

Building Environment on Windows: Anaconda

Introduction

Anaconda is an integrated environment of Python. It includes not only Python language support, but also a lot of packages for you to `import` such as `numpy` `pandas`, and some fundamental tools such as pip, IDEs (Spyder etc.) and Jupyter Notebook.

Reference: [【Anaconda教程01】怎么安装Anaconda3 - 知乎 \(zhihu.com\)](#)

Step 1: Download the Installer

- **Attention:** Anaconda3 2019.10 (with Python 3.7) is the standard environment in this course. However, Python 3.6 and newer versions perform almost the same with the content in this course.

1.1 Anaconda

On official site (slow, not recommended): [Index of / \(anaconda.com\)](#)

On TUNA mirror site: [Index of /anaconda/archive/ | 清华大学开源软件镜像站 | Tsinghua Open Source Mirror](#)

Find the file with corresponding version, OS and architecture.

E.g. Windows 64bit: https://mirrors.tuna.tsinghua.edu.cn/anaconda/archive/Anaconda3-2019.10-Windows-x86_64.exe

1.2 Another Choice: Miniconda

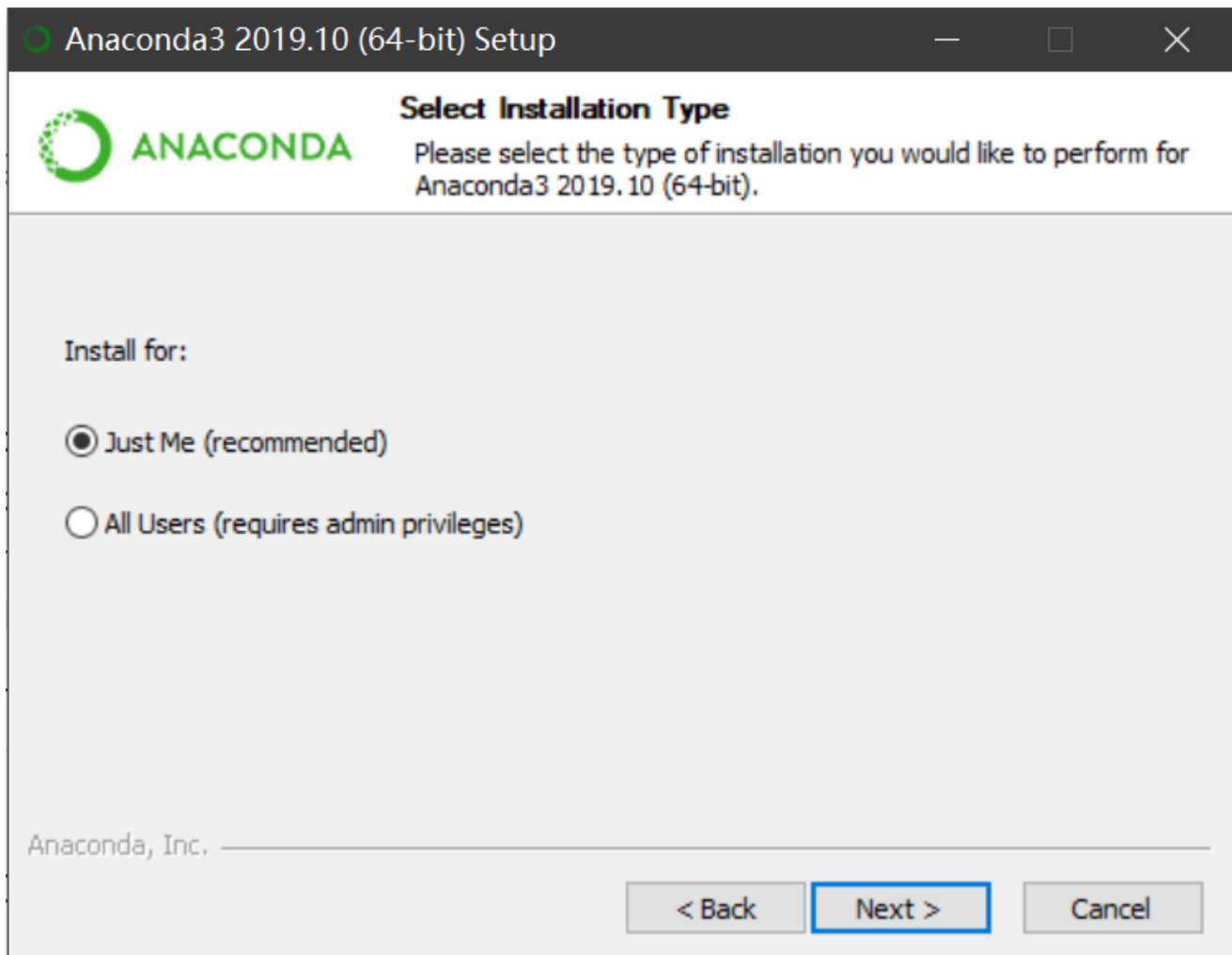
A light version of Anaconda. It only includes Python, packages and a few tools.

[Miniconda — Conda documentation](#)

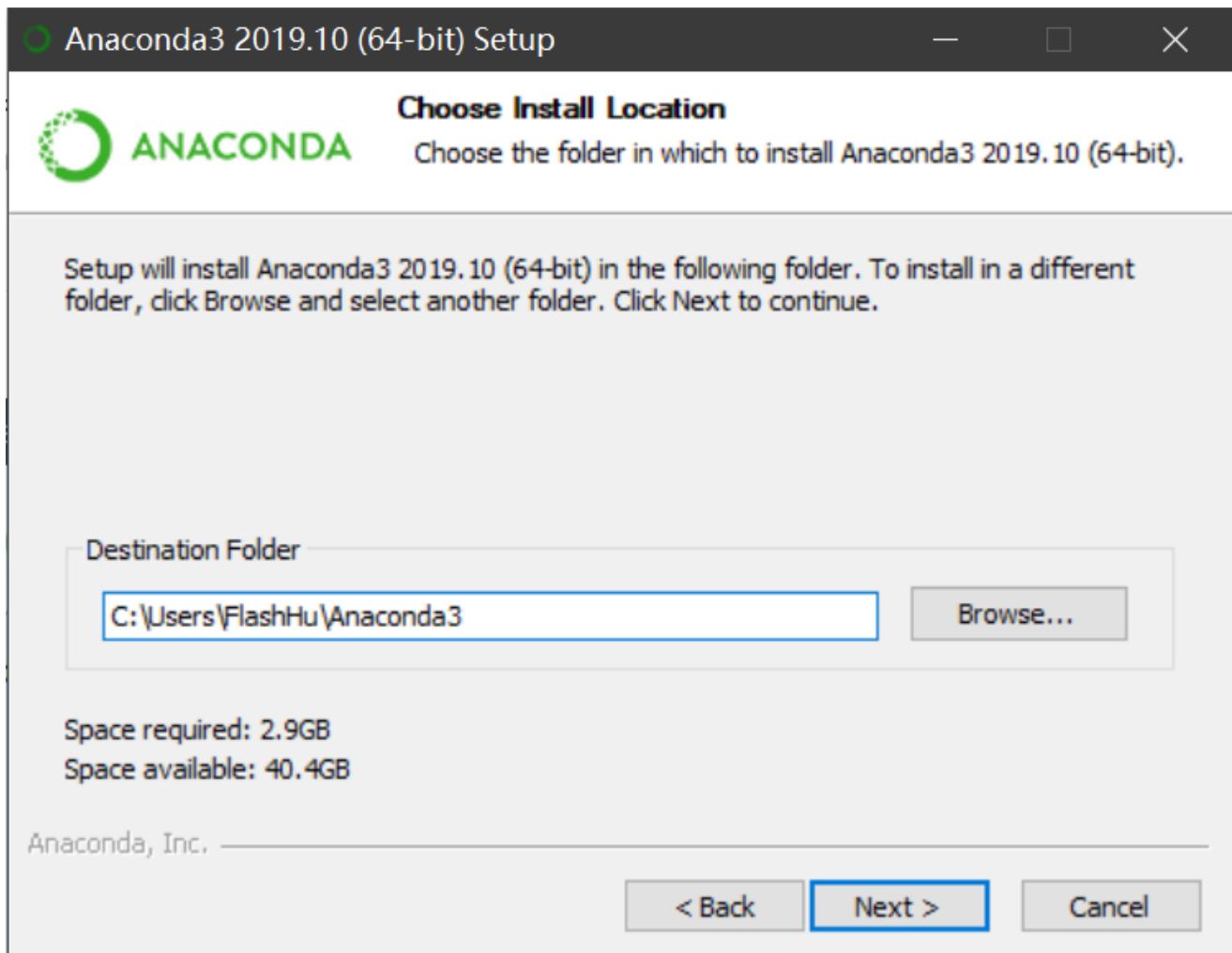
Step 2: Install

- **Attention:** If you install Anaconda, you don't need to install Python alone. If you have installed Python before and want to install Anaconda, you'd better completely uninstall it and delete the PATH related to Python.

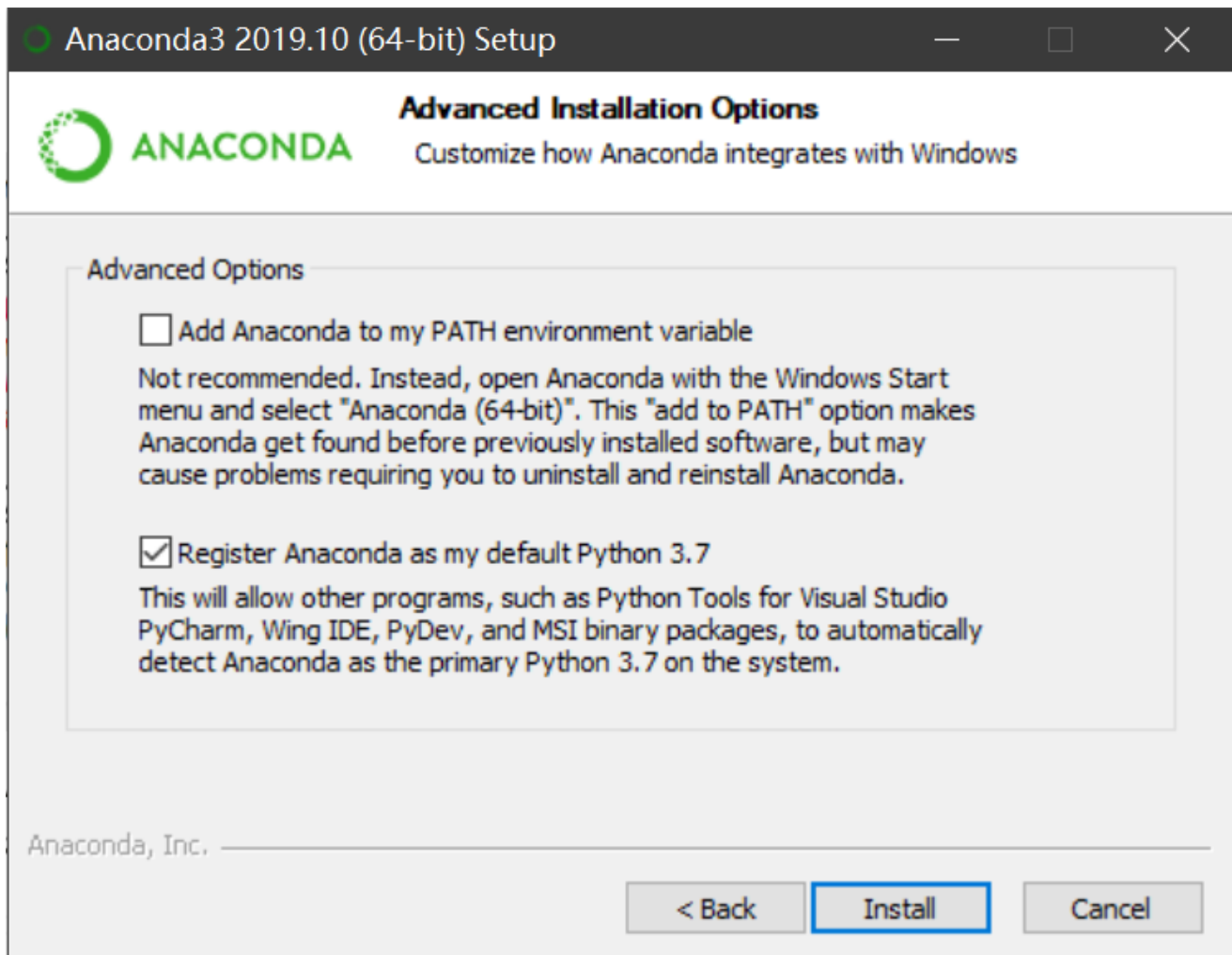
Run the setup file. There are several options during the installation.



Both OK, depending on your requirement.



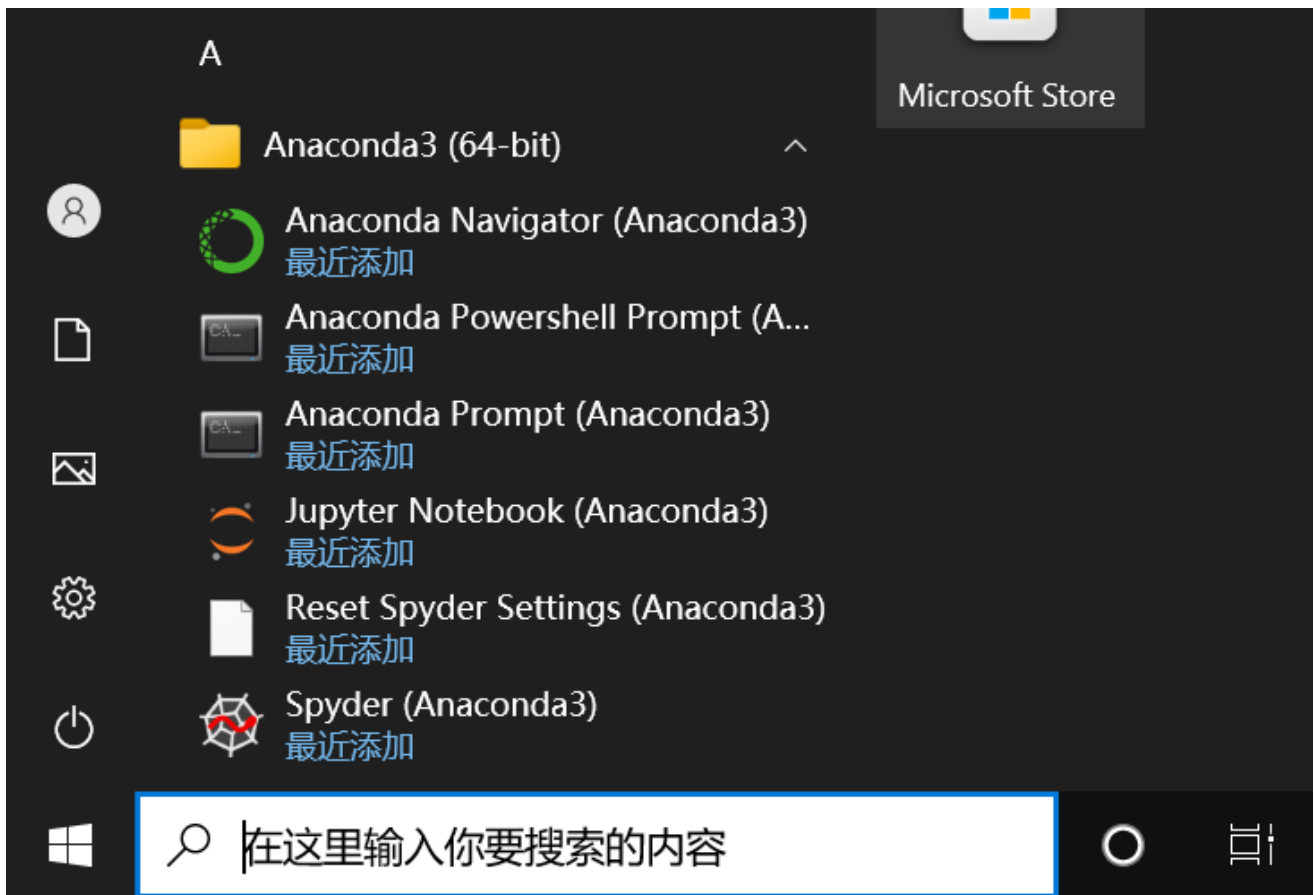
Whatever you want. However, the path should **NOT** contain spaces or special characters including Chinese characters.



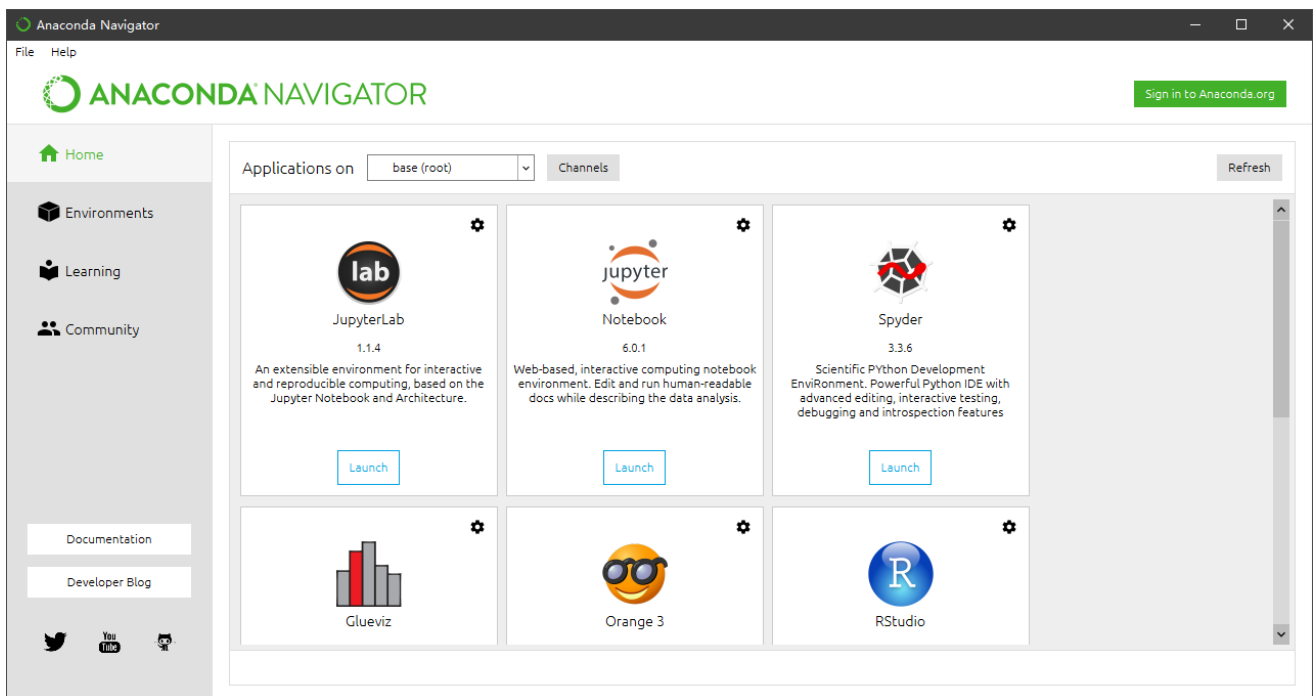
Add Anaconda to my PATH environment variable: **NOT** recommended, unless you clearly understand PATH and the risk you will take.

Register Anaconda as my default Python 3.X: recommended, unless you plan to install multiple versions of Python or Anaconda.

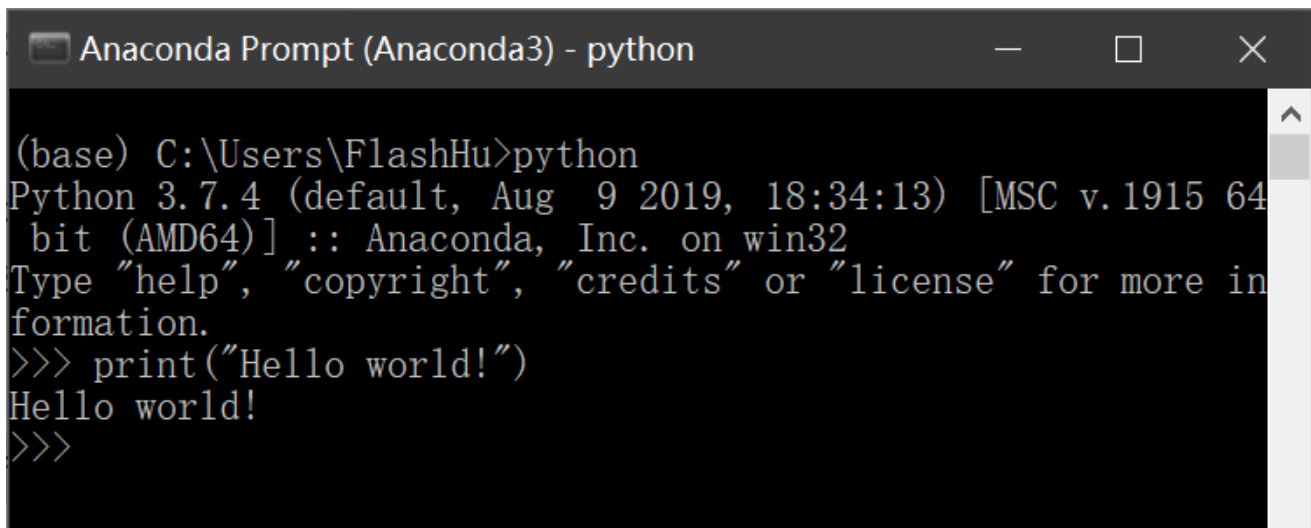
Step 3: Test Environment



They are added to your Windows start menu.



Open Anaconda Navigator: one way to launch those tools.

A screenshot of an Anaconda Prompt window titled "Anaconda Prompt (Anaconda3) - python". The window shows a terminal session where the user has entered the command 'python'. The output shows the Python 3.7.4 version information and the Anaconda logo. The user then enters a Python prompt '>>>' and types 'print("Hello world!")', which outputs 'Hello world!'. The prompt '>>>' is shown again at the end of the session.

```
(base) C:\Users\FlashHu>python
Python 3.7.4 (default, Aug 9 2019, 18:34:13) [MSC v.1915 64
bit (AMD64)] :: Anaconda, Inc. on win32
Type "help", "copyright", "credits" or "license" for more in
formation.
>>> print("Hello world!")
Hello world!
>>>
```

Open Anaconda PowerShell Prompt/Anaconda Prompt. We view them as cmd with Python.

- Type `spyder` `jupyter notebook` etc.: another way to launch those tools.
- Type `python` to write mini programs.
- Type `conda list` to see the packages you have installed.
- Type `pip install xxx` to install the package you want.

For writing long programs, Spyder is the default IDE. You can also use your favorite IDEs like VSCode, Pycharm, etc..

Try Jupyter Notebook, which your slides are written by. You may be required to use it in later courses like SI 140.

About

Author: Flash Hu

Typesetting: Flash Hu, teafrogsf

Date: 02/17/2022