

DDA3020 Python Setup Instruction

Installation Guide for Python Programming Environment

For DDA3020

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Before You Start

This guide is about installing and using the Python based *Anaconda* platform and the lightweight open source tool *Jupyter Notebook*.

Other sources such as the official Python *IDLE*, *VS Code*, *Pycharm*, etc. are also compatible with this course, but please make sure you are using a Python (<https://www.python.org>) kernel distribution of 3.7 or higher.

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For Windows User

This process will take 20~30mins

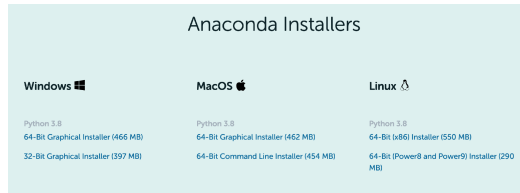
Step 1: Download Anaconda

Go to the Anaconda official website:



www.anaconda.com

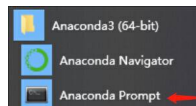
Download the latest version suitable for your system.



Step 2: Anaconda Setup

After download, Right click—Run as admin(“以管理员身份运行”), Keep hitting “Next” until ‘Done’.

Eventually, see this in Start menu.



Step 3: Update required packages

Open Anaconda Prompt, Type in `conda list` then press enter to check out packages already installed.

```
(base) C:\Users\Y>conda list
# packages in environment at C:\ProgramData\Anaconda3:
#
# Name                    Version            Build                Channel
#-----
appdirs                   1.4.3              py36h67574a_0       py36_0
blas                      1.0.0              mkl                  mkl
conda                     4.5.0              py36_0               conda-forge
conda-client              3.6.0              py36_0               conda-forge
conda-navigator           0.0.1              py36_0               conda-forge
conda-project             0.2.2              py36hfa2e28_0       py36_0
cryptography              2.8.0              py36_0               conda-forge
dask-core                 1.2.0              py36_0               conda-forge
dask-gateway              0.1.0              py36_0               conda-forge
dask-labview              0.1.0              py36_0               conda-forge
dask-ml                   0.1.0              py36_0               conda-forge
dask-scheduler            0.1.0              py36_0               conda-forge
dask-worker               0.1.0              py36_0               conda-forge
distributed               0.1.0              py36_0               conda-forge
distributed-logging       0.1.0              py36_0               conda-forge
distributed-locks         0.1.0              py36_0               conda-forge
distributed-queues        0.1.0              py36_0               conda-forge
distributed-tracker       0.1.0              py36_0               conda-forge
distributed-worker        0.1.0              py36_0               conda-forge
distributed-worker-logs   0.1.0              py36_0               conda-forge
distributed-worker-logs2  0.1.0              py36_0               conda-forge
distributed-worker-logs3  0.1.0              py36_0               conda-forge
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distributed-worker-logs6  0.1.0              py36_0               conda-forge
distributed-worker-logs7  0.1.0              py36_0               conda-forge
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distributed-worker-logs98 0.1.0              py36_0               conda-forge
distributed-worker-logs99 0.1.0              py36_0               conda-forge
distributed-worker-logs100 0.1.0             py36_0               conda-forge
```

Type in `conda upgrade --all`, then Enter to update them all.

```
(base) C:\Users\Y>conda upgrade --all
Solving environment: done
```

When you are asked if Proceed, Type ‘y’ as YES.

```
tk: 8.6.7-hc92d03_3 --> 8.6.8
widgetsnbextension: 3.4.0-py36_0 --> 3.4.1
xlswriter: 1.0.5-py36_0 --> 1.1.0
zope: 1.0-py36_0 --> 1.0-py36_0

Proceed ([y]/n)? y

Downloading and Extracting Packages
libtiff-4.0.9 829 KB #####
openpyxl-2.5.6 341 KB #####
cryptography-vectors 30.4 MB #####
multipledispatch-0.6 21 KB #####
sqlalchemy-1.2.11 1.6 MB #####
```

Validating Setup:

1. Type in `python`, should look like this: `>>>`
2. Type in `print('Hello World')` to get the output.
3. Then `exit()` to exit the interactive python.

```
(base) C:\Windows\system32>python
Python 3.8.3 (default, May 19 2020, 06:50:17) [MSC v.1916 64 bit (AMD64)] :: Anaconda, Inc. on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> print('Hello World')
Hello World
>>> exit()
```

Step 4: Jupyter Notebook Setup

Type in: conda install jupyter notebook in Prompt and wait until done.

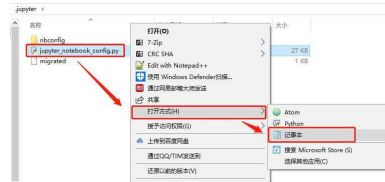
```
(base) C:\Users\Y>conda install jupyter notebook  
Solving environment: done
```

Step 5: Change the work directory (optional)

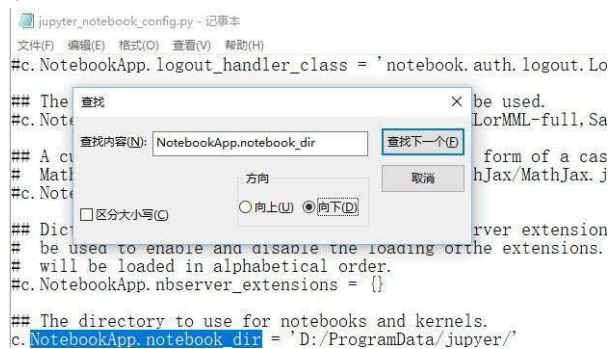
1. In Prompt, type in: jupyter notebook --generate-config, then Enter, demonstrates the configuration file path.

```
(base) C:\Users\Y>jupyter notebook --generate-config  
Writing default config to: C:\Users\Y\.jupyter\jupyter_notebook_config.py
```

2. Then please go to THE folder above and edit with Notepad.

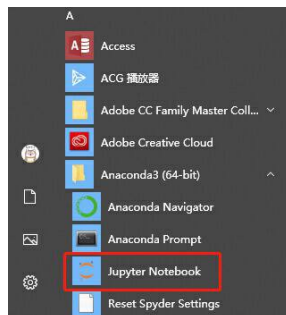


3. Use Find function (Ctrl+F) to locate NotebookApp.notebook_dir, then change it to wherever you want.

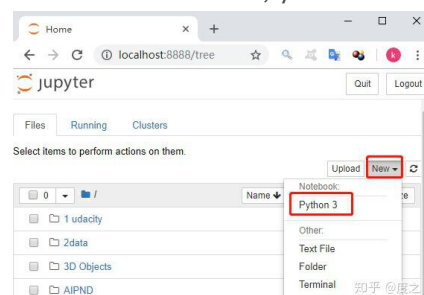


Step 6: Start up Jupyter Notebook

Find Jupyter Notebook in your Start Menu and click to begin.



Wait a few seconds, your default browser will pop up.



Now, you may change create edit or delete your files in on the Web page。

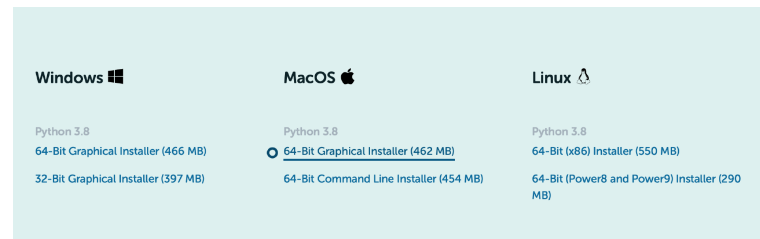
Click “New–Python 3” to start interactive programming with Jupyter Notebook!

For Mac/Linux User:

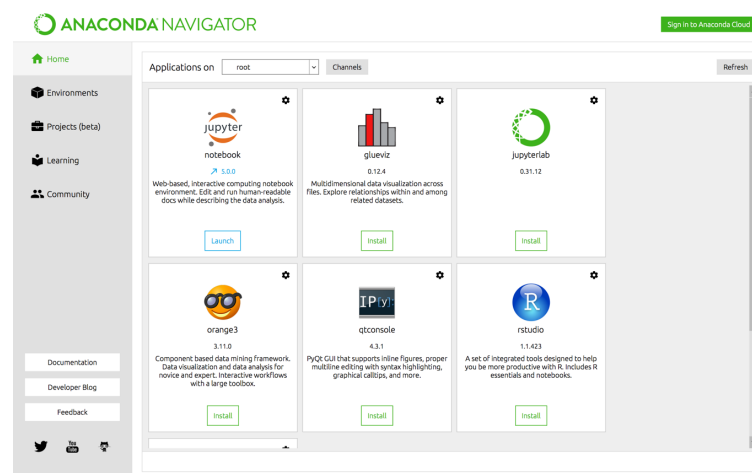
This process is similar and slightly simpler, you can also reference Windows part.

Install Anaconda& Jupyter

Download Anaconda and make sure to choose the right version. And Install graphically (command–line style recommended for experienced users).



Anaconda Graphic Interface



When you finish the installation try type in below line in your terminal:

jupyter notebook

Install new packages:

conda install + ‘Package Name’

Terminal and path to Jupyter Notebook

Mac: Open **spotlight** then type in: *terminal*.

Usually, default notebook path:

/Users/xxxxxx(User name)/

Or, You can also use the abbrev:

~/

If you have questions, please contact course TAs via email.

