Getting Started with Jupyter and Python[¶](#gjdgxs)

### Popularity Contest[¶](#30j0zll)

* 2017 [Top Programming Languages](https://people.duke.edu/~ccc14/sta-663-2018/notebooks/S00_Python.html)
* March 2024 [TIOBE Index](https://www.tiobe.com/tiobe-index/)

## Installation[¶](#1fob9te)

### Environment management[¶](#3znysh7)

* What are environments: a Python environment is a self-contained directory that contains a specific Python version and various packages.
* Why it's crucial: different projects may require different versions of Python or libraries, and environments prevent conflicts between these requirements.

### conda for environment management[¶](#2et92p0)

* Download miniforge here, <https://github.com/conda-forge/miniforge>
* open your terminal/command prompt

conda create --name stat\_207 python=3.10 conda activate stat\_207 conda install numpy conda deactivate conda env remove --name myenv

Jupyter lab/notebook[¶](#tyjcwt)

[website](https://jupyter.org/install)

conda install matplotlib conda install -c conda-forge jupyterlab

Once installed, launch JupyterLab with:

jupyter lab

Install the classic Jupyter Notebook with:

conda install notebook

To run the notebook:

jupyter notebook

(Optional) TensorFlow/PyTorch[¶](#3dy6vkm)

For deep learning and training deep neural networks,

* [TensorFlow](https://www.tensorflow.org/install/pip)
* [PyTorch](https://pytorch.org/get-started/locally/)

Python IDEs for deep learning and data science

* Jupyter Notebook/JupyterLab
* PyCharm
* Visual Studio Code (VS Code)
* Spyder
* Google Colab: <https://colab.research.google.com/>