

Jupyter Notebook: An Introduction

by [Mike Driscoll](#) 🕒 Jan 28, 2019 🗨️ 5 Comments 📖 [intermediate](#) [tools](#)

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This tutorial has a related video course created by the Real Python team. Watch it together with the written tutorial to deepen your understanding: [Using Jupyter Notebooks](#)

The Jupyter Notebook is an open source web application that you can use to create and share documents that contain live code, equations, visualizations, and text. Jupyter Notebook is maintained by the people at [Project Jupyter](#).

Jupyter Notebooks are a spin-off project from the IPython project, which used to have an IPython Notebook project itself. The name, Jupyter, comes from the

R. Jupyter ships with the IPython kernel over 100 other kernels that you can also

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```
1 # How to merge two dicts
2 # in Python 3.5+
3
4 >>> x = {'a': 1, 'b': 2}
5 >>> y = {'b': 3, 'c': 4}
6
7 >>> z = {'**x, **y}
8
9 >>> z
10 {'c': 4, 'a': 1, 'b': 3}
```

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Getting Up and Runni

The Jupyter Notebook is not included w

There are many distributions of the Python language. This article will focus on just two of them for the purposes of installing Jupyter Notebook. The most popular is CPython, which is the reference version of Python that you can get from their [website](#). It is also assumed that you are using **Python 3**.

Installation

If so, then you can use a handy tool that comes with Python called **pip** to install Jupyter Notebook like this:

Shell

\$ pip install jupyter

The next most popular distribution of Python is [Anaconda](#). Anaconda has its own installer tool called **conda** that you could use for installing a third-party package. However, Anaconda comes with many scientific libraries preinstalled, including the Jupyter Notebook, so you don't actually need to do anything other than install Anaconda itself.

Starting the Jupyter Notebook Server

Now that you have Jupyter installed, let's learn how to use it. To get started, all you need to do is open up your terminal application and go to a folder of your choice. I recommend using something like your Documents folder to start out with and create a subfolder there called *Notebooks* or something else that is easy to remember.

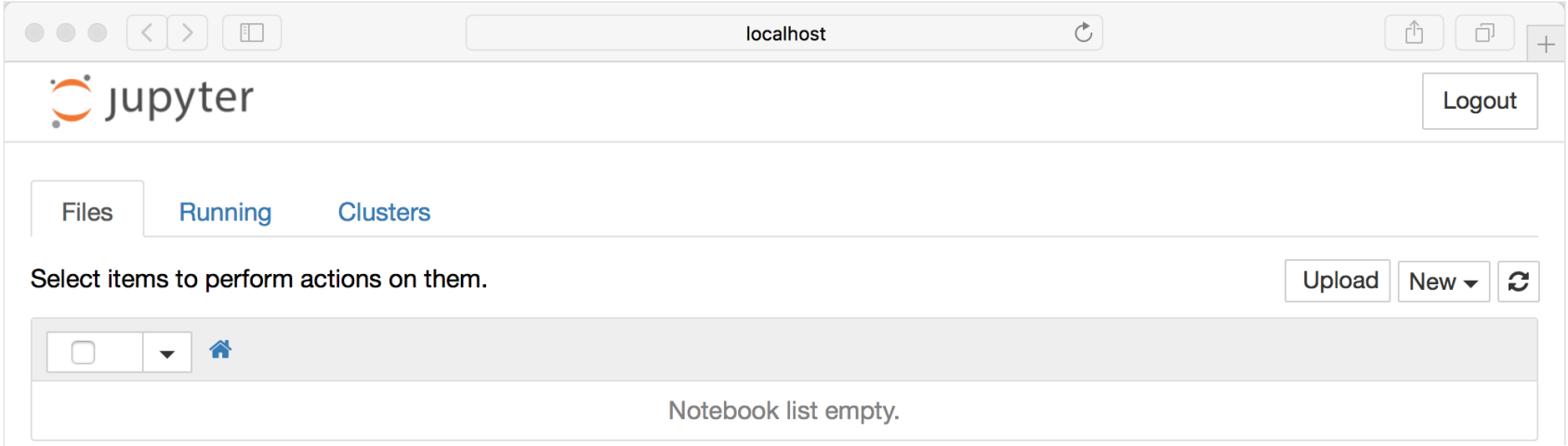
Then just go to that location in your terminal and run the following command:

Shell

\$ jupyter notebook

This will start up Jupyter and your default browser should start (or open a new tab) to the following URL: <http://localhost:8888/tree>

Your browser should now look something like this:



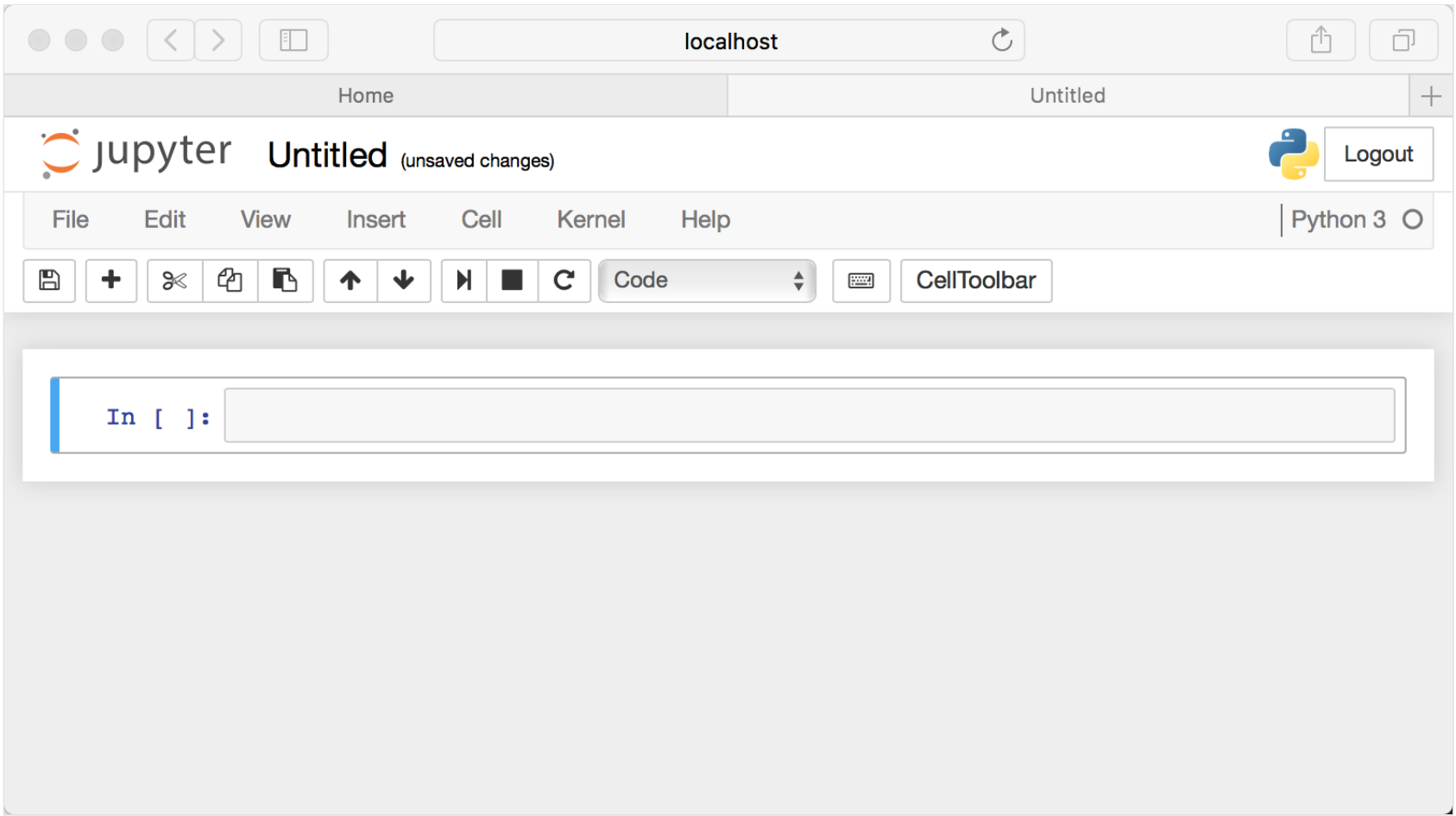
Note that right now you are not actually
Let’s actually create a Notebook now!

Creating a Notebook

Now that you know how to start a Notebook document.

All you need to do is click on the *New* button. You may not happen to have Python 2 and Python 3 installed, so I can create a Notebook that uses either of these. For simplicity’s sake, let’s choose Python 3.

Your web page should now look like this:



Naming

You will notice that at the top of the page is the word *Untitled*. This is the title for the page and the name of your Notebook. Since that isn’t a very descriptive name, let’s change it!

Just move your mouse over the word *Untitled* and click on the text. You should now see an in-browser dialog titled *Rename Notebook*. Let’s rename this one to *Hello Jupyter*:

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