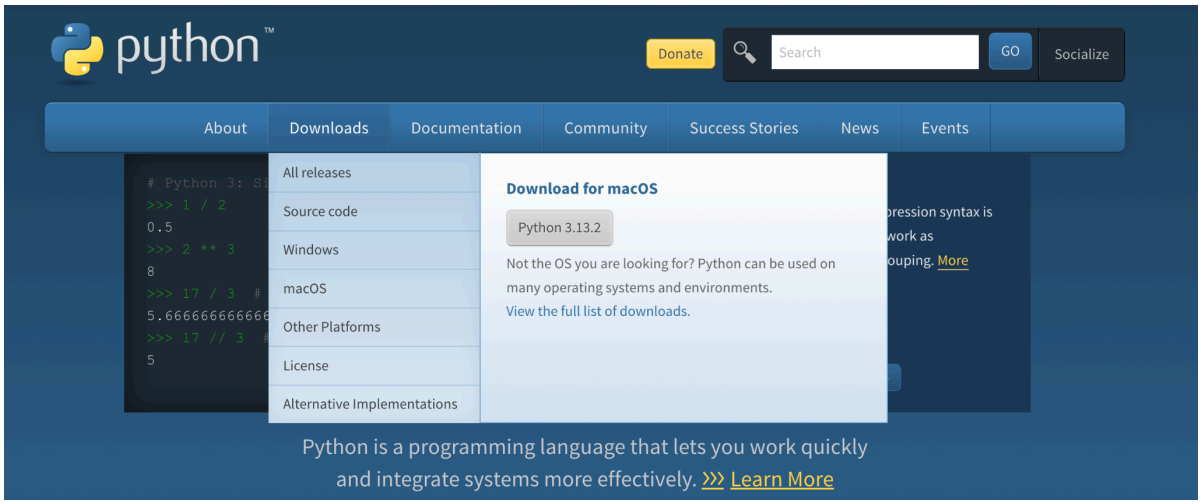
Mac setup

Install Python

1. Go to **python.org** and download the latest Python 3 installer for macOS (e.g., Python 3.13 as of early 2025).



2. After downloading the installer, run it by opening it (click the box with the arrow).

3. Follow the instructions in the installer. During installation, check the option to "Add Python to PATH" if prompted.

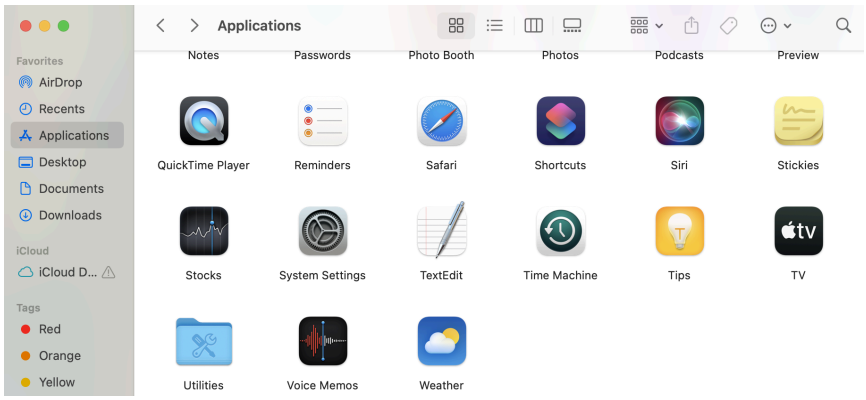
4. Congratulations for installing Python!

Check installation

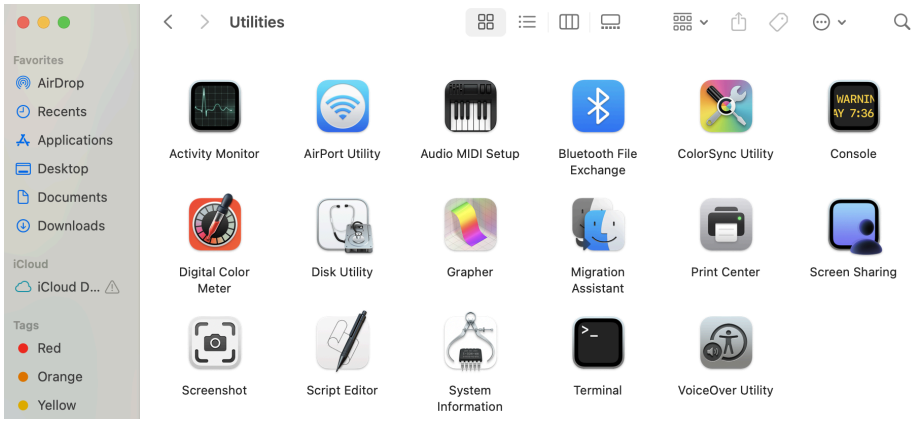
1. Open your terminal. The fastest way to do that is to use Spotlight Search. Press Command (⌘) + Spacebar to open Spotlight Search. Type Terminal and press Enter.

Another way to open the terminal is to click on 'Finder'.

Then click on the 'Utilities' folder.



Finally click on 'Terminal':



2. Once in your terminal, type 'python3 --version'.

```
~ % python3 --version
```

You should see something like 'Python 3.13.2' (you may have a more recent version).

```
Python 3.13.2
```

Install Necessary Packages

1. Next, install **Jupyter** (for notebooks) and the libraries you use, like **pandas**, **matplotlib**, and **scikit-learn**.

In the terminal type:
'pip3 install jupyter pandas matplotlib scikit-learn'

```
~ % pip3 install jupyter pandas matplotlib scikit-learn
```

This command installs:

- jupyter: Runs Jupyter Notebooks.
- pandas: Handles data manipulation.
- matplotlib: Creates plots.
- scikit-learn: Supports machine learning (including Linear models).

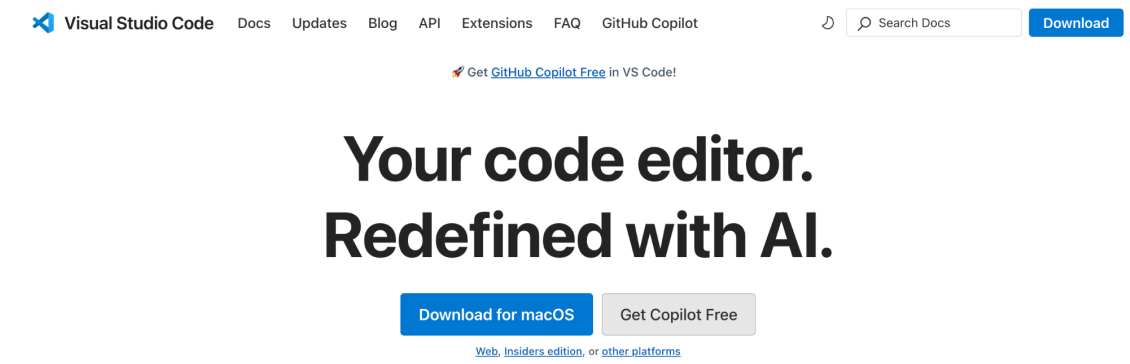
2. After the installation process is complete, you can check if you have installed each package with 'pip3 list'

```
~ % pip3 list
```

Install VS Code

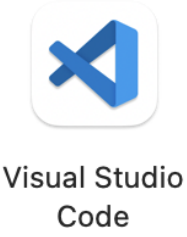
Now we need a code editor. VS Code is a popular option.

1. Download VS Code from 'code.visualstudio.com'.



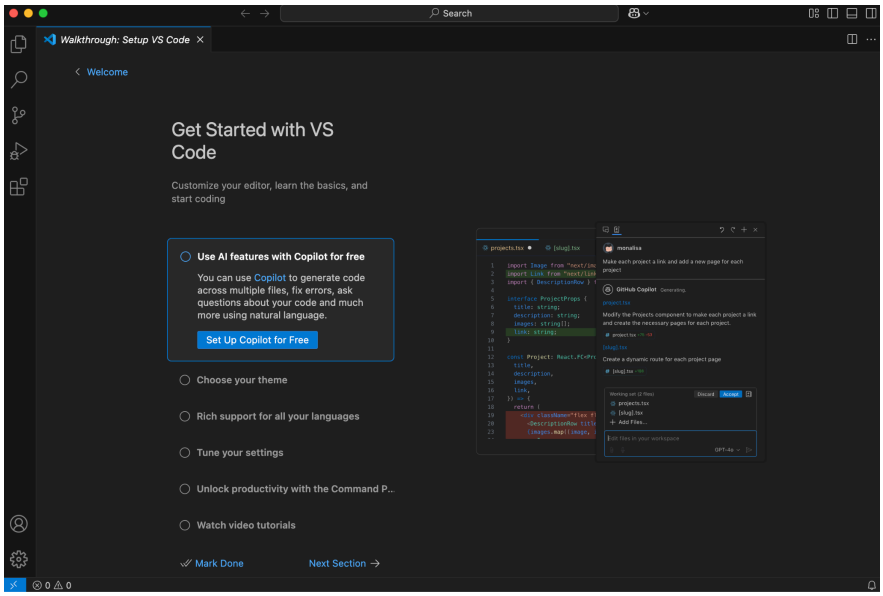
2. Open the VS Code zip file by double clicking.
3. Move the VS Code file from the **'Downloads'** folder to the **'Applications'** folder.

4. In the **'Applications'** folder, double click on the VS Code icon to open it.



Download extensions

1. Once in VS Code, click on the extensions icon (on the left sidebar).

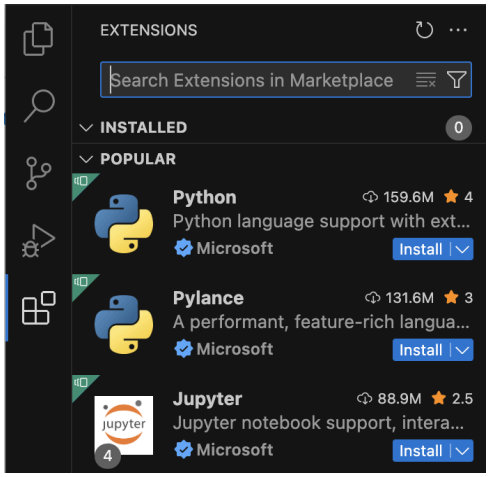


Here is the icon:

2. Install the following extensions:

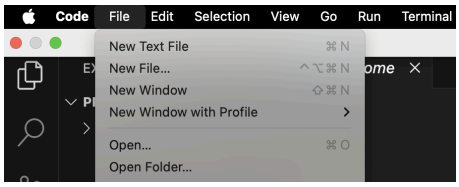
- Python (by Microsoft): Adds Python support.
- Jupyter Extension Pack (by Microsoft): Enables notebook functionality.

Just search for each, click "Install," and you're set.

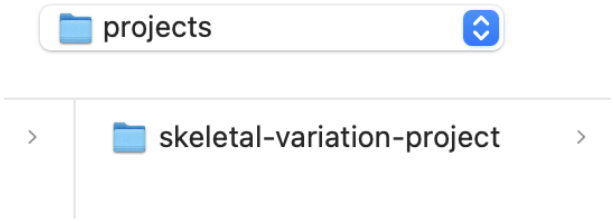


Set Up Your Project and Interpreter

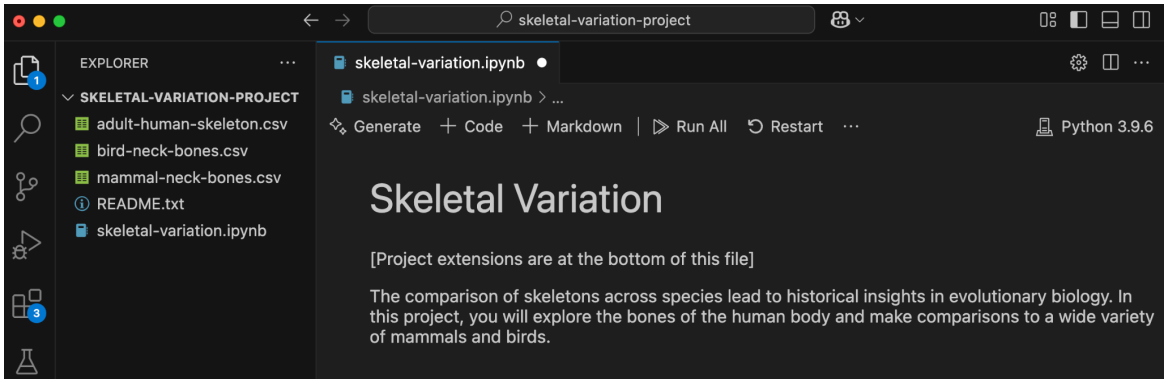
1. Open up your project. In VS Code, use '**File > Open Folder…**' to open the folder where your notebooks are.



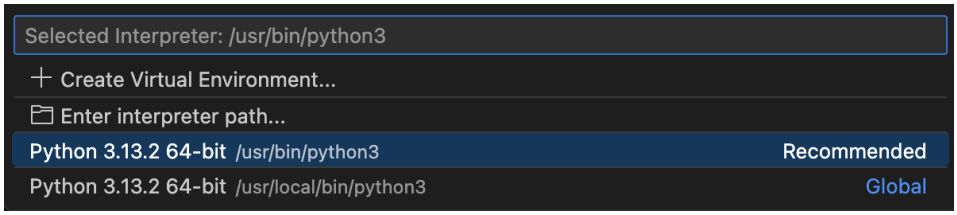
2. Choose your folder, such as 'skeletal-variation-project'.



3. Now the project should be open in VS Code. Open the **'ipynb'** file.

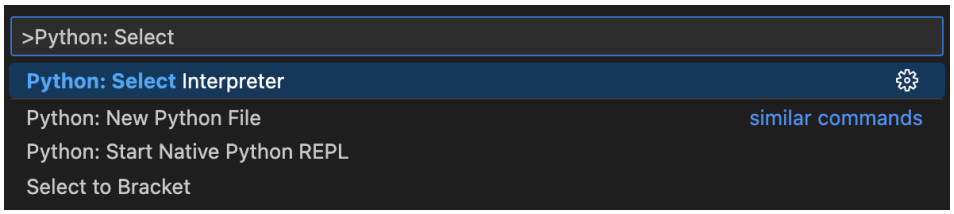


4. When you run the code for the first time, you might need to select the Python interpreter. Select the python you downloaded earlier.



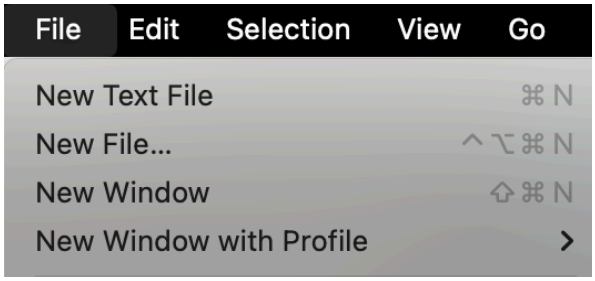
5. You can change your Python interpreter as follows.

- Press **Shift+Cmd+P** to open the Command Palette.
- Type "Python: Select Interpreter" and select the Python interpreter.

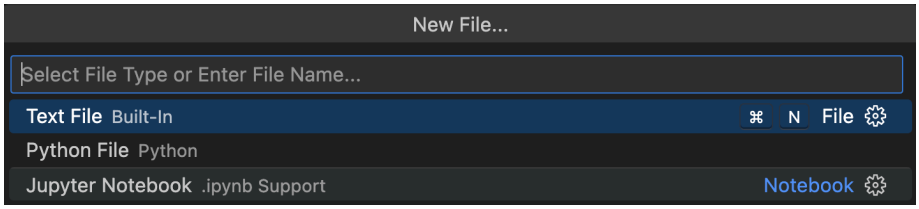


New Interactive Python Notebook

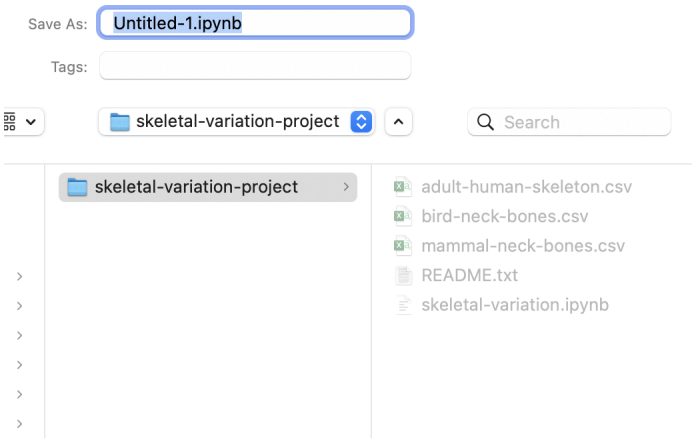
1. Select **'File > New File'**.



2. Select Jupyter Notebook.



3. Click '**File > Save As..**' to rename and save this notebook.



Verify Everything Works

To make sure your setup works, try these quick tests in your notebook:

For **pandas**:
import pandas as pd; print(pd.__version__)

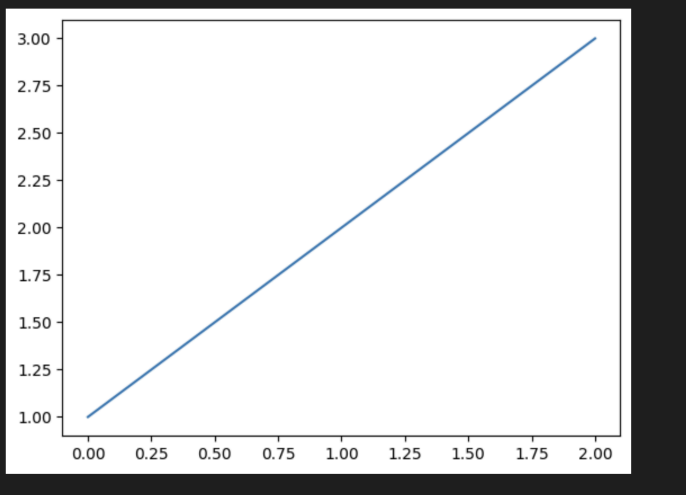
```
import pandas as pd; print(pd.__version__)

[1]  ✓ 0.3s
...  2.0.2
```

For **matplotlib**:
import matplotlib.pyplot as plt; plt.plot([1,2,3]); plt.show()

```
import matplotlib.pyplot as plt; plt.plot([1,2,3]); plt.show()

[2]  ✓ 0.3s
```



For **scikit-learn**:
from sklearn.datasets import load_iris; print(load_iris().data.shape)

```
from sklearn.datasets import load_iris; print(load_iris().data.shape)

[3]  ✓ 2.4s
...  (150, 4)
```

If these run without errors and show outputs (e.g., a plot or data shape), you're good to go!