

[Mathematics for Sustainability \(part 2\)](#)[/ Installing Python 3 on your own computer/](#)

Installing Python 3 - Mac

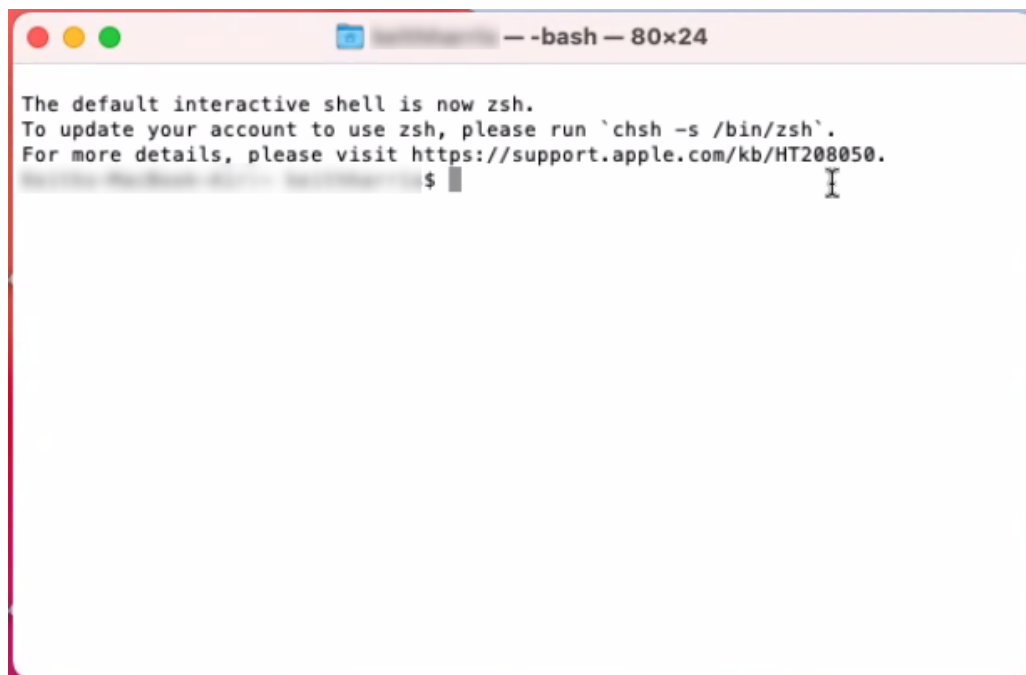
# Installing Python 3 - Mac

All the software you need for Python is free. I try to explain here what your options are.

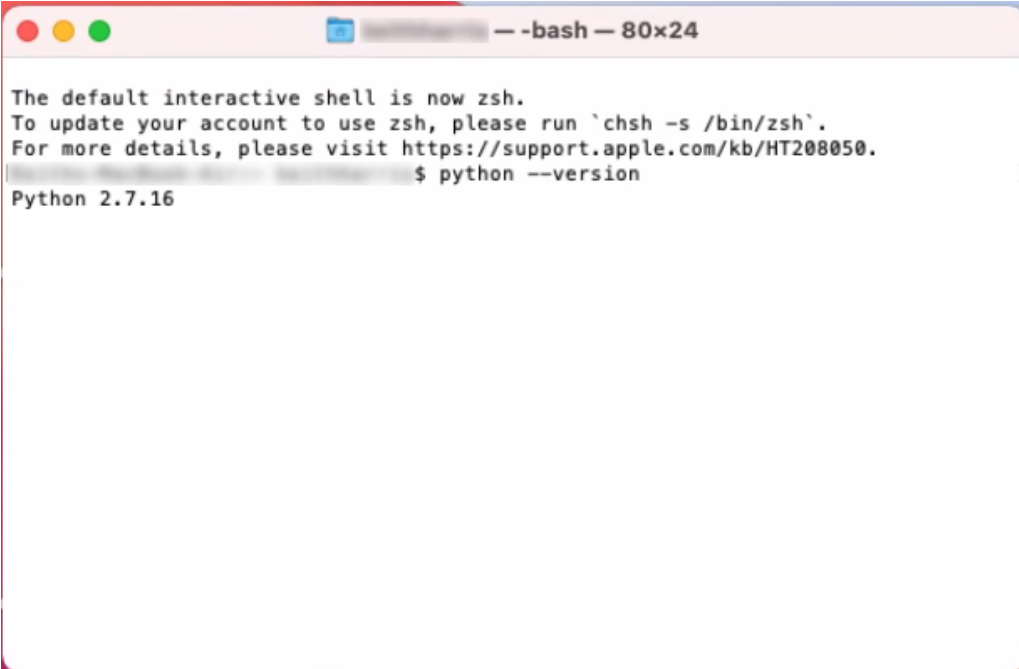
## Do you have Python 3?

Mac users may have Python 3 installed already. To test this:

1. In the Finder, go to Applications and find 'Terminal', which might be under 'Utilities'. You should get something that looks like this.



2. Type (or copy) `python --version` and press enter.
3. What happens? If it says Python 3.something, then you have Python 3 installed and are good to go. If it says Python 2.something like this screenshot, or does something else, you need to install Python 3 following the instructions below.

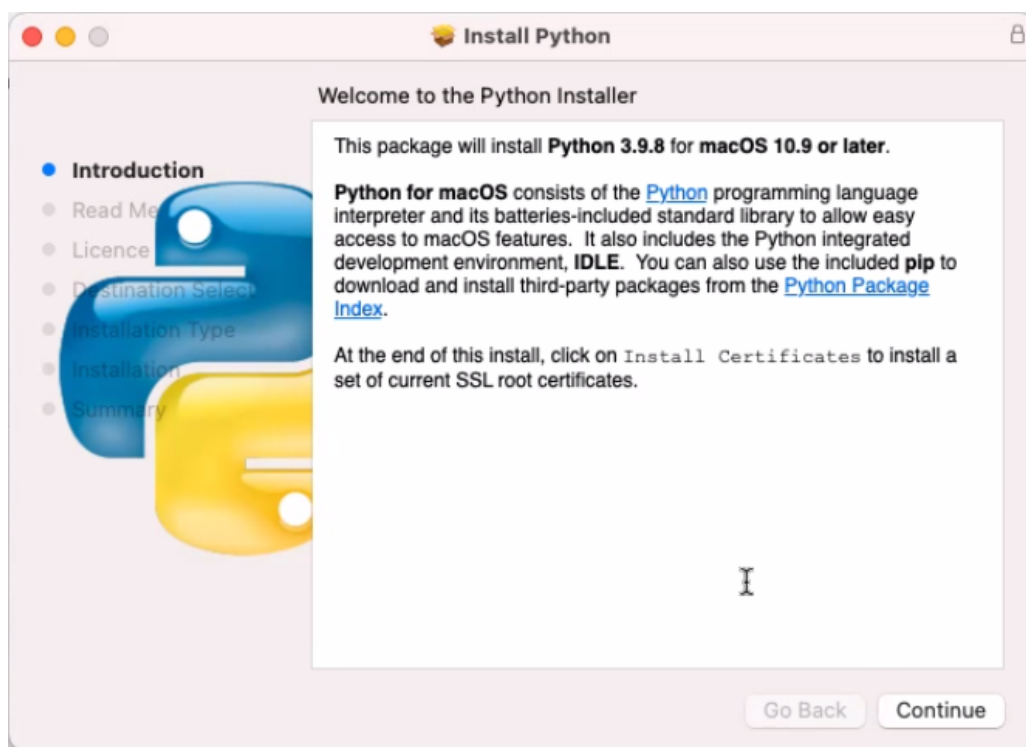
A screenshot of a macOS terminal window. The title bar shows standard macOS window controls (red, yellow, green buttons) and a blue icon. The text in the terminal reads: "The default interactive shell is now zsh. To update your account to use zsh, please run `chsh -s /bin/zsh`. For more details, please visit https://support.apple.com/kb/HT208050." followed by a prompt character and the command "\$ python --version". The output of the command is "Python 2.7.16".

```
The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
$ python --version
Python 2.7.16
```

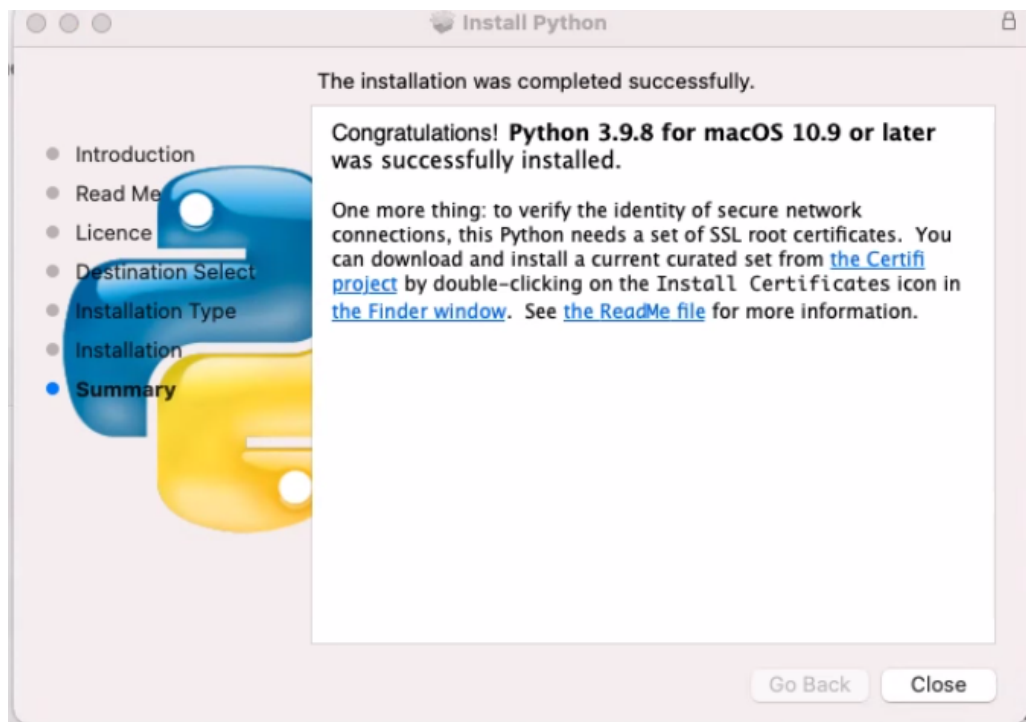
## If you need to install Python 3

1. Download the latest version of Python from [the Python website](https://www.python.org/downloads/).

2. Run the file to install Python.



3. You'll have to click through a few screens and enter your password to install new software. Continue until you get to this screen.



## Extra packages

1. Open the right program for your computer:
  - On a Mac, pip runs in a Terminal window, so find the Terminal application and open it. In the Finder, go to Applications and find 'Terminal', which might be under 'Utilities'. You should get something that looks like this.



2. Please copy this command and press enter to run it.

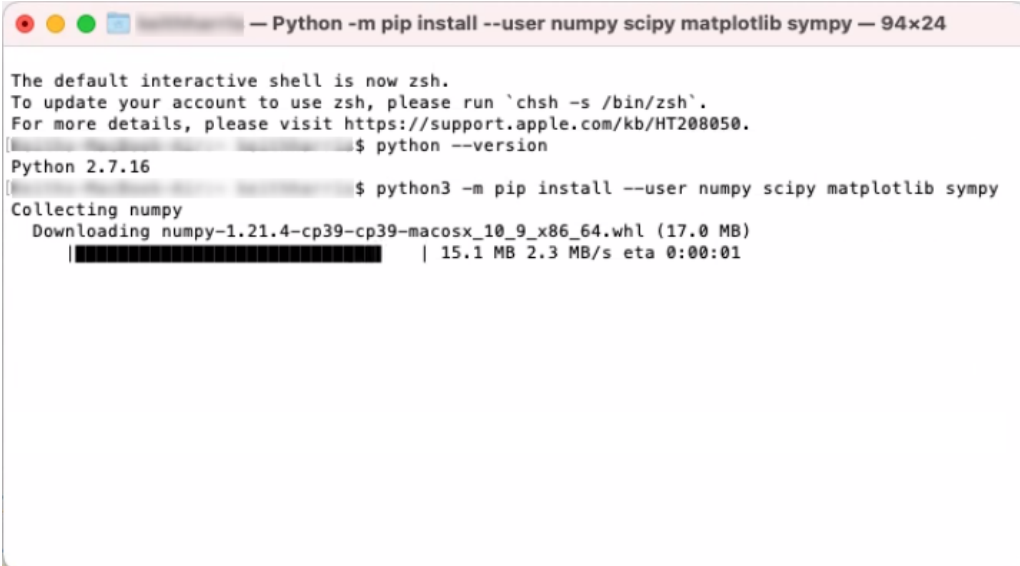
```
python3 -m pip install --user numpy scipy  
matplotlib sympy
```

If this doesn't work, try this.

```
python -m pip install --user numpy scipy matplotlib  
sympy
```

This will install a useful set of mathematical and scientific packages.

Here's what this should look like in macos when you run the command:

A screenshot of a macOS terminal window. The title bar reads "Python -m pip install --user numpy scipy matplotlib sympy — 94x24". The terminal output shows the default shell is zsh, followed by a message to update the account. Then, the command `$ python --version` is run, showing `Python 2.7.16`. Next, the command `$ python3 -m pip install --user numpy scipy matplotlib sympy` is run. The output shows "Collecting numpy" and "Downloading numpy-1.21.4-cp39-cp39-macosx\_10\_9\_x86\_64.whl (17.0 MB)" with a progress bar and speed information: "15.1 MB 2.3 MB/s eta 0:00:01".

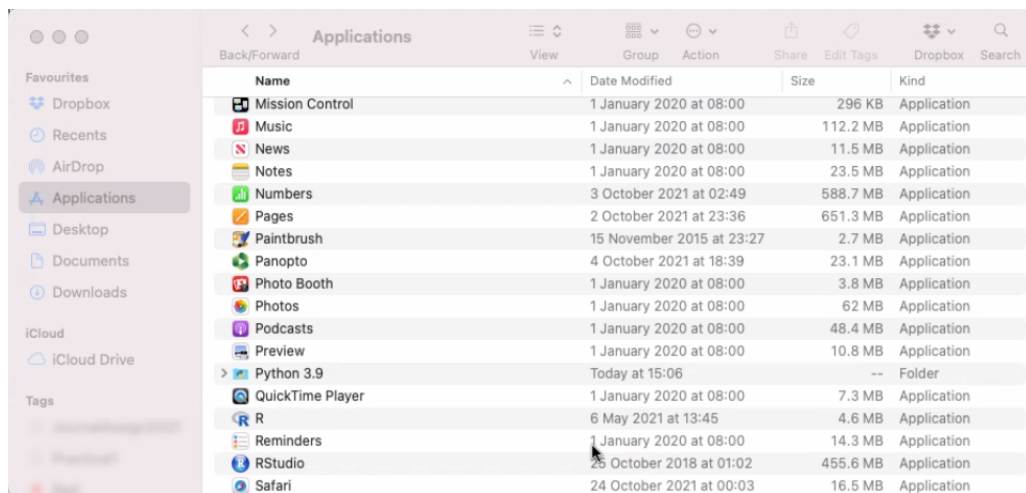
```
Python -m pip install --user numpy scipy matplotlib sympy — 94x24  
  
The default interactive shell is now zsh.  
To update your account to use zsh, please run `chsh -s /bin/zsh`.  
For more details, please visit https://support.apple.com/kb/HT208050.  
$ python --version  
Python 2.7.16  
$ python3 -m pip install --user numpy scipy matplotlib sympy  
Collecting numpy  
  Downloading numpy-1.21.4-cp39-cp39-macosx_10_9_x86_64.whl (17.0 MB)  
    |#####| 15.1 MB 2.3 MB/s eta 0:00:01
```

## Editor

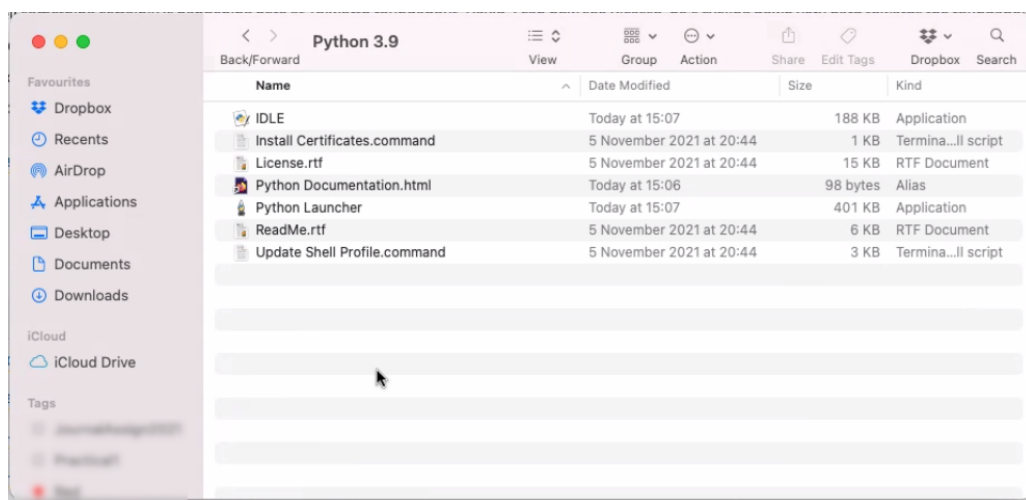
Once Python has installed, you will load the editor IDLE.

1. In the Finder, go to Applications and you should see a folder called 'Python 3 something'

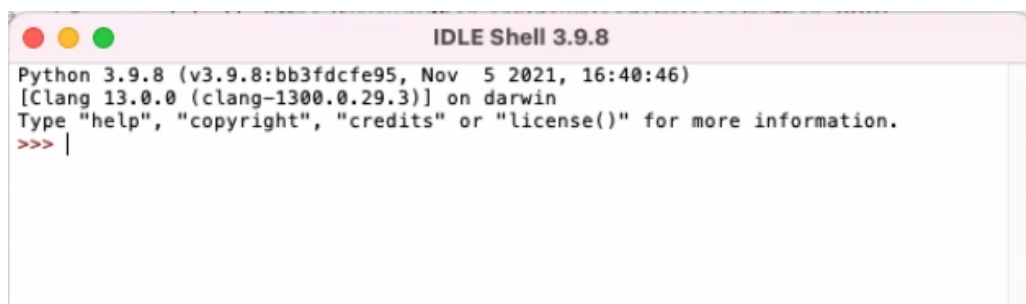
### Python 3.something .



2. Within the Python folder, you should find an application called IDLE. Run this.



3. Check that the program that opens says "Python 3.something" at the top.



Warning: I've heard your Mac might default to using TextEdit as a Python editor, which is no good because it does weird rich text things. Instead, make sure you are loading IDLE (which comes with Python) or install another editor such as [Spyder](#).

It is now time to move to the 'Python basics' notes.