LG 467 Computers in Linguistics

[1-2021] Python 1: Installation and Setup

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Installation

Windows 10

32 vs 64: It’s probably safe to say your laptop run a 64-bit version..

But if you want to be sure, do the following:

- Select *Start*
- Select *Settings*, then *System*, and then *About*
- See *System type* under *Device specifications*.

Knowing this should help you choose either a 32- or 64-bit version

Python

Two common versions

- Python 2.X: discontinued in 2020
- Python 3.X: most recent version 3.9.6

We could have installed Python from python.org/downloads

- Python plus standard libraries and `pip` (package manager)

Python

We’re going to install **Anaconda** instead....

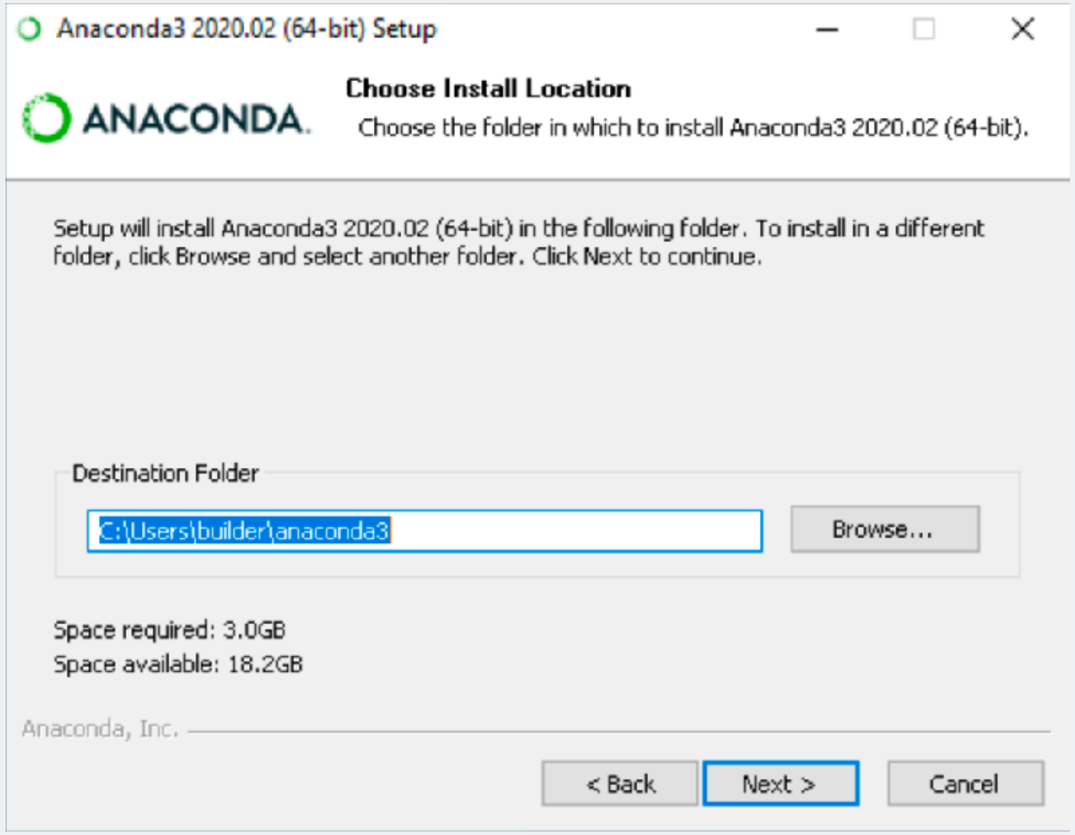
- an all-in-one distribution of Python and R languages
  - the programming language
  - hundreds of useful packages ("libraries") for data science
  - GUI, **Anaconda Navigator**, and IDE/editor such as **Spyder**
  - package manager, **Conda**

Anaconda

Anaconda Individual Edition

- Google "anaconda individual edition"
- Select your operating system (or simply click download)

Anaconda



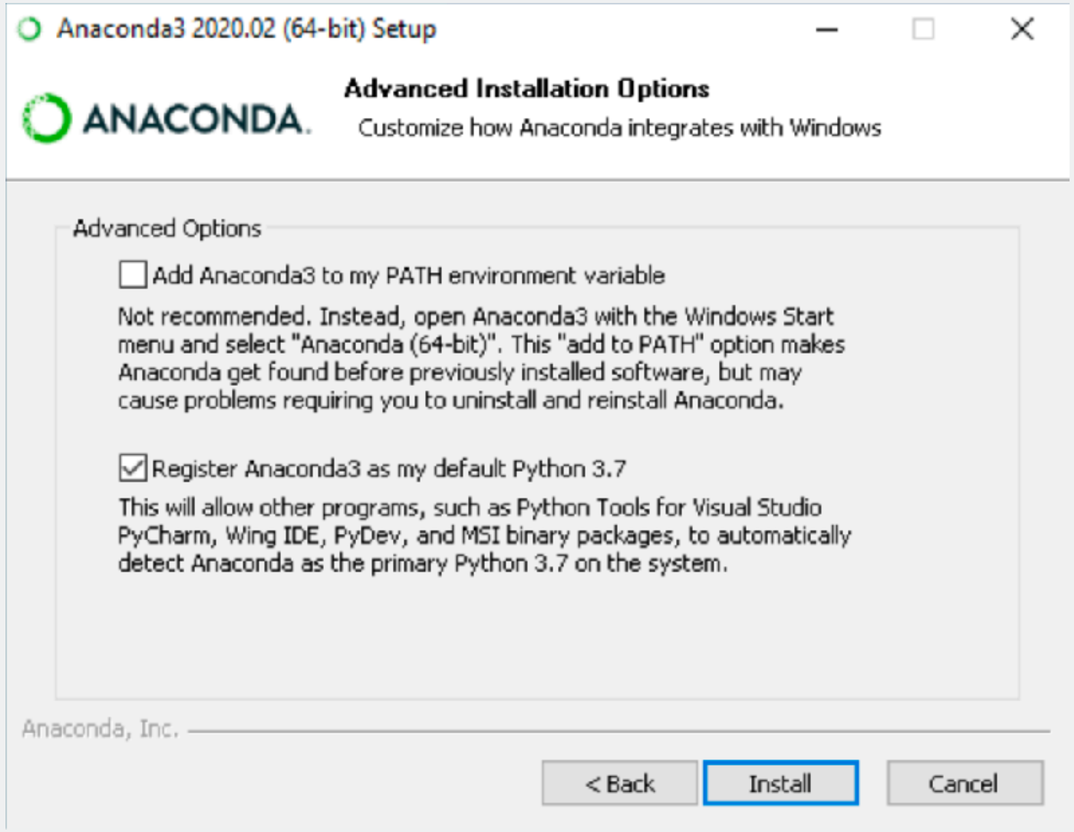
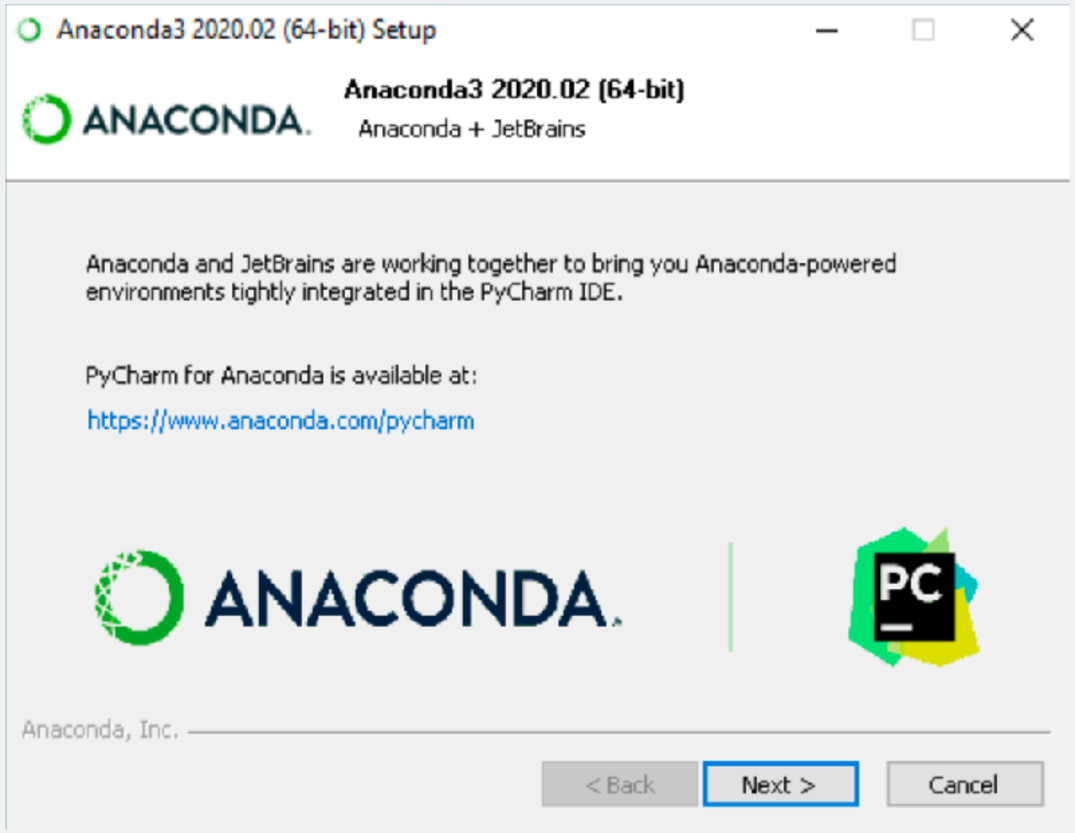


Image source: Anaconda

Anaconda



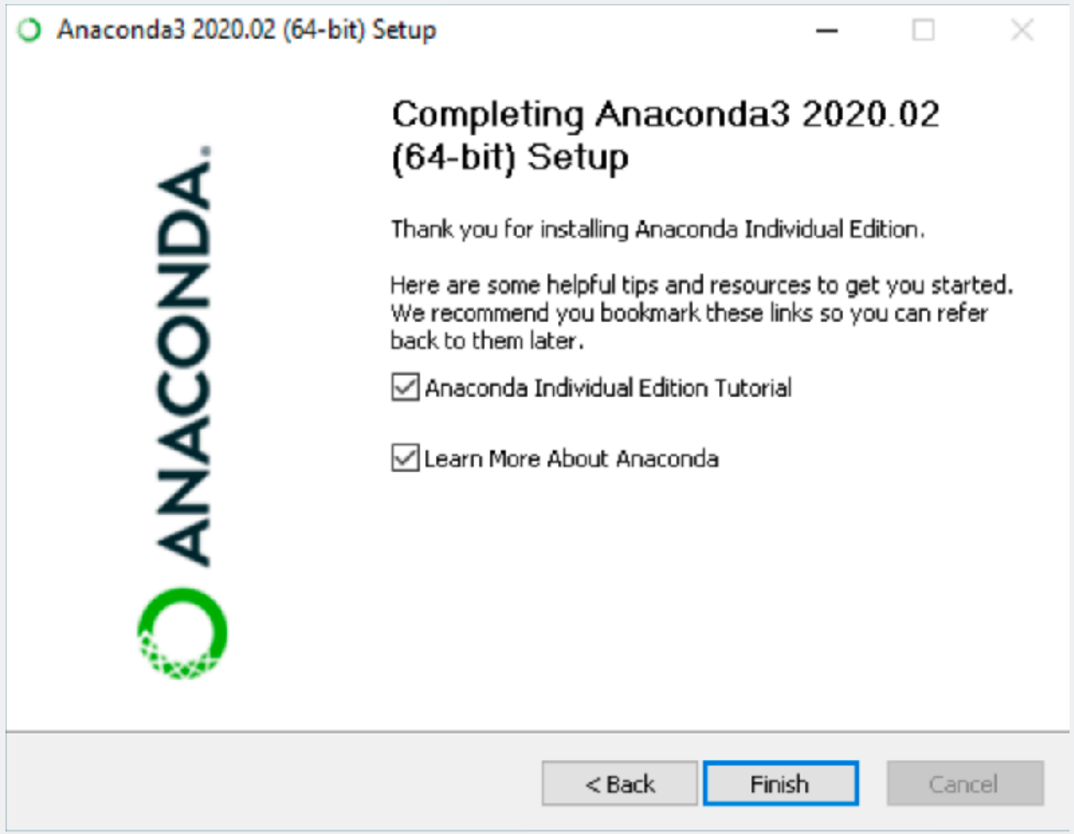


Image source: Anaconda

Anaconda Navigator

Graphical User Interface (GUI) which is useful for

- launching various applications (Spyder, RStudio, VS Code, etc.)
- installing packages
- managing environments*

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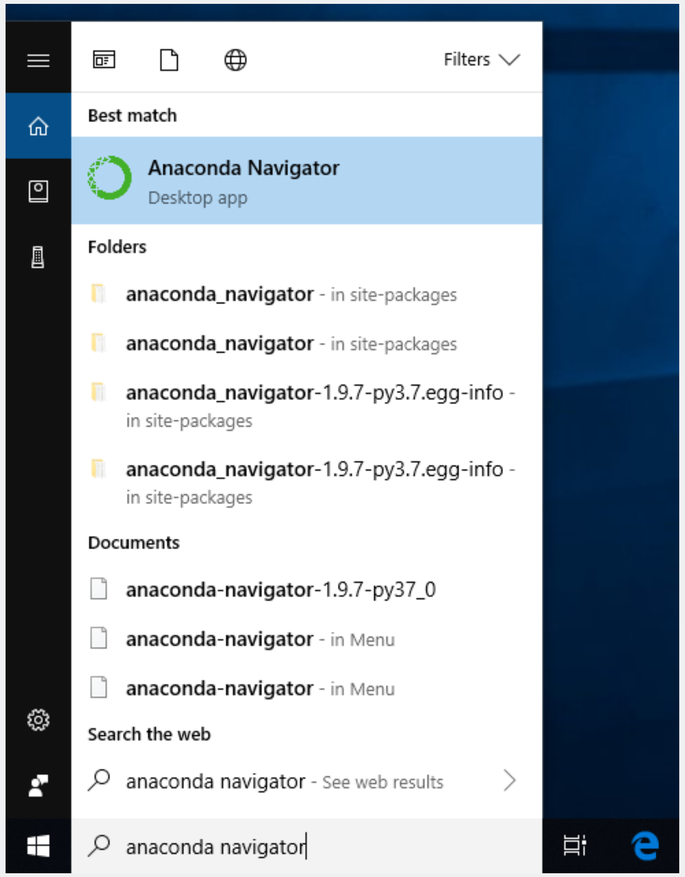
* We probably won’t cover environments in this course.

Anaconda Navigator

From the Start menu, search & launch Anaconda Navigator



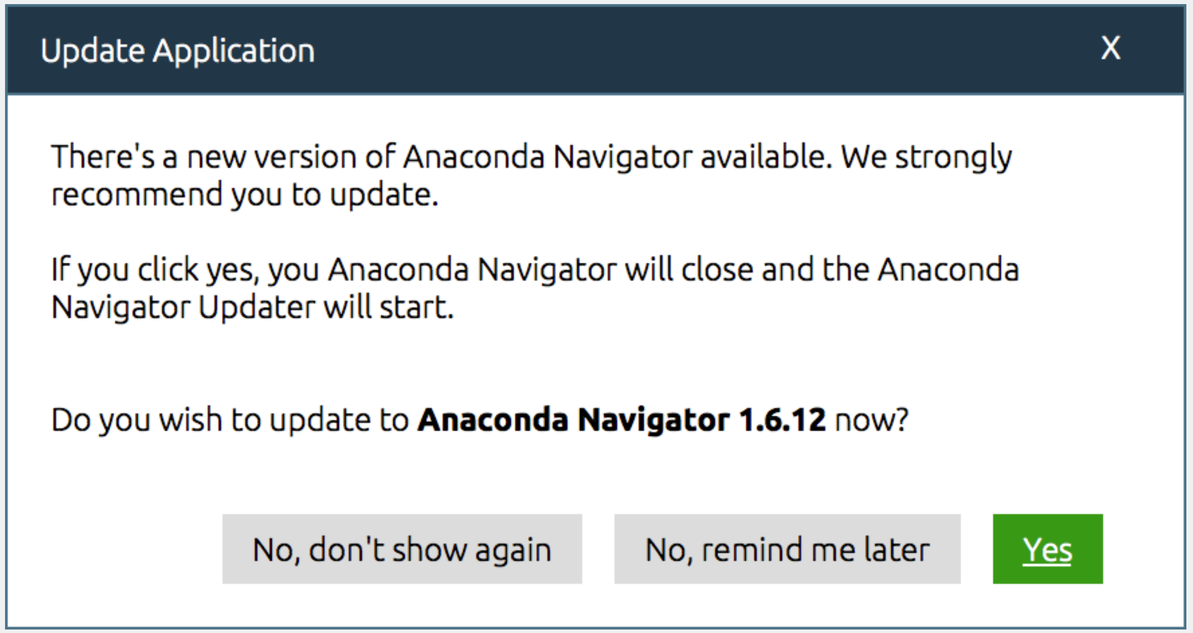


Image source: Anaconda

Spyder

Spyder

Integrated Development Environment (IDE)

- Useful for writing, running, and debugging code

Spyder

Launching Spyder (the program may take a while to load...)

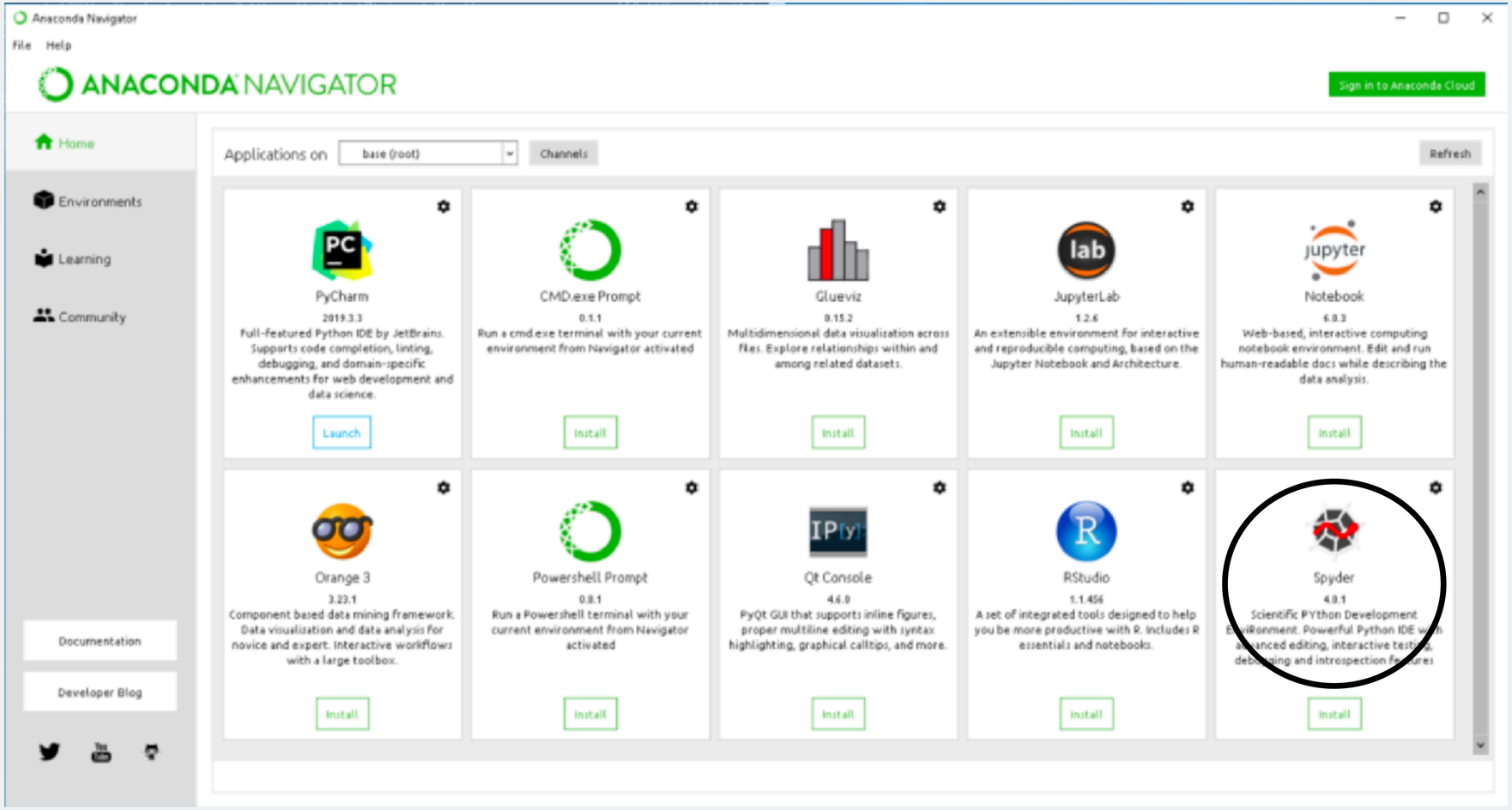
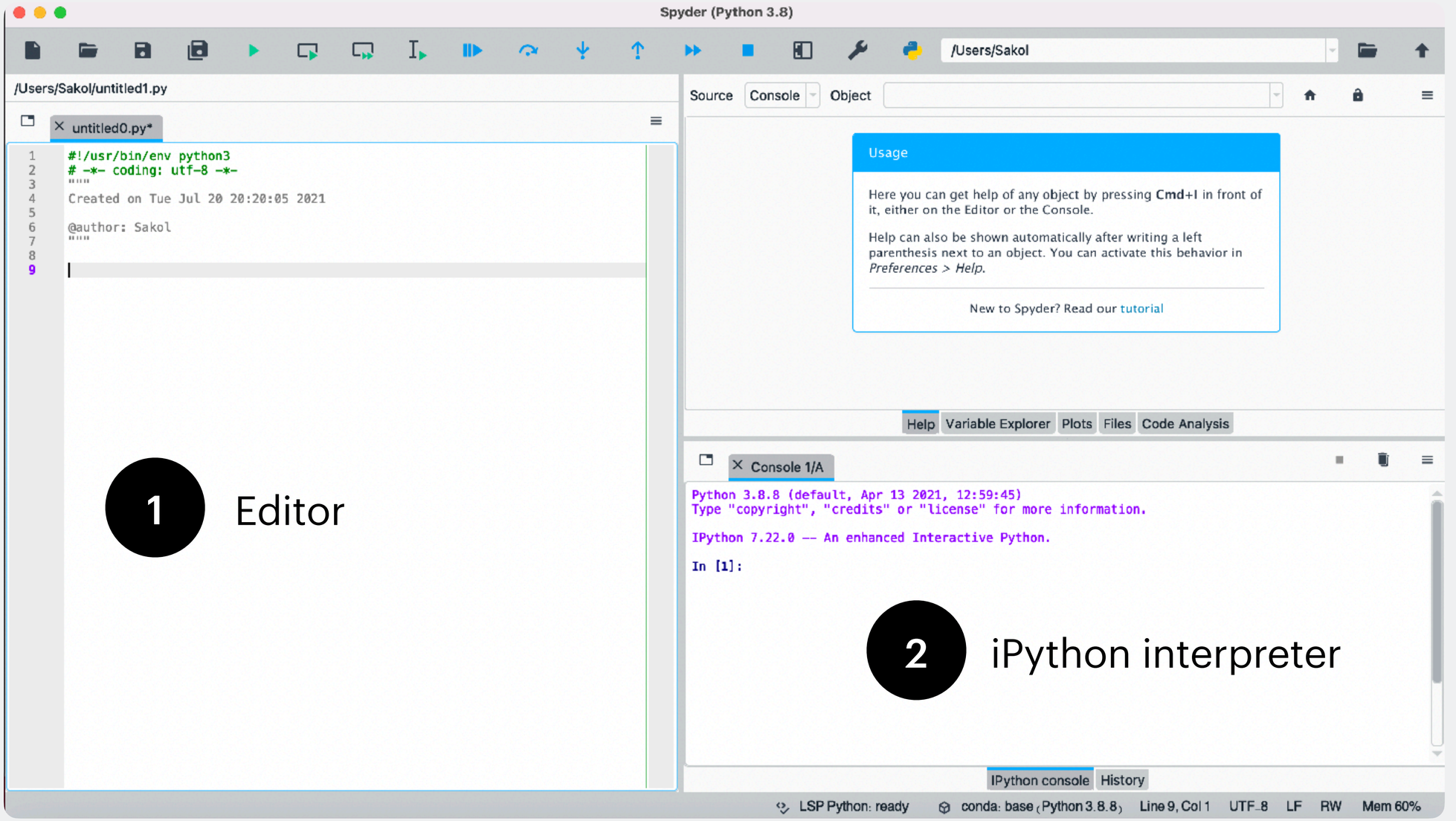


Image source: Anaconda

Spyder


Spyder (Python 3.8)
/Users/Sakol
/Users/Sakol/untitled1.py
untitled0.py*
#!/usr/bin/env python3
-*- coding: utf-8 -*-
"""
Created on Tue Jul 20 20:20:05 2021
@author: Sakol
"""
1
Editor
Source
Console
Object
Usage
Here you can get help of any object by pressing Cmd+I in front of it, either on the Editor or the Console.
Help can also be shown automatically after writing a left parenthesis next to an object. You can activate this behavior in Preferences > Help.
New to Spyder? Read our tutorial
Help
Variable Explorer
Plots
Files
Code Analysis
Console 1/A
Python 3.8.8 (default, Apr 13 2021, 12:59:45)
Type "copyright", "credits" or "license" for more information.
IPython 7.22.0 -- An enhanced Interactive Python.
In [1]:
2
iPython interpreter
IPython console
History
LSP Python: ready
conda: base (Python 3.8.8)
Line 9, Col 1
UTF-8
LF
RW
Mem 60%

Spyder

iPython prompt: Some math

```
5 + 3
7 - 2

4 / 2
7 // 2
7 % 2
4 ** 2

5 + 3 * 8
4 - 2 / 3

(5 + 3) * 8
5 + (3 * 8)
4 - (2 / 3)
```

Code 0.1

Spyder

Editor:

- Create a class folder and change a working directory
- Create and save a new file (hello.py) in that folder

```
greet = "Hello, world!"
```

Code 0.2

- Run the file hello.py. What do you see?
- Add the following line to your script. Save and run it again.

```
print(greet)
```

Code 0.3

Our plan next week!

More Python!

- We'll cover the basics of Python, plus text processing with NLTK

Assignment: HW 2 Unicode (Link) → due Saturday midnight

Readings: NLTK Chapter 1 (minus Sec. 5)