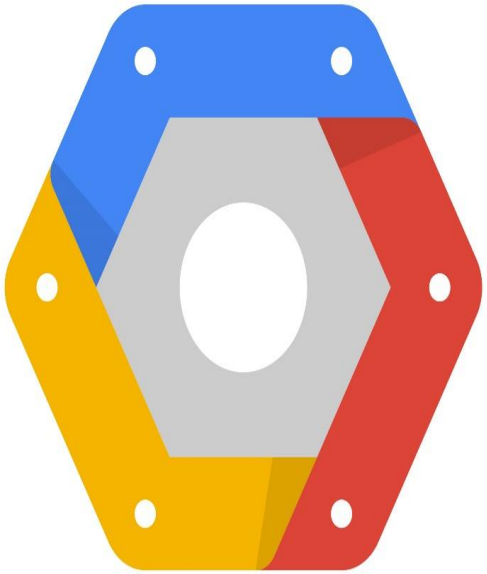
Cloud Datalab

Bear Su

Overview



- Introduction
- Setup
- Usage



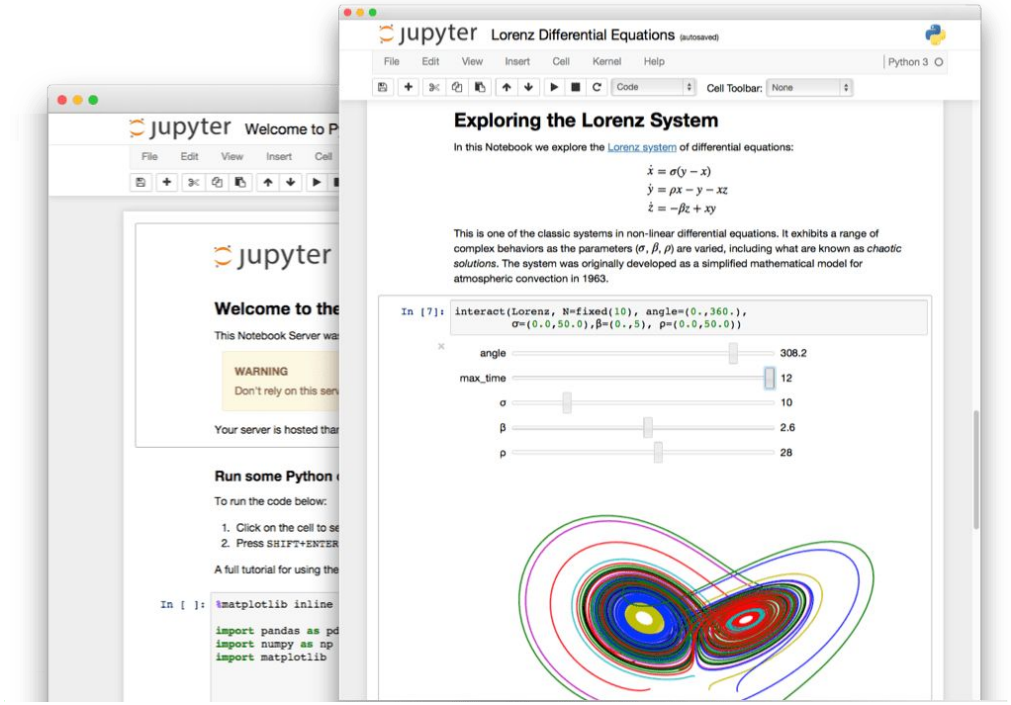
Introduction

Setup

Usage

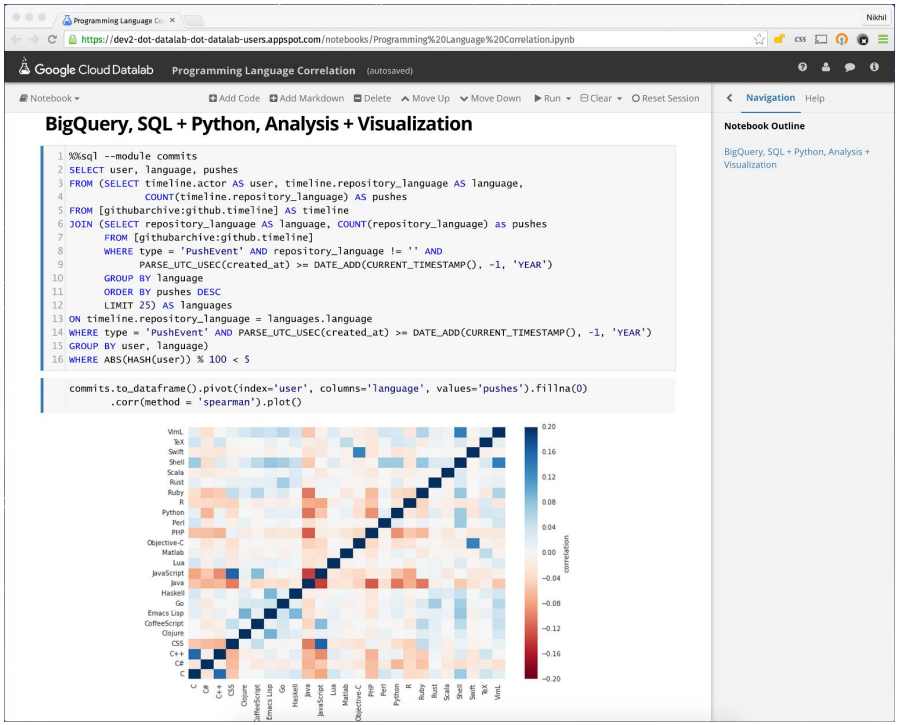
Introduction

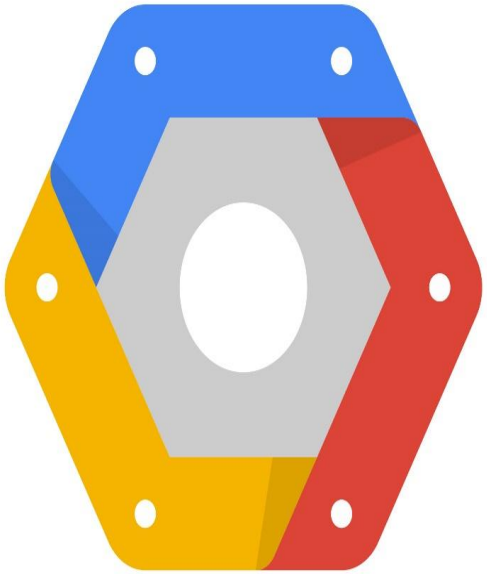
- 基於 Jupyter(IPython)
- 互動式介面，即時輸出結果



Introduction

- 使用 Python
- 整合 Google 服務
  - Google BigQuery
  - Cloud Machine Learning Engine
  - Google Compute Engine
  - Google Cloud Storage
- 開放原始碼專案





Introduction

Setup

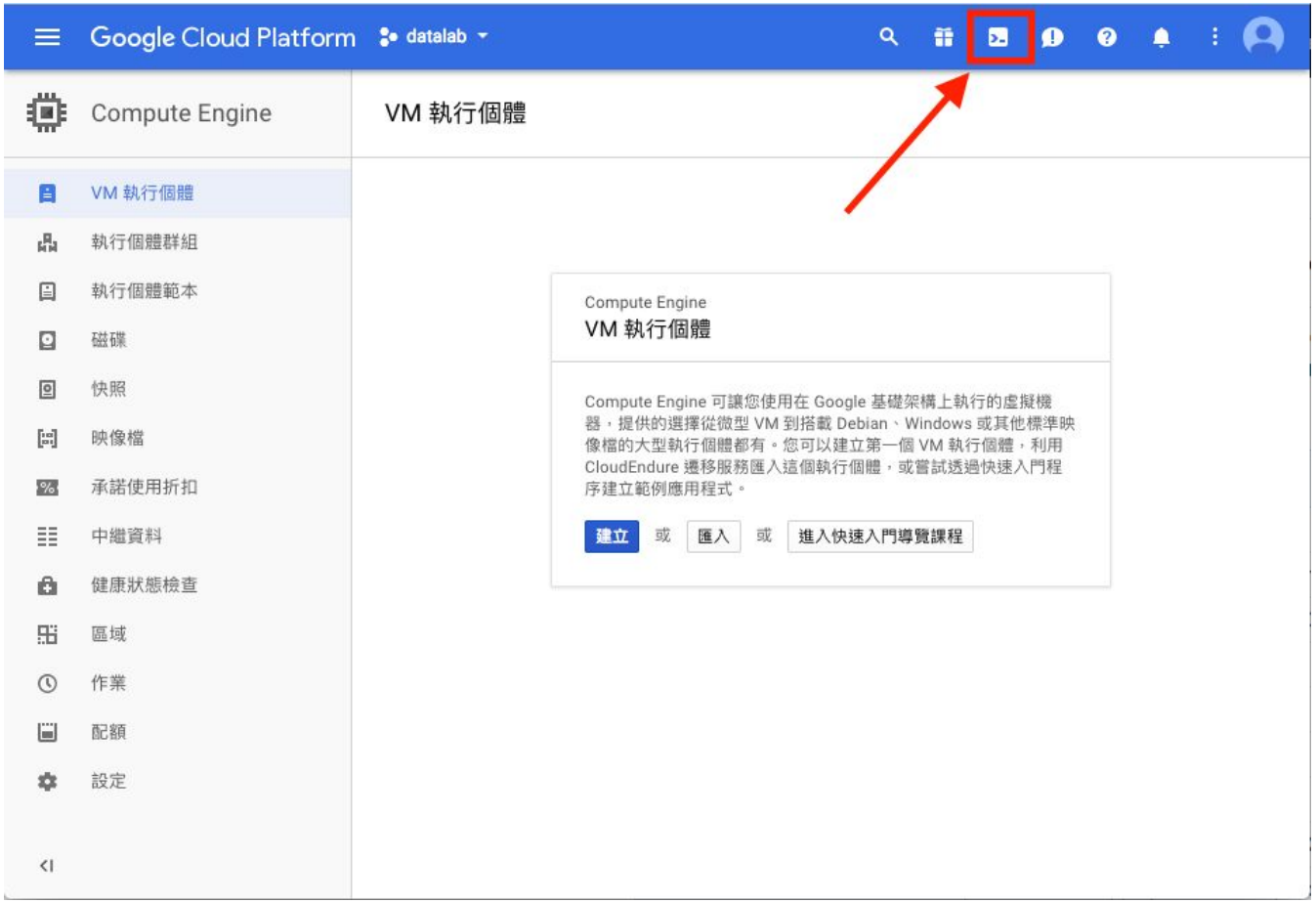
Usage

Setup

- 建立 GCP 帳號
- 申請免費試用($300)
- 建立專案
- 啟用 Compute Engine API
- 開啟 Cloud Shell
- 啟動 Datalab
- text note短網址:
  https://goo.gl/evHFPY

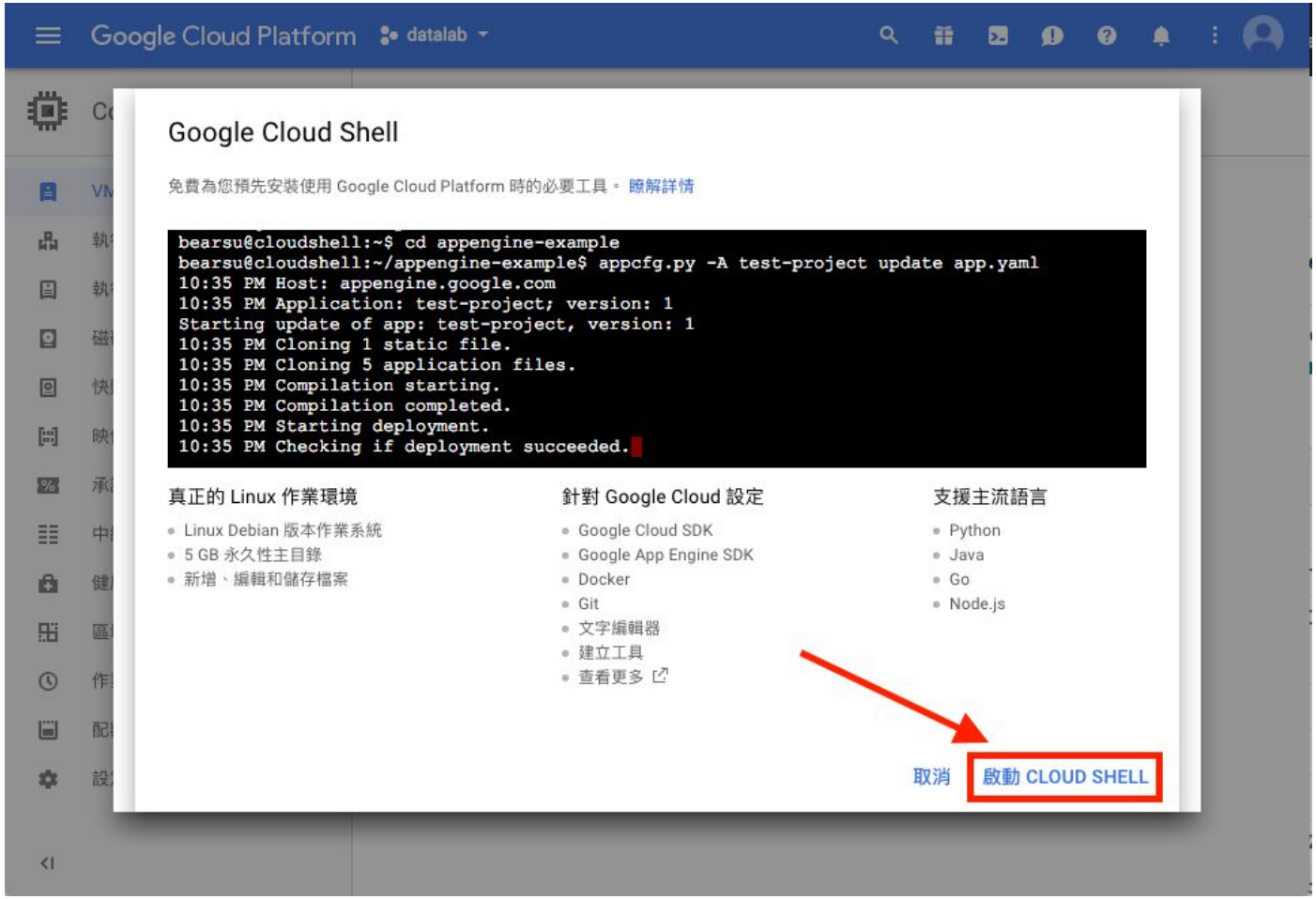
Setup

開啟 Cloud Shell

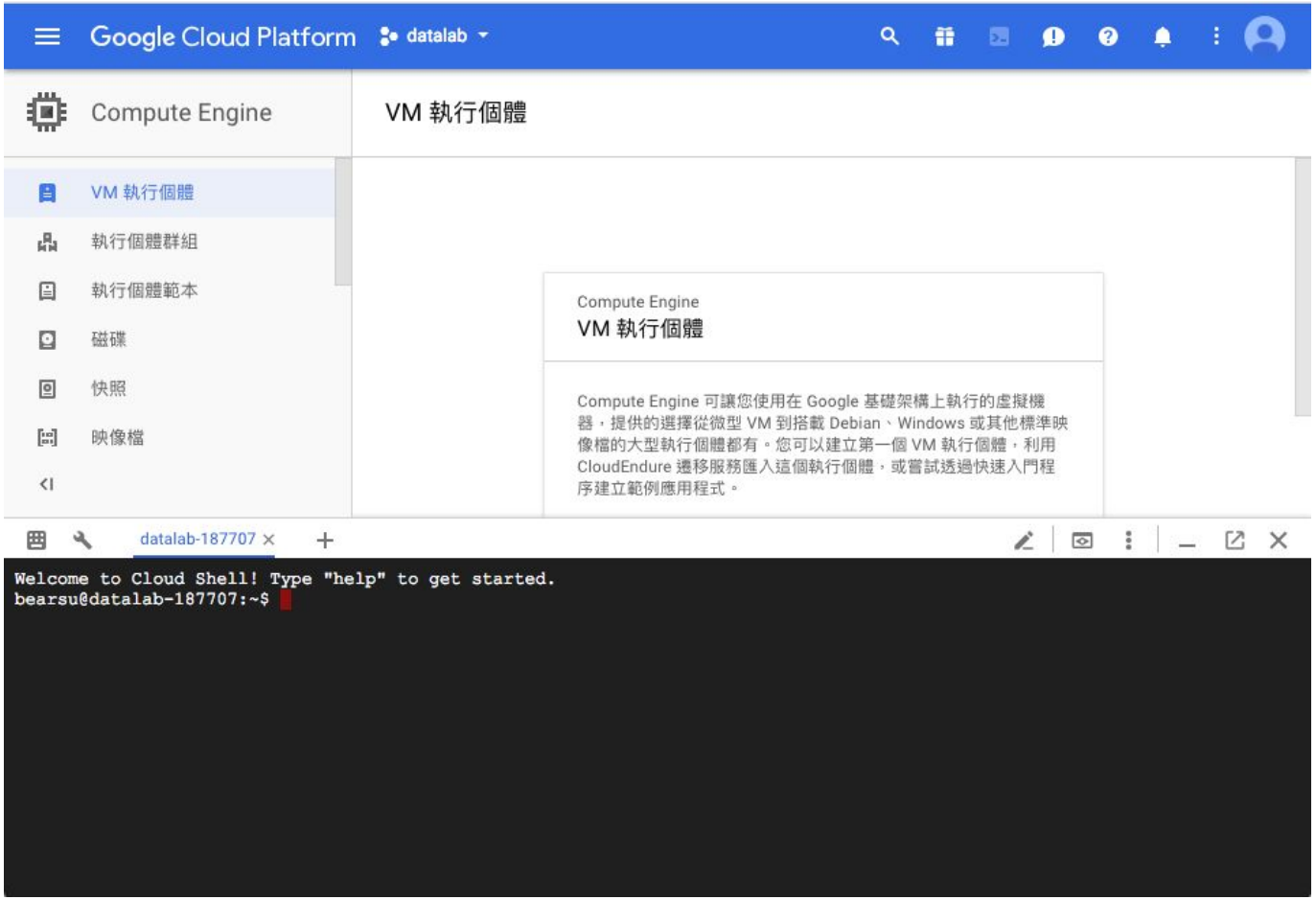


Setup

點擊「啟動 CLOUD SHELL」



Cloud Shell 的介面



Setup

輸入指令：

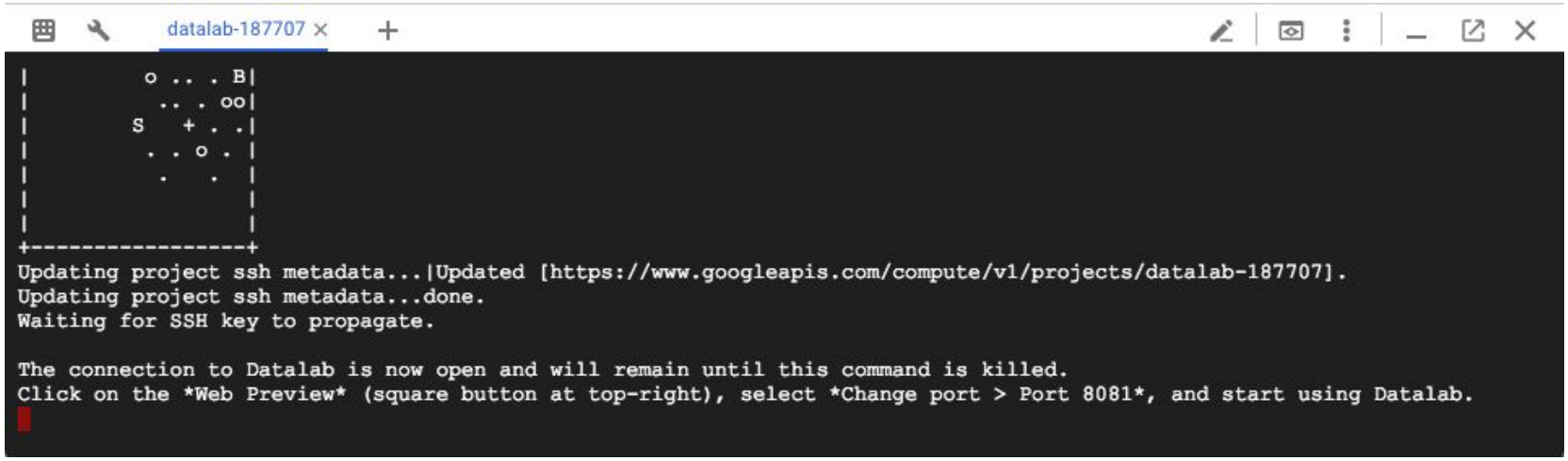
```
datalab create lab-machine \
    --machine-type n1-standard-4 \
    --zone asia-east1-b
```

```
Welcome to Cloud Shell! Type "help" to get started.
bearsu@datalab-187707:~$ datalab create lab-machine \
>     --machine-type n1-standard-4 \
>     --zone asia-east1-b
Creating the instance lab-machine
Created [https://www.googleapis.com/compute/v1/projects/datalab-187707/zones/asia-east1-b/instances/lab-machine].
Connecting to lab-machine.
This will create an SSH tunnel and may prompt you to create an rsa key pair. To manage these keys, see https://cloud.goog
le.com/compute/docs/instances/adding-removing-ssh-keys
Waiting for Datalab to be reachable at http://localhost:8081/
This tool needs to create the directory [/home/bearsu/.ssh] before
being able to generate SSH keys.

Do you want to continue (Y/n)?  y
```

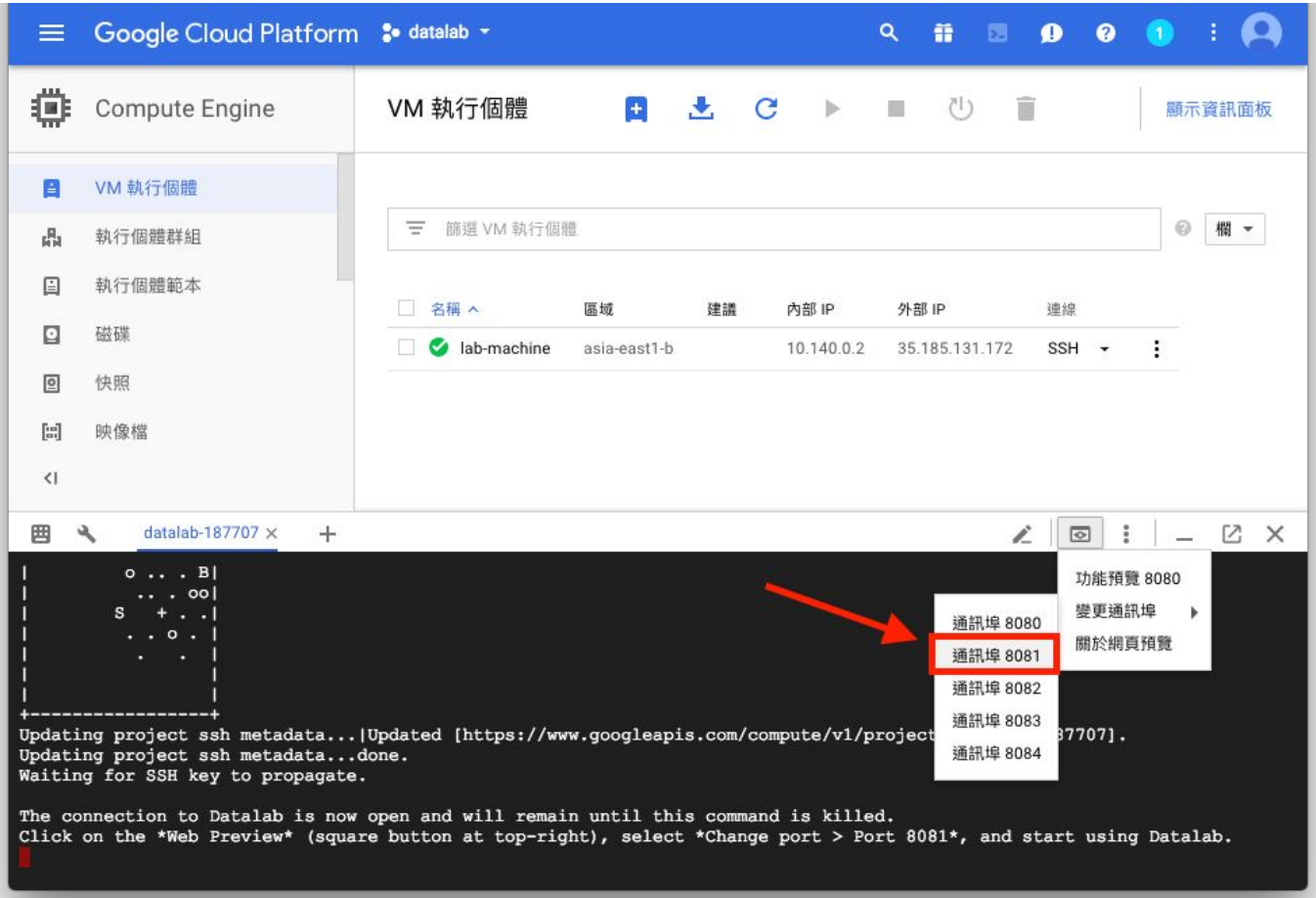
Setup

Datalab 啟動成功



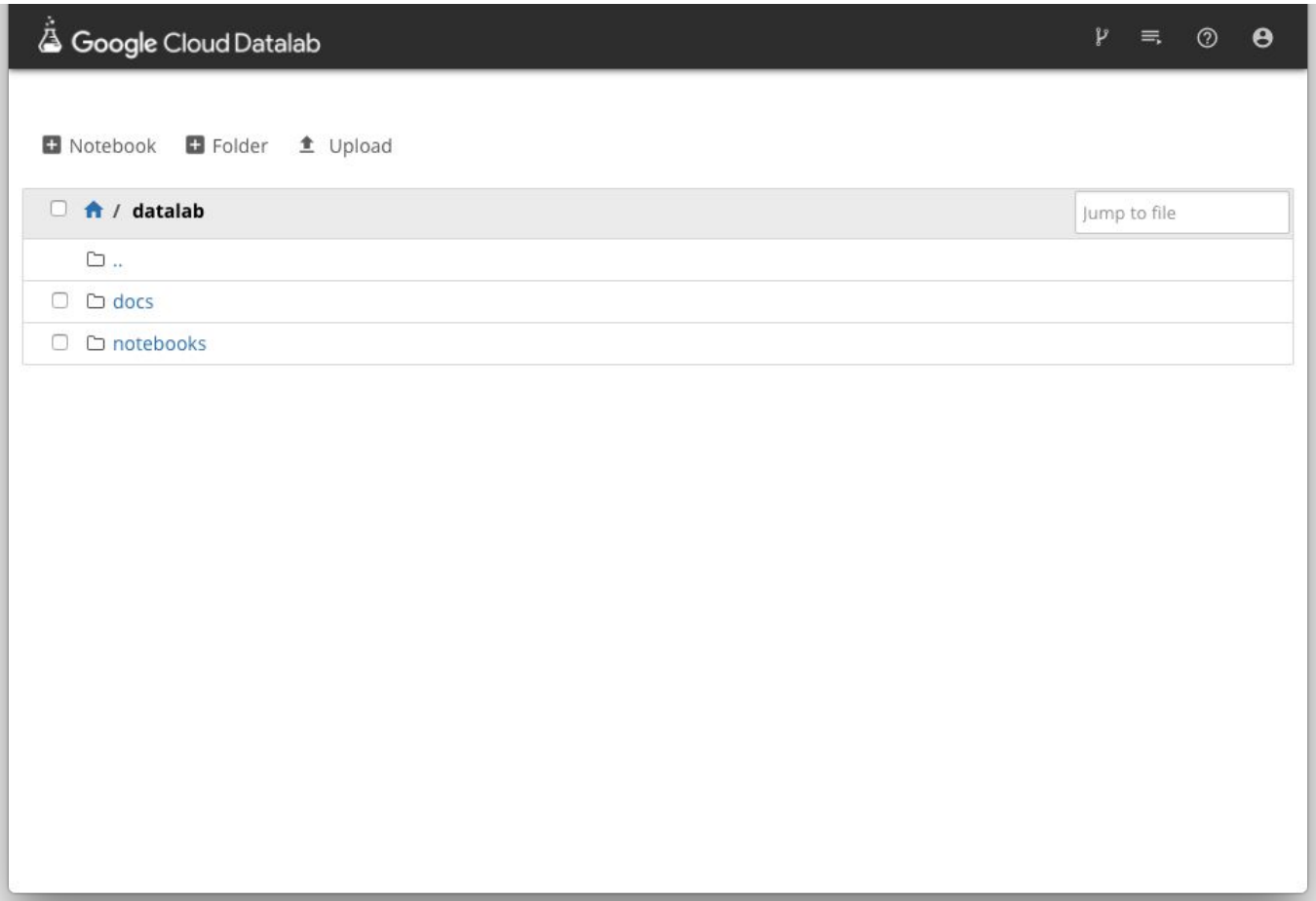
Setup

依訊息開啟 Datalab 網頁介面



Setup

Datalab 介面



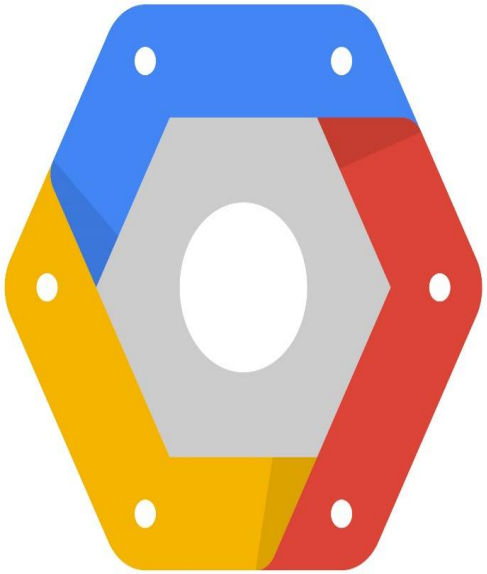
基本指令

重新連上：
```
datalab connect lab-machine
```

停止：
```
datalab stop lab-machine
```

刪除：
```
datalab delete lab-machine
```

刪除(保留硬碟)：
```
datalab delete --keep-disk lab-machine
```



Introduction

Installation

Usage

Usage

- 建立 notebook
- 編輯名稱
- 基本語法
- 停止 sessions
- 透過 git 下載 notebooks
- 透過 shell 指令下載檔案

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建立 notebook

點擊「+ Notebook」

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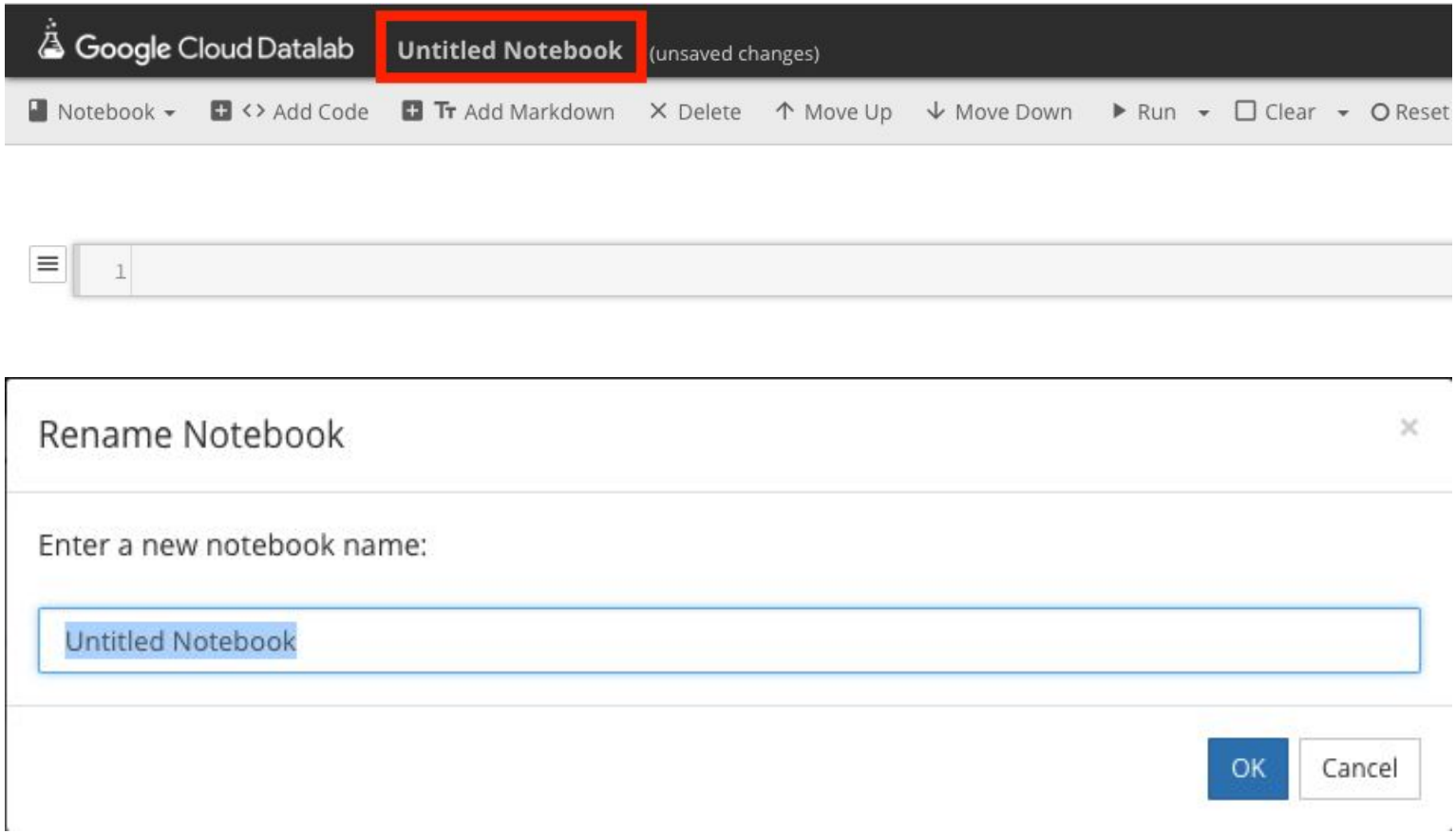
編輯名稱

點擊名稱，於彈出視窗編輯



Usage

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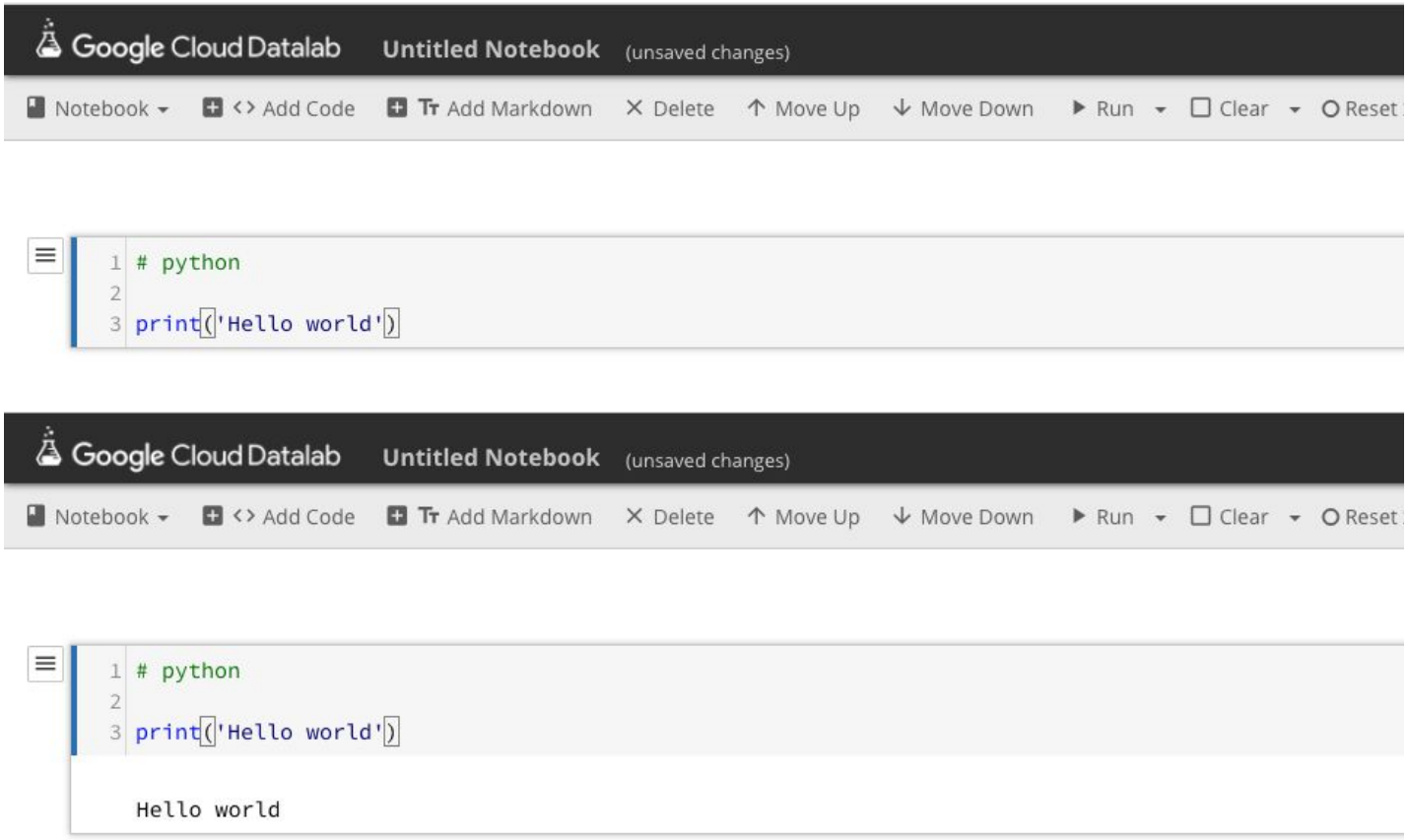
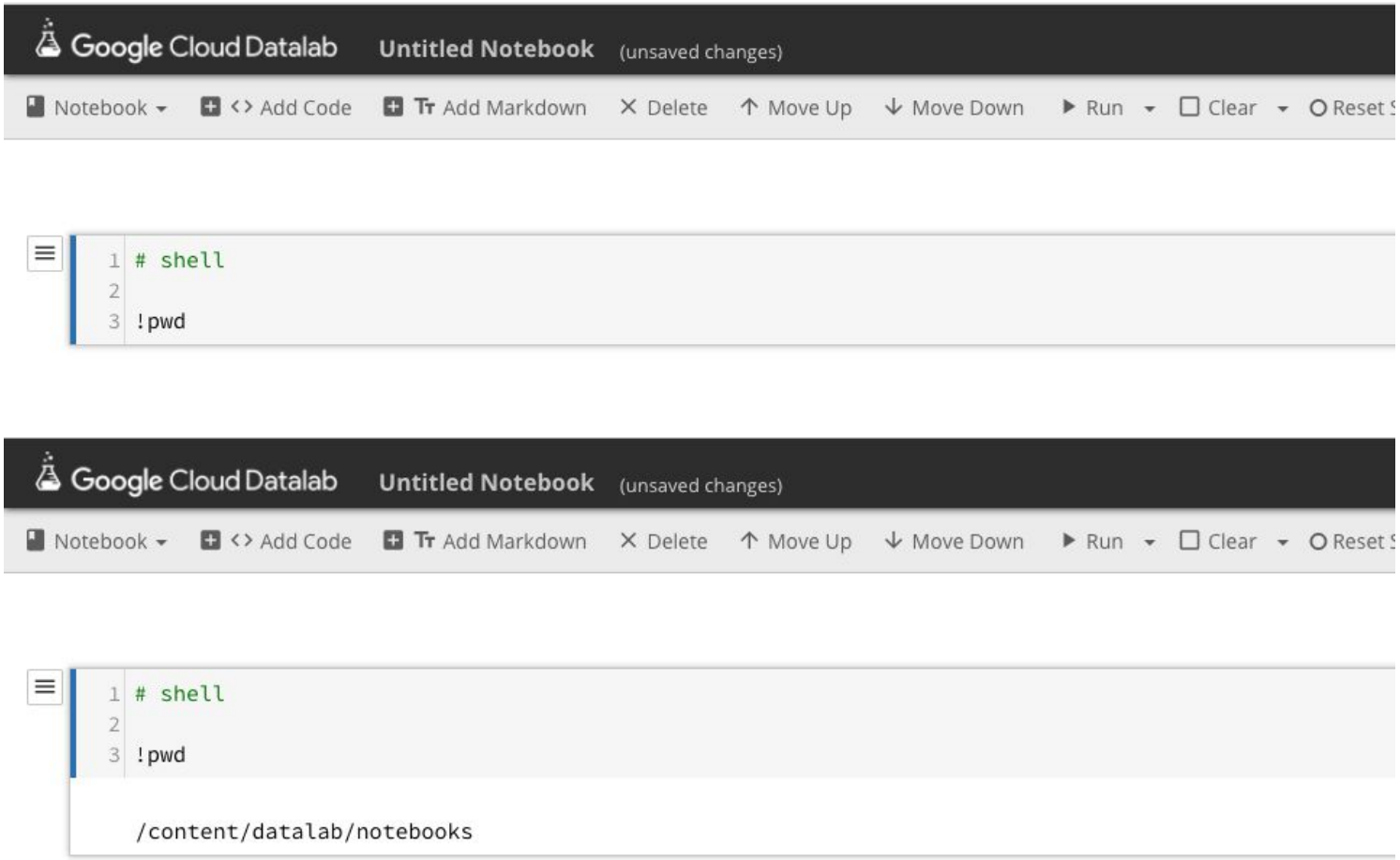
基本語法 - python

輸入 python 程式碼，點擊「Run」或是「Ctrl + Enter」執行程式碼區塊

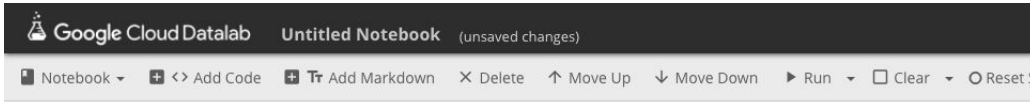


基本語法 - shell

shell 指令前面要加上「!」



基本語法 - javascript



Title

Table of Contents:

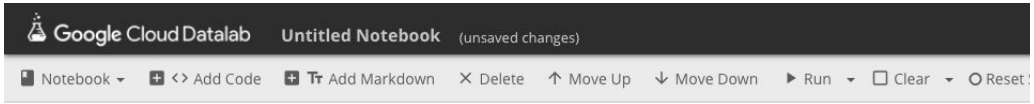
```
%%javascript
$.getScript('https://kmahelona.github.io/ipython_notebook_goodies/ipython_notebook_toc.js')
```

Section 1

description

Section 2

description



Title

Table of Contents:


```
%%javascript
$.getScript('https://kmahelona.github.io/ipython_notebook_goodies/ipython_notebook_toc.js')
```

Section 1

description

Section 2

description

Usage

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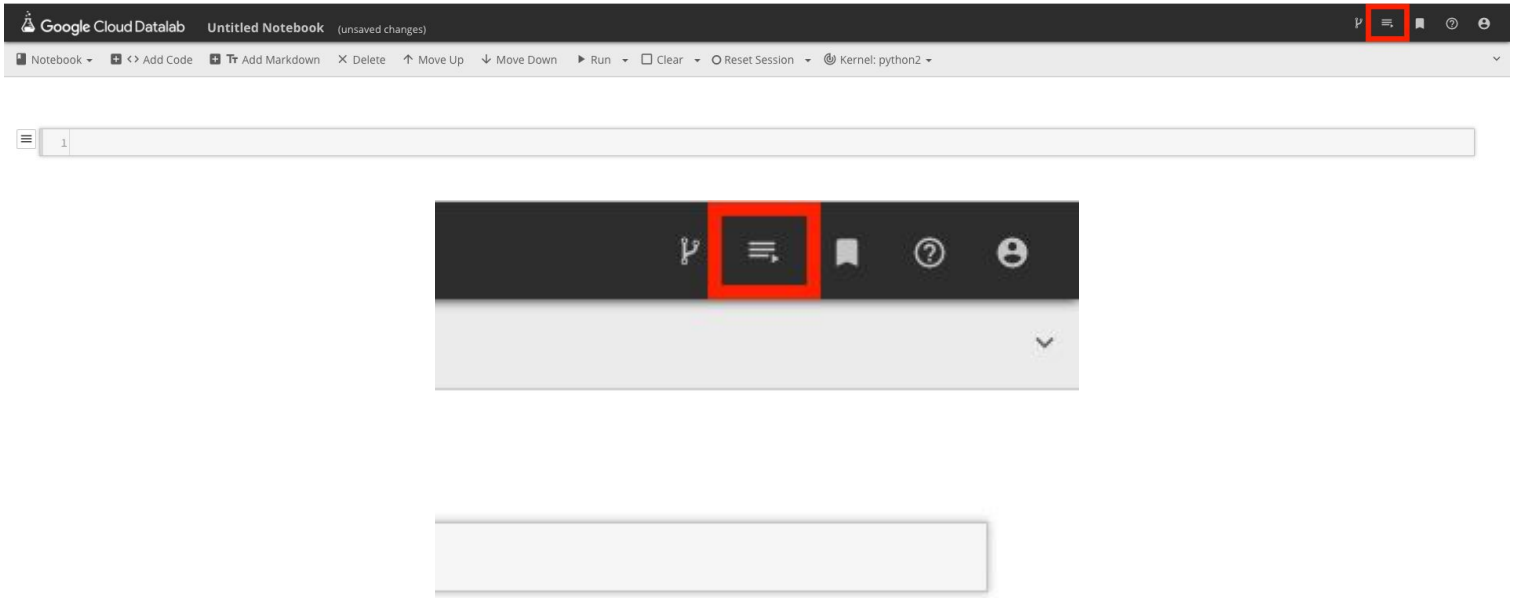
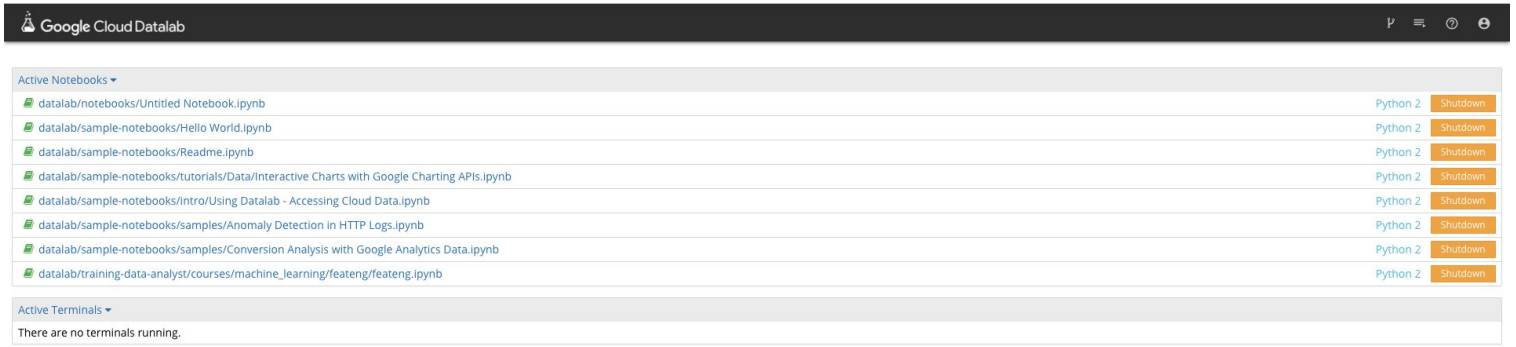
停止 sessions


Google Cloud Datalab
Untitled Notebook
(unsaved changes)
Notebook
Add Code
Add Markdown
Delete
Move Up
Move Down
Run
Clear
Reset Session
Kernel: python2


Google Cloud Datalab
Active Notebooks
datalab/notebooks/Untitled Notebook.ipynb
datalab/sample-notebooks/Hello World.ipynb
datalab/sample-notebooks/Readme.ipynb
datalab/sample-notebooks/tutorials/Data/Interactive Charts with Google Charting APIs.ipynb
datalab/sample-notebooks/intro/Using Datalab - Accessing Cloud Data.ipynb
datalab/sample-notebooks/samples/Anomaly Detection in HTTP Logs.ipynb
datalab/sample-notebooks/samples/Conversion Analysis with Google Analytics Data.ipynb
datalab/training-data-analyst/courses/machine_learning/feateng/feateng.ipynb
Python 2
Shutdown
Active Terminals
There are no terminals running.

Usage

- 建立 notebook
- 編輯名稱
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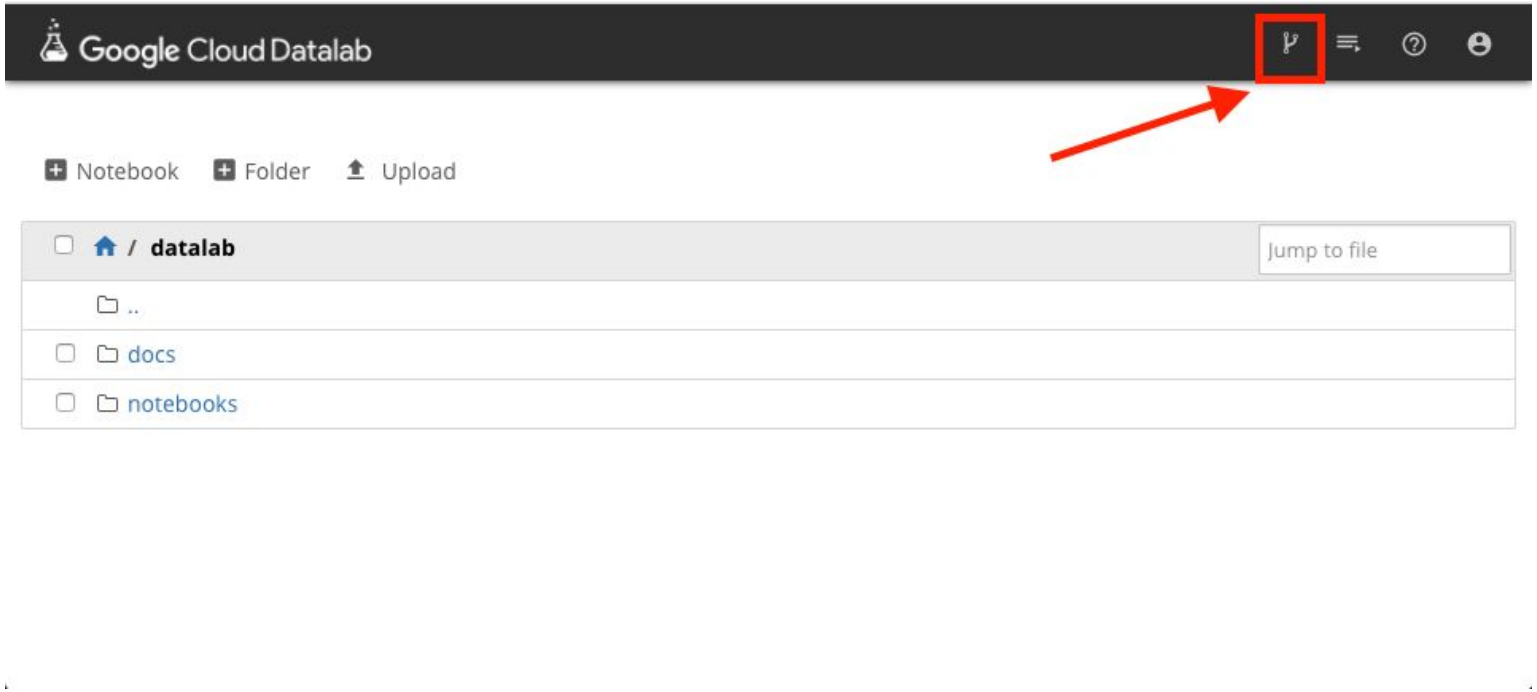
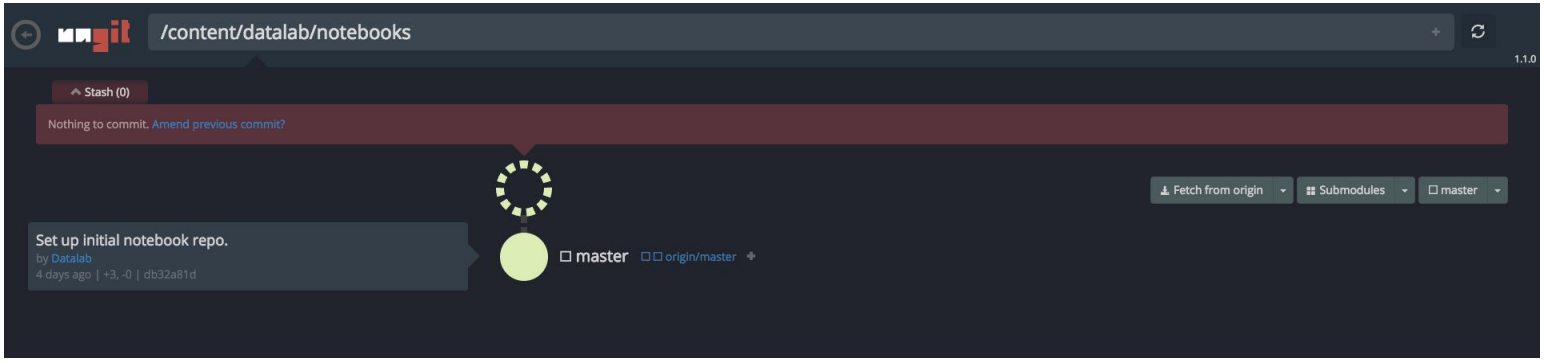
透過 git 下載 notebooks

點擊右上角分支圖示



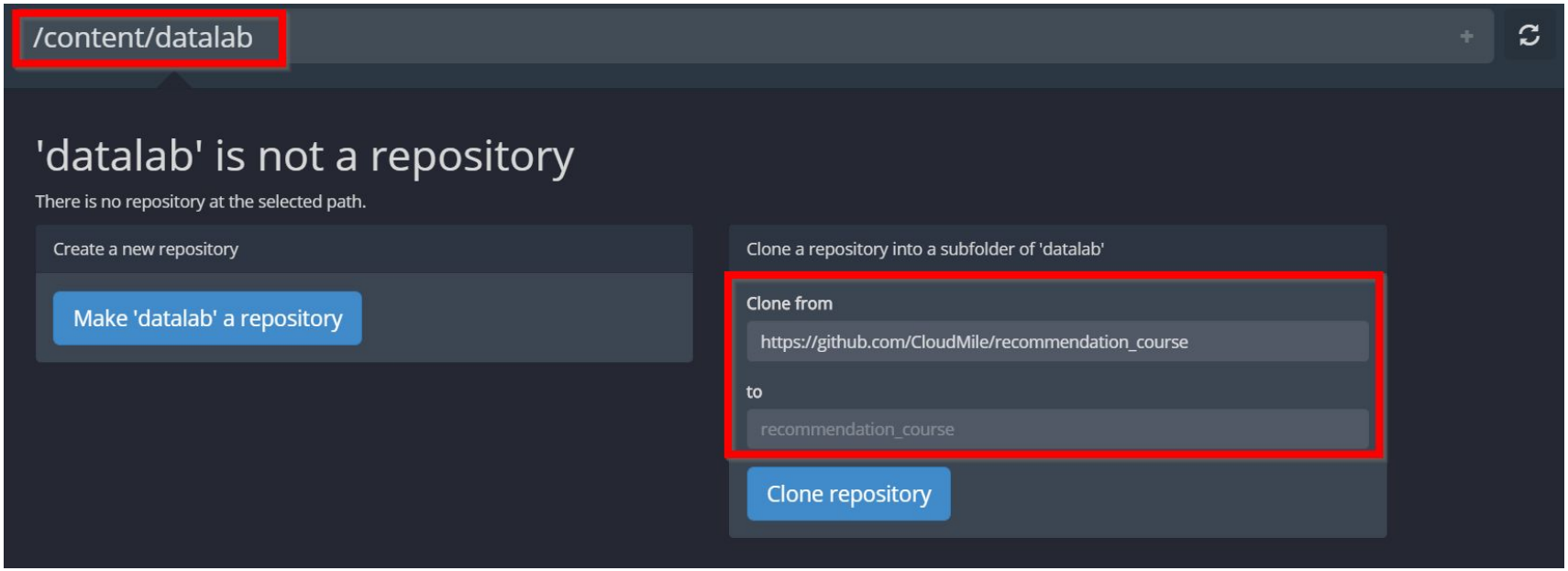
透過 git 下載 notebooks

ungit 畫面



透過 git 下載 notebooks

- 修改工作路徑後按下 Enter
- 於「Clone from」欄位填入：
  - https://github.com/CloudMile/recommendation_course
- 於「to」欄位填入：recommendation_course
- 點擊「Clone repository」



透過 git 下載 notebooks

已新增檔案

Usage

- 建立 notebook
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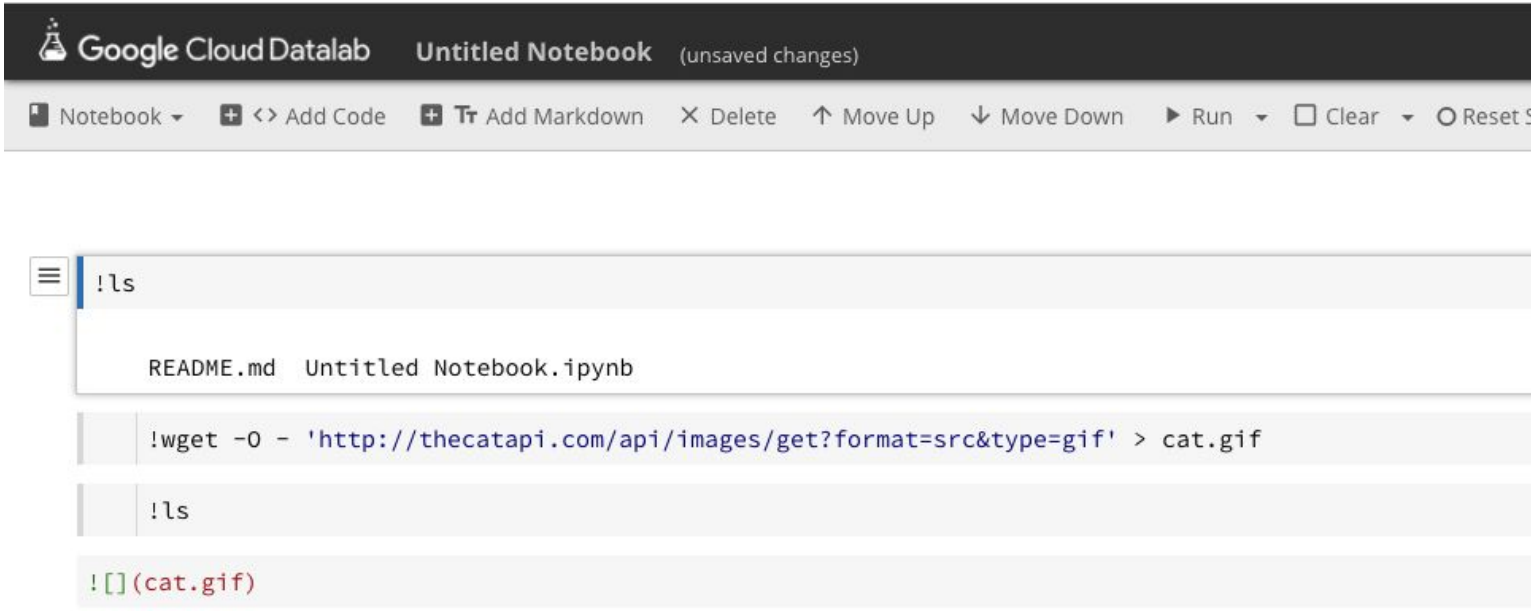
透過 shell 指令下載檔案

輸入 !wget -O - '下載網址' > 本地檔名



透過 shell 指令下載檔案

Google Cloud Datalab Untitled Notebook (autosaved)

Notebook Add Code Add Markdown Delete Move Up Move Down Run Clear Reset Session Kernel: python2

```
!ls
```

```
README.md  Untitled Notebook.ipynb
```

```
1 !wget -O - 'http://thecatapi.com/api/images/get?format=src&type=gif' > cat.gif
```

```
--2017-12-05 08:13:02--  http://thecatapi.com/api/images/get?format=src&type=gif
Resolving thecatapi.com (thecatapi.com)... 87.106.120.160
Connecting to thecatapi.com (thecatapi.com)|87.106.120.160|:80... connected.
HTTP request sent, awaiting response... 302 Found
Location: http://25.media.tumblr.com/tumblr_lk64ayaE4h1qbhtrto1_500.gif [following]
--2017-12-05 08:13:03--  http://25.media.tumblr.com/tumblr_lk64ayaE4h1qbhtrto1_500.gif
Resolving 25.media.tumblr.com (25.media.tumblr.com)... 119.161.14.19, 119.161.14.20, 124.108.101.59, ...
Connecting to 25.media.tumblr.com (25.media.tumblr.com)|119.161.14.19|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 510972 (499K) [image/gif]
Saving to: 'STDOUT'

-                   100%[====================>] 499.00K  --.-KB/s    in 0.04s

2017-12-05 08:13:03 (13.2 MB/s) - written to stdout [510972/510972]
```

```
!ls
```

```
cat.gif  README.md  Untitled Notebook.ipynb
```

Google Cloud Datalab

Notebook Folder Upload

/ datalab / notebooks Jump to file

..

Untitled Notebook.ipynb Running

cat.gif

README.md

Reference

- https://cloud.google.com/datalab/?hl=zh-tw
- https://cloud.google.com/datalab/docs/?hl=zh-tw
- https://github.com/googledatalab/datalab
- http://jupyter.org/
- https://codelabs.developers.google.com/ search `datalab`
- https://cloud.google.com/datalab/docs/reference/command-line/commands
-