# Python環境安裝說明

- 以下為首次使用永豐金Python API建議安裝的程式(套件):
  1. Conda - 套件管理系統
  2. Shioaji - 永豐金Python API
  3. Jupyter Notebook - 互動式筆記本

## Conda - 套件管理系統



　　Conda是在Windows、macOS和Linux上運行的開源套件管理系統和環境管理系統。Conda可以快速安裝、運行和更新套件及其相依套件。並且輕鬆地在本地電腦上的環境中創建，保存，加載和切換。

　　Conda作為套件管理系統，可以幫助您查找和安裝套件。如果您需要一個能夠使用不同版本Python的套件，則無需切換到其他環境管理器，因為conda也是環境管理器。僅需幾個命令，就可以設置一個完全獨立的環境來運行不同版本的Python，同時繼續在正常環境中運行喜歡的Python版本。

　　在默認配置下，conda可以安裝和管理來自repo.anaconda.com倉庫的7,500多個軟件包，該倉庫由Anaconda生成，審查和維護。所有版本的Anaconda，Miniconda和Anaconda存儲庫均包含conda軟件包和環境管理器。

# Miniconda 下載

## Miniconda Repo 連結 (https://docs.conda.io/en/latest/miniconda.html)

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## Miniconda

Miniconda is a free minimal installer for conda. It is a small, bootstrap version of Anaconda that includes only conda, Python, the packages they depend on, and a small number of other useful packages, including pip, zlib and a few others. Use the `conda install` command to install 720+ additional conda packages from the Anaconda repository.

See if Miniconda is right for you.

## System requirements

- License: Free use and redistribution under the terms of the EULA for Miniconda.
- Operating system: Windows 8 or newer, 64-bit macOS 10.13+, or Linux, including Ubuntu, RedHat, CentOS 7+, and others.
- If your operating system is older than what is currently supported, you can find older versions of the Miniconda installers in our archive that might work for you.
- System architecture: Windows- 64-bit x86, 32-bit x86; macOS- 64-bit x86 & Apple M1 (ARM64); Linux- 64-bit x86, 64-bit aarch64 (AWS Graviton2), 64-bit IBM Power8/Power9, s390x (Linux on IBM Z & LinuxONE).
- The `linux-aarch64` Miniconda installer requires `glibc >=2.26` and thus will **not** work with CentOS 7, Ubuntu 16.04, or Debian 9 ("stretch").
- Minimum 400 MB disk space to download and install.

On Windows, macOS, and Linux, it is best to install Miniconda for the local user, which does not require administrator permissions and is the most robust type of installation. However, if you need to, you can install Miniconda system wide, which does require administrator permissions.

## Latest Miniconda Installer Links

*Latest - Conda 4.12.0 Python 3.9.7 released February 15, 2022*

| Platform | Name | SHA256 hash |
|---|---|---|

請下載64位元版本的Miniconda，以Windows為例，請下載 `Python 3.9 Miniconda3 Windows 64-bit` 。

**Windows installers** %

| Python version | Name | Size | SHA256 hash |
|---|---|---|---|
| | | | *Windows* |
| Python 3.9 | Miniconda3 Windows 64-bit | 71.2 MiB | `1acbc2e8277ddd54a5f724896c7edee112d068529588d944702966c867e7e9cc` |
| Python 3.8 | Miniconda3 Windows 64-bit | 70.6 MiB | `94f24e52e316fa935ccf94b0c504ceca8e6abc6190c68378e18550c95bb7cee1` |
| Python 3.7 | Miniconda3 Windows 64-bit | 69.0 MiB | `b221ccdb2bbc5a8209a292f858ae05fd87f882f79be75b37d26faa881523c057` |
| Python 3.9 | Miniconda3 Windows 32-bit | 67.8 MiB | `4fb64e6c9c28b88beab16994bfba4829110ea3145baa60bda5344174ab65d462` |
| Python 3.8 | Miniconda3 Windows 32-bit | 66.8 MiB | `60cc5874b3cce9d80a38fb2b28df96d880e8e95d1b5848b15c20f1181e2807db` |
| Python 3.7 | Miniconda3 Windows 32-bit | 65.5 MiB | `a6af674b984a333b53aaf99043f6af4f50b0bb2ab78e0b732aa60c47bbfb0704` |

**macOS installers**
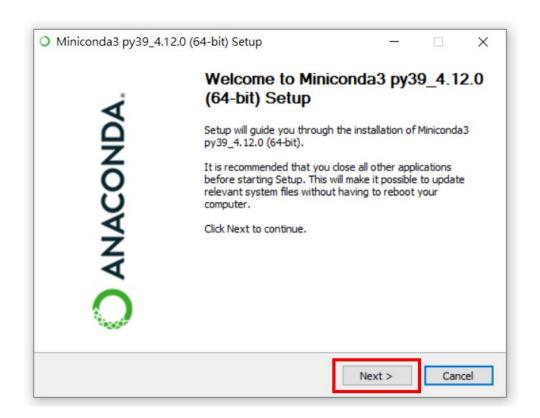
| Python version | Name | Size | SHA256 hash |
|---|---|---|---|
| | | | *macOS* |
| Python 3.9 | Miniconda3 macOS Intel x86 64-bit bash | 56.0 MiB | `007bae6f18dc7b6f2ca6209b5a0c9bd2f283154152f82becf787aac709a51633` |
| | Miniconda3 macOS Intel x86 64-bit pkg | 62.7 MiB | `cb56184637711685b08f6eba9532cef6985ed7007b38e789613d5dd3f94ccc6b` |
| | Miniconda3 macOS Apple M1 ARM 64-bit bash | 52.2 MiB | `4bd112168cc33f8a4a60d3ef7e72b52a85972d588cd065be803eb21d73b625ef` |
| | Miniconda3 macOS Apple M1 ARM 64-bit pkg | 63.5 MiB | `0cb5165ca751e827d91a4ae6823bfda24d22c398a0b3b01213e57377a2c54226` |
| Python 3.8 | Miniconda3 macOS Intel x86 64-bit bash | 56.4 MiB | `f930f5b1c85e509ebbf9f28e13c697a082581f21472dc5360c41905d10802c7b` |
| | Miniconda3 macOS Intel x86 64-bit pkg | 63.1 MiB | `62eda1322b971d43409e5dde8dc0fd7bfe799d18a49fb2d8d6ad1f6833448f5c` |
| | Miniconda3 macOS Apple M1 ARM 64-bit bash | 52.5 MiB | `13b992328ef088a49a685ae84461f132f8719bf0cabc43792fc9009b0421f611` |
| | Miniconda3 macOS Apple M1 ARM 64-bit pkg | 63.8 MiB | `e92fd40710f7123d9e1b2d44f71e7b2101e3397049b87807ccf612c964beef35` |
| Python 3.7 | Miniconda3 macOS Intel x86 64-bit bash | 66.0 MiB | `323179e4873e291f07db041f3d968da2ffc102dcf709915b48a253914d981868` |
| | Miniconda3 macOS Intel x86 64-bit pkg | 72.7 MiB | `9278875a235ef625d581c63b46129b27373c3cf5516d36250a1a3640978280cd` |
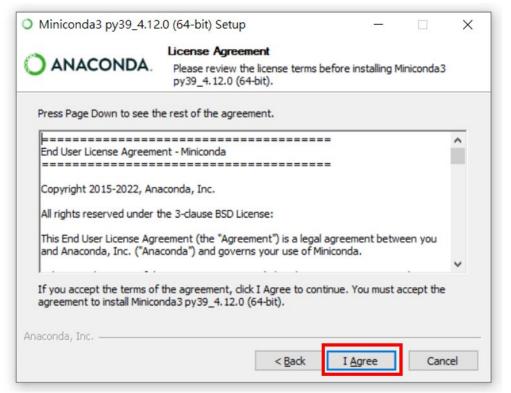
# Miniconda 安裝
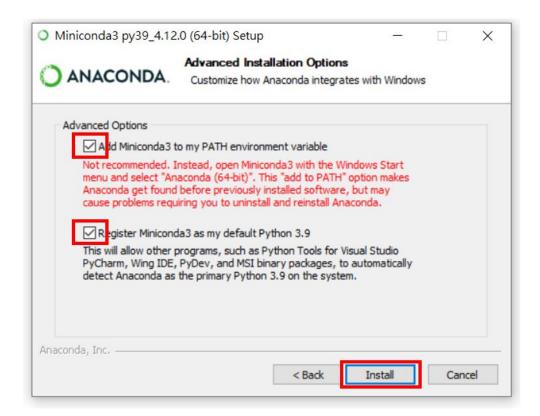
Minicoda安裝步驟:
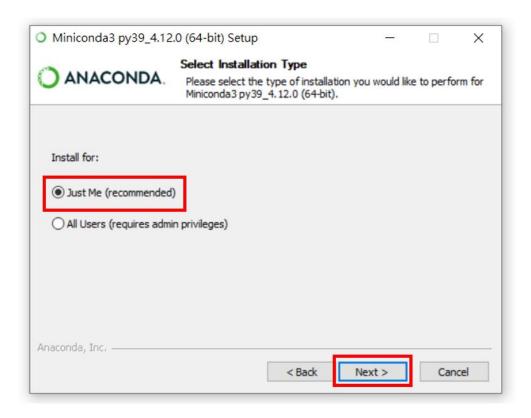
點擊 `Next`
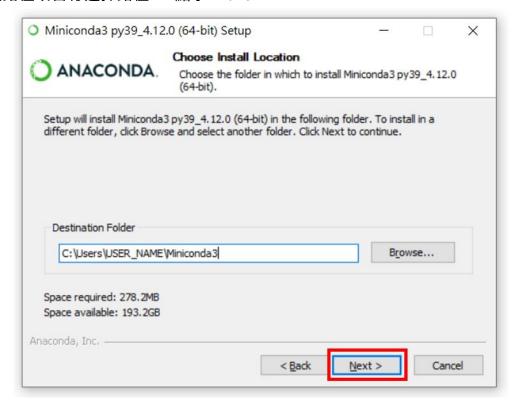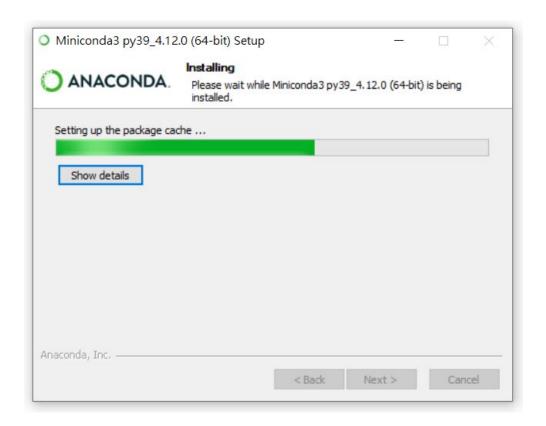
閱讀完後，點擊 I Agree



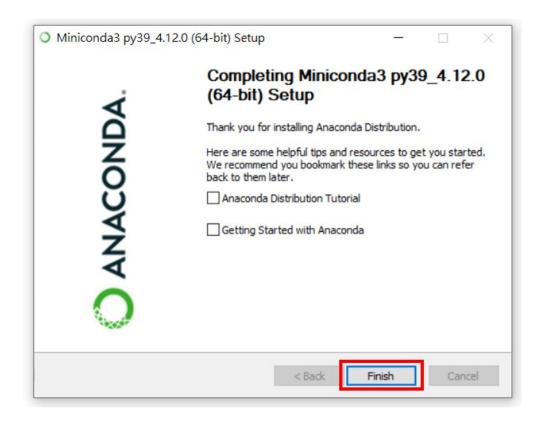點選 Just Me -> 點擊 Next

使用預設安裝路徑或自行選擇路徑 -> 點擊 Next
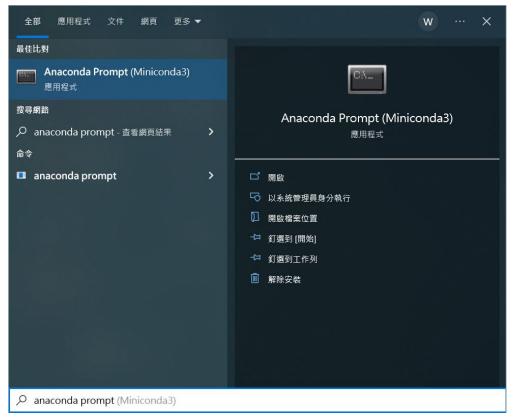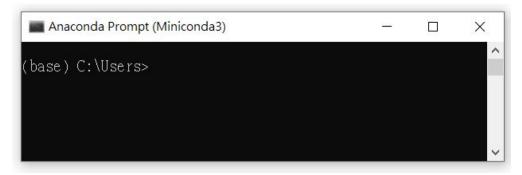


請勾選紅框處 -> 點擊 Next

開始安裝



安裝完成

## 確認Miniconda是否安裝成功

於 開始 輸入 `anaconda prompt` 搜尋 Anaconda Prompt (Miniconda3)

Anaconda Prompt (Miniconda3)



# Shioaji - 永豐金Python API

## 安裝

於Anaconda Prompt，輸入 `pip install -U shioaji`
顯示 `Successfully installed shioaji` 即表示安裝成功。



## 測試

- 開啟Python
  於Anaconda Prompt，輸入 `python`



- 測試shioaji
  進入 `python` 後，輸入

```
import shioaji as sj
sj.__version__
```

顯示shioaji版本號(ex: 0.3.6.dev3)，即為正常。



欲退出 python 請輸入 exit()

# Jupyter Notebook - 互動式筆記本

Jupyter Notebook(此前被稱為 IPython notebook)是一個互動式筆記本，支援執行 40 多種程式語言。Jupyter Notebook 的本質是一個 Web 應用程式，便於建立和共享程式文件，支援實時程式碼，數學方程，視覺化和 markdown。 用途包括：資料清理和轉換，數值模擬，統計建模，機器學習等等。

在資料處理方面，邏輯比較簡單，程式碼量也不是很大，最難的莫過於資料展示，所以能夠合理高效的展示資料成為Jupyter最大的優勢。有了這個優勢，讓Jupyter成為資料科學家喜歡的工具，它能幫助他們便捷地執行各種端到端的任務，比如說：資料清理和轉換，數值模擬，統計建模，機器學習等。

對於Python初學者而言，Jupyter也有獨特的魅力。它的一個特色是允許把程式碼寫入獨立的cell中，然後單獨執行。意味著使用者可以在內試專案時單獨測試特定程式碼塊，無需從頭開始執行程式碼，雖然其他的IDE環境也提供了這種功能，但是從目前情況而言，Jupyter的單元結構是設計的最好的。

## 安裝Jupyter Notenook

於Anaconda Prompt，輸入 `pip install jupyter`
顯示 `Successfully installed ...` 即表示安裝成功。

## 安裝 `shioaji_env ipykernel`

此步驟為確保Jupyter Notebook可以正確取得已安裝shioaji的python環境
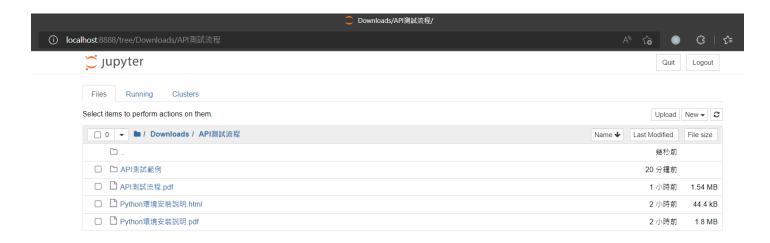
於Anaconda Prompt，輸入 `python -m ipykernel install --name shioaji_env`



## 開啓Jupyter Notebook

於Anaconda Prompt，輸入 `jupyter notebook`



- 為確保jupyter notebook網頁正常瀏覽，請勿關閉Anaconda Prompt。

彈出jupyter notebook網頁

localhost:8888/tree/Downloads/API測試流程

# jupyter

Quit    Logout

Files    Running    Clusters

Select items to perform actions on them.

Upload    New ▾    ↻

☐ 0  ▾   ■ / Downloads / API測試流程                    Name ↓   Last Modified   File size

☐ 📁 ..                                                          幾秒前

☐ 📁 API測試範例                                                 20 分鐘前

☐ 📄 API測試流程.pdf                                            1 小時前    1.54 MB

☐ 📄 Python環境安裝說明.html                                    2 小時前    44.4 kB

☐ 📄 Python環境安裝說明.pdf                                     2 小時前    1.8 MB

點擊 New， shioaji_env 若存在即表示安裝成功

localhost:8888/tree/Downloads/API測試流程

# jupyter

Quit    Logout

Files    Running    Clusters

Select items to perform actions on them.

Upload    New ▾    ↻

☐ 0  ▾   ■ / Downloads / API測試流程                    Name ▾

☐ 📁 ..

☐ 📁 API測試範例

☐ 📄 API測試流程.pdf

☐ 📄 Python環境安裝說明.html

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Notebook:

Python 3 (ipykernel)

shioaji

shioaji_env

Other:

Text File

Folder

Terminal