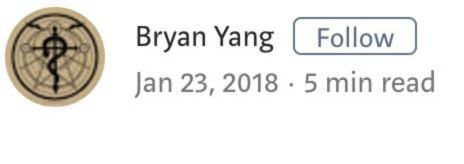
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## [Python] 解決 import 相對路徑執行問 題



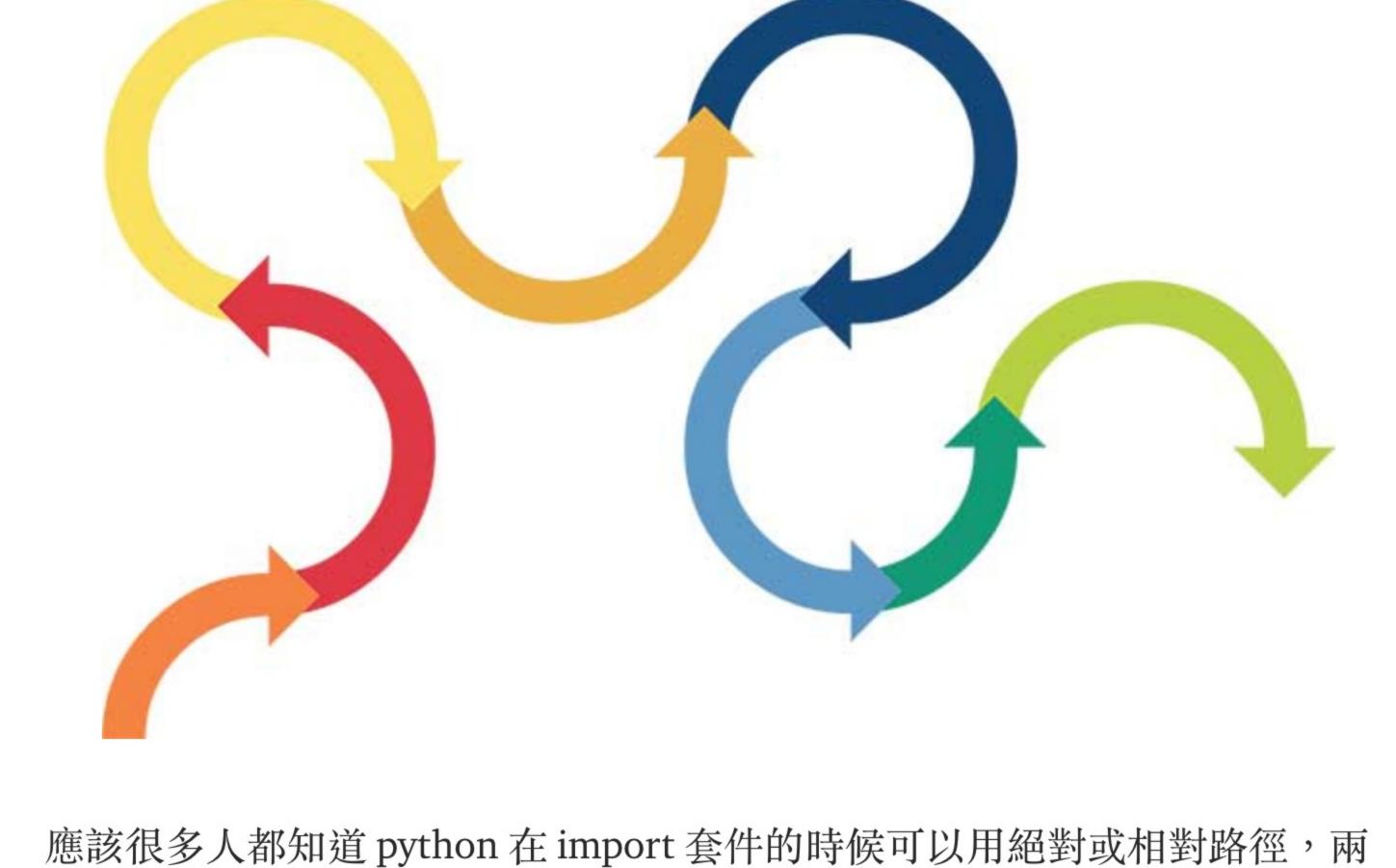
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機和今天遇到的問題: 狀況是我和同事共同開發一個專案,我開發 REST API部分,同事負責寫 Module,剛開始腦袋沒想清楚檔案結構,所以分在不同目錄開發,後來偷 懶懶得寫 install file 想說直接 copy 過來就發生了一些問題,靠著改成 import

者各有好壞,最近剛好有個專案兩種都有用到,剛好可以整理一下,使用時

相對路徑解決: BUT! 凡事就是這個 BUT,有些程式 run 不起來

…崩 (〒皿〒)┘ 潰…. 來個簡化版的結構

# src/

if \_\_name\_\_ == '\_\_main\_\_':

class HaError(Exception):

from .errors import HaError

~/D/w/t/test\_python python src/app.py

File "src/app.py", line 1, in <module>

Traceback (most recent call last):

from .errors import HaError

main()

app.py errors.py

app.py

```
from .errors import HaError
def main():
   print('hi')
   raise HaError()
```

## pass

但是

errors.py

```
Traceback (most recent call last):
 File "app.py", line 1, in <module>
```

ImportError: attempted relative import with no known parent package

### …崩 └(〒皿〒)┘ 潰….

~/D/w/t/t/src
 ■

ImportError: attempted relative import with no known parent package ~/D/w/t/test\_python

雖然想說應該是路徑的問題但是就算回到上一層也還是崩潰

```
後來終於想到還有一招沒用 python -m
Traceback (most recent call last):
 File "/Users/bryan.yang/miniconda3/lib/python3.5/runpy.py", line 193, in _run_module_as_main
   "__main__", mod_spec)
```

File "/Users/bryan.yang/Documents/workspace/temp/test\_python/src/app.py", line 12, in <module

File "/Users/bryan.yang/Documents/workspace/temp/test\_python/src/app.py", line 8, in main

File "/Users/bryan.yang/miniconda3/lib/python3.5/runpy.py", line 85, in \_run\_code

raise HaError() src.errors.HaError ~/D/w/t/test\_python

from .errors import HaError

raise HaError()

if \_\_name\_\_ == '\_\_main\_\_':

exec(code, run\_globals)

main()

app.py

print('hi')

main()

```
python -m 可以把 python module 當成 script 來執行
 (<a href="https://www.python.org/dev/peps/pep-0338/">https://www.python.org/dev/peps/pep-0338/</a>) 重點是看一下用 python
和用 python -m 差在哪裡,為什麼直接用 python 找不到相對應的 module.
修改一下程式內容:
```

def main(): print(type(\_\_name\_\_), \_\_name\_\_) print(type(\_\_package\_\_), \_\_package\_\_)

```
errors.py
  print(type(__name__), __name__)
  print(type(__package__), __package__)
  class HaError(Exception):
      pass
加入兩行:
```

print(type(\_\_\_name\_\_\_), \_\_\_name\_\_\_) # 執行程式的名字

print(type(\_\_package\_\_), \_\_package\_\_) # 屬於哪個 package

#### File "/Users/bryan.yang/miniconda3/lib/python3.5/runpy.py", line 85, in \_run\_code exec(code, run\_globals) File "/Users/bryan.yang/Documents/workspace/temp/test\_python/src/app.py", line 12, in <module> main() File "/Users/bryan.yang/Documents/workspace/temp/test\_python/src/app.py", line 8, in main

再執行一次

<class 'str'> src.errors

<class 'str'> \_\_main\_\_

raise HaError()

"\_\_main\_\_", mod\_spec)

exec(code, run\_globals)

~/D/w/t/t/src

References:

www.python.org

16 claps

+3:33 hours Physician Note

Related reads

Stephen Chen
Jun 21, 2018 · 5 min re:

**Bryan Yang** 

from .errors import HaError

2. 像本篇解法一樣,寫相對路徑

src.errors.HaError

自然是 src·

<class 'str'> src

<class 'str'> src

→ ~/D/w/t/test\_python python -m src.app

Traceback (most recent call last):

"\_\_main\_\_", mod\_spec)

```
下面兩個是 app.py ,直接執行的程式(app.py) , __name___ 就會等於
__main__, package 名稱也會是 src ·
值得注意的是 python -m 如果要帶 package name 進去,一定要在最外面那
層(跟 package 同一層)執行才有用,進到 src 後執行也會找不到路徑(嚴格
來說是找不到 package name) ·

→ ~/D/w/t/t/src python -m app

Traceback (most recent call last):
 File "/Users/bryan.yang/miniconda3/lib/python3.5/runpy.py", line 193, in _run_module_as_main
```

File "/Users/bryan.yang/Documents/workspace/temp/test\_python/src/app.py", line 1, in <module>

File "/Users/bryan.yang/miniconda3/lib/python3.5/runpy.py", line 85, in \_run\_code

1. 全部都寫絕對路徑,但是如果目錄很深,又有可能移動會很難寫

ImportError: attempted relative import with no known parent package

回到原本的問題,要解決 python 路徑大致有四種解法:

File "/Users/bryan.yang/miniconda3/lib/python3.5/runpy.py", line 193, in \_run\_module\_as\_main

前面兩個是 從 errors.py 出來的結果,透過 python -m,import 其他 package

時,其他 package 的名字會呈現 package+module name , package 的名稱

```
3. 把 package 的路徑加入 PYTHONPATH
4. 用 setuptools 另外寫一個 setup.py,使用 python setup.py install 安裝套
  件
至於什麼時候用哪個就看情境了:
```

www.python.org

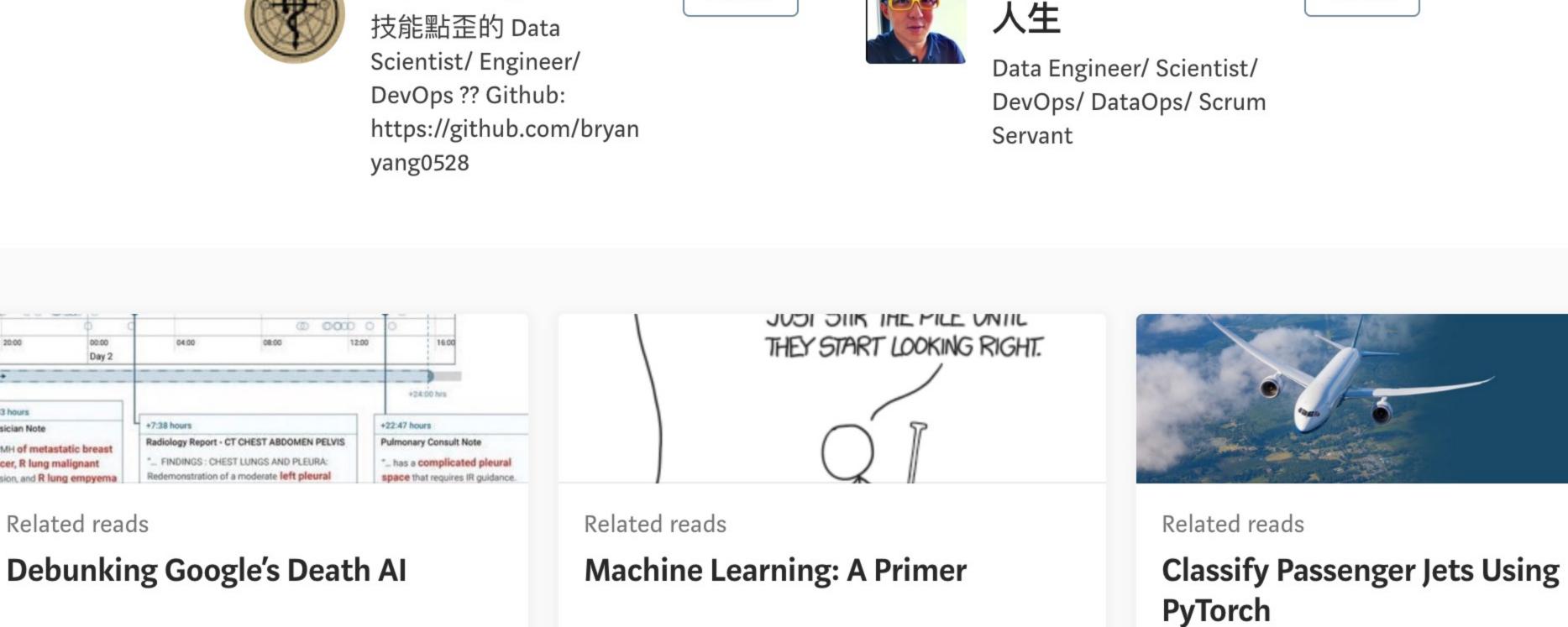
The official home of the Python Programming Language

PEP 338 -- Executing modules as scripts

PEP 328 -- Imports: Multi-Line and Absolute/Relative

The official home of the Python Programming Language

```
Relative imports in Python 3
 I want to import a function from another file in the same directory. Sometimes
 it works for me with from .mymodule...
 stackoverflow.com
Python
          Module
                     Packages
                                Improt
```



Lizzie Turner
May 27, 2018 · 12 min

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