

How to Install Jupyter Notebook?

By [Singh](#) | February 11, 2021

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Jupyter Notebook is a widely-used and powerful data science tool. In this article, we will walk you through how to install it, set it up on your local system, and how to use it. But before all that, let's first understand Jupyter Notebook.

What is Jupyter Notebook?

Jupyter Notebook is an open-source web application. It is a notebook/advanced IDE that allows us to write code and display its output in a single document. As a consequence, many Python data scientists use it to run and explore data within a single document. With it, we can:

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- Write code,
- Visualize output,
- Narrate text,
- Show mathematical equations,
- Execute code, and
- Do much other media-related stuff.

Jupyter notebook also makes it easy to share the code document along with the outputs in different formats. Although Jupyter Notebook

supports over **40 Programming languages**, this article will only cover how to install Jupyter Notebook for Python and how to use it with Python.

Installing Jupyter Notebook on Windows, macOS, and Linux

There are two ways to install Jupyter Notebook for your Python environment:

- Using Anaconda
- Using Python pip

Before you wish to install Jupyter Notebook, make sure that Python and pip are already installed on your system. Here's [how to install Python](#) and [how to install pip](#).

Also, [check your Python version](#) and make sure that it is Python 3.3 or newer.

How to Install Jupyter Notebook Using Anaconda

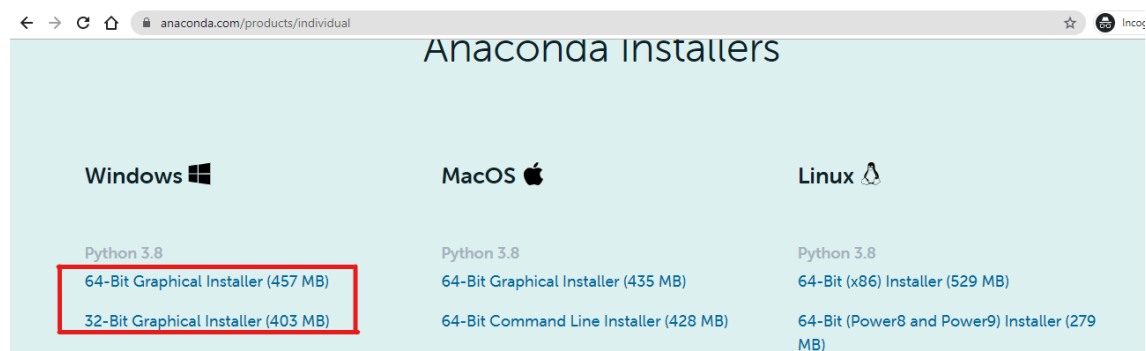
Anaconda is an open-source distribution that provides data science and scientific computing tools, including Jupyter Notebook, [Python](#) and [R](#) programming languages. Anaconda works on R and Python programming languages. Similar to Python pip, it acts as a package manager for managing data science, machine learning, and data processing packages.

Many data scientists and beginners use Anaconda to install Jupyter Notebook and other data-science-related packages. This is because Anaconda provides a straightforward and simple interface to install Jupyter Notebook and other Data Science related packages and [programming languages](#).

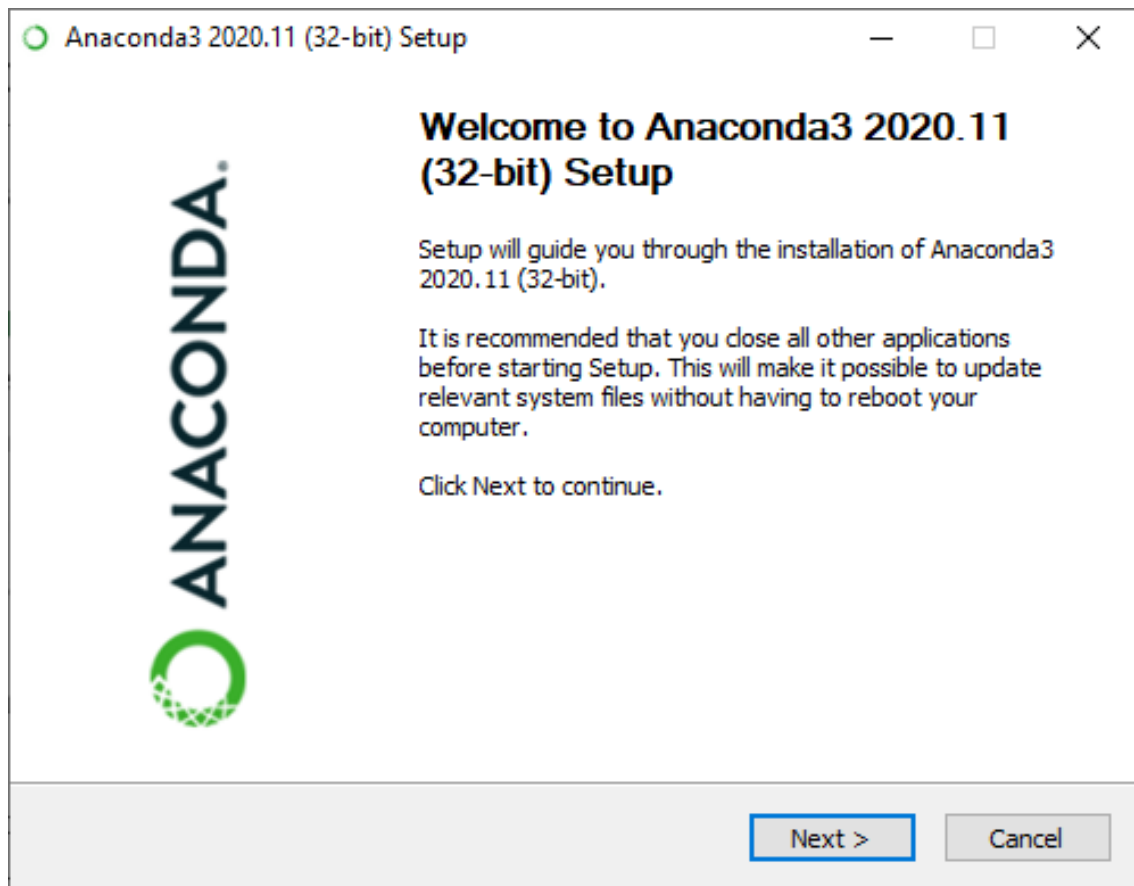
Steps to download Jupyter Notebook using Anaconda

Step 1: Download and Install Anaconda

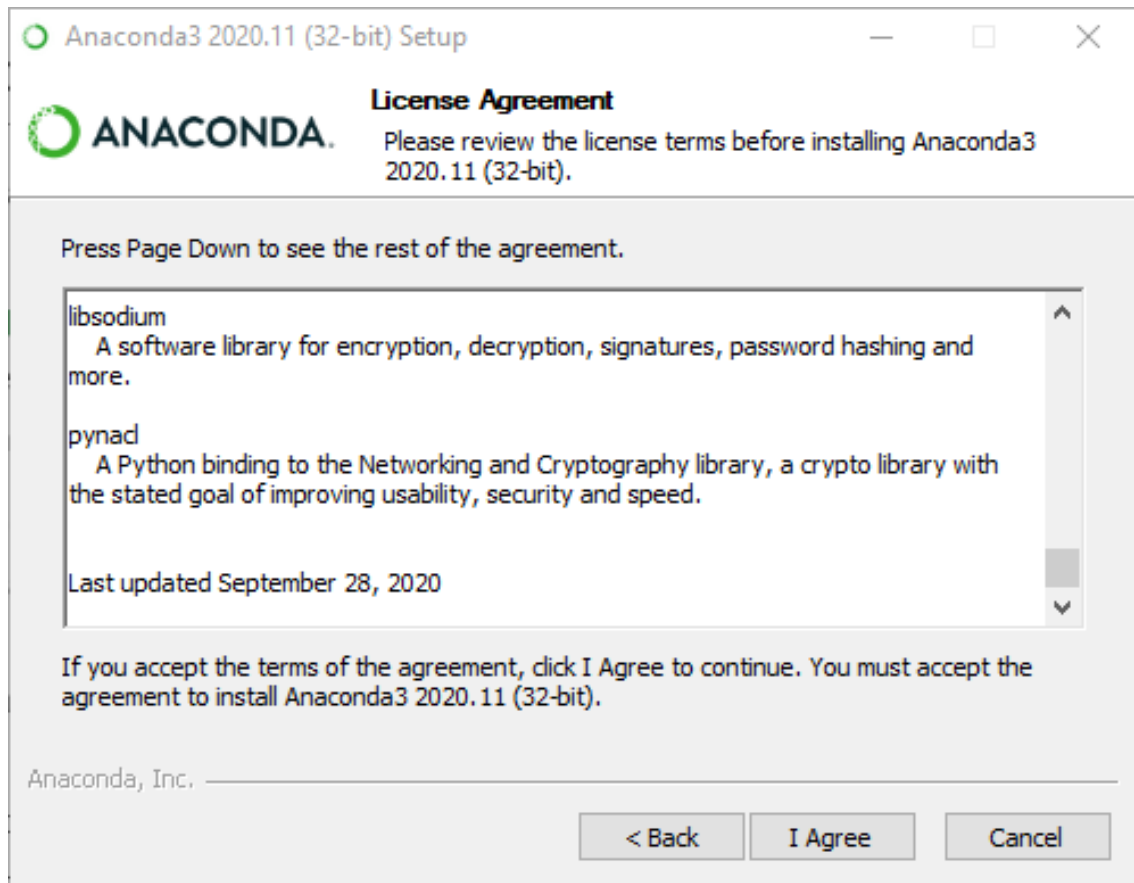
Visit the official web-site of [Anaconda](#), and under the **products** section, click on the **individual** edition. From there, you can install the relevant Anaconda for your system. Right now, we are using windows, so we are downloading the Windows version, as demonstrated follows:



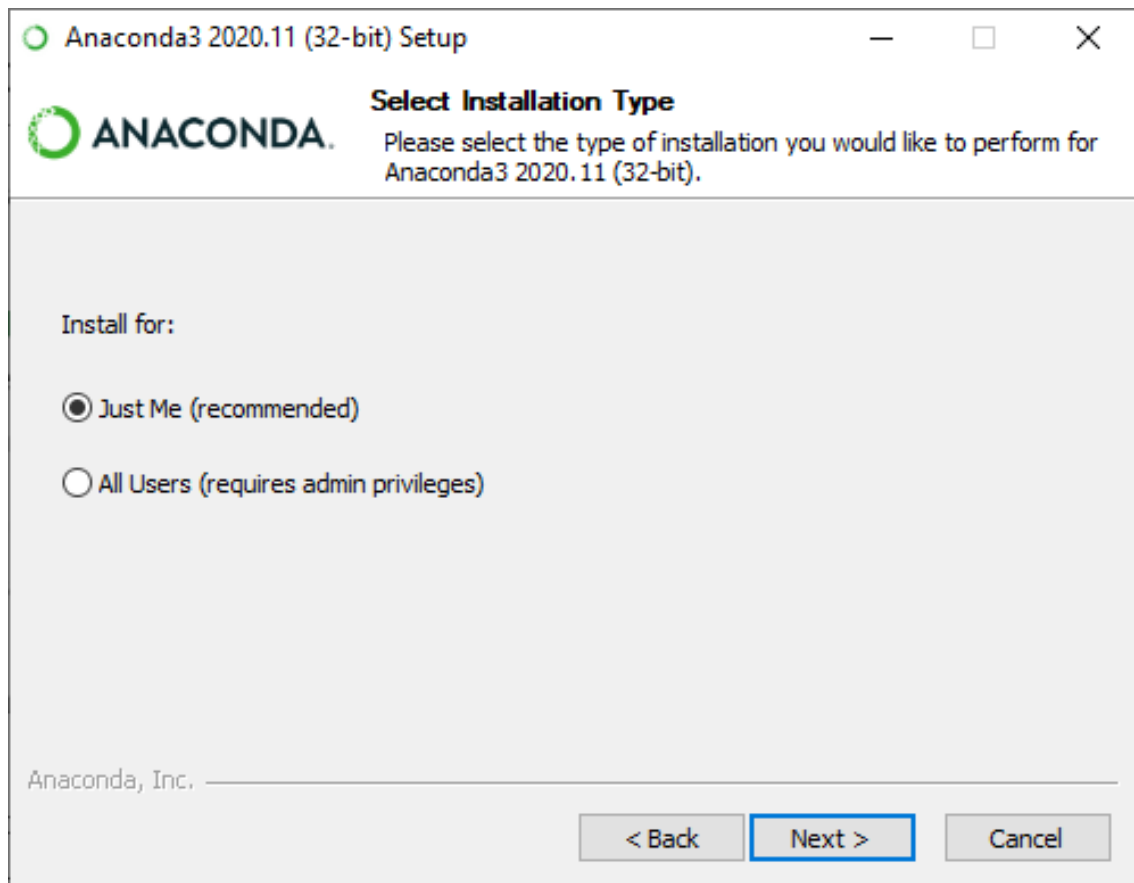
After downloading the Anaconda application, install it on your system.



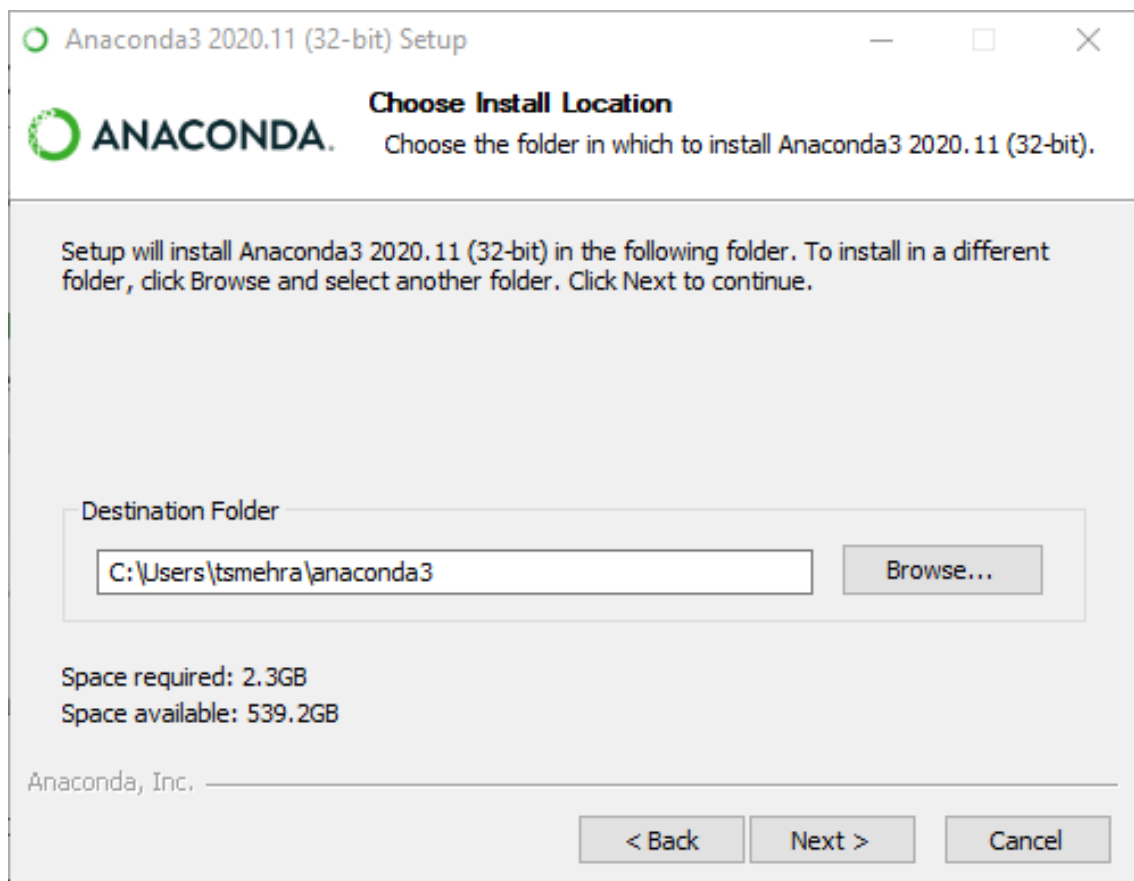
Click on the **I Agree** Button.



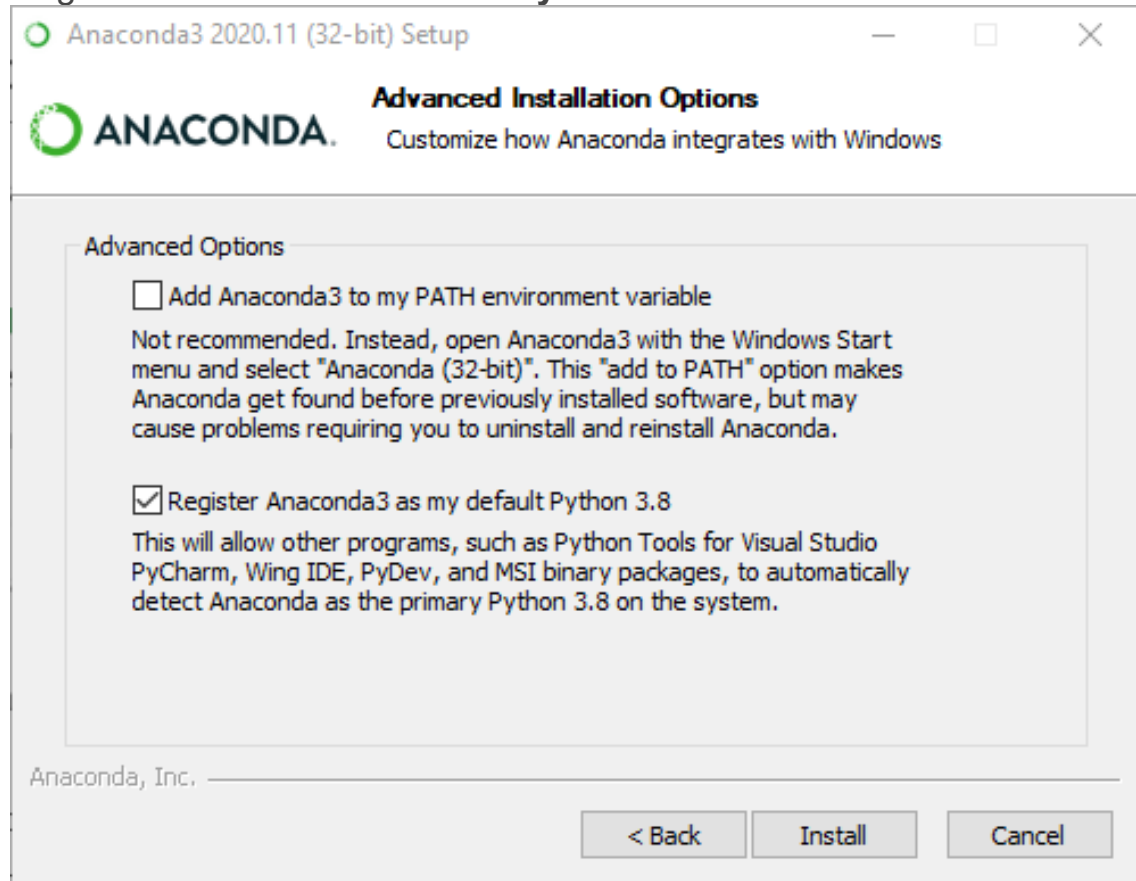
Checkmark the **Just Me**.



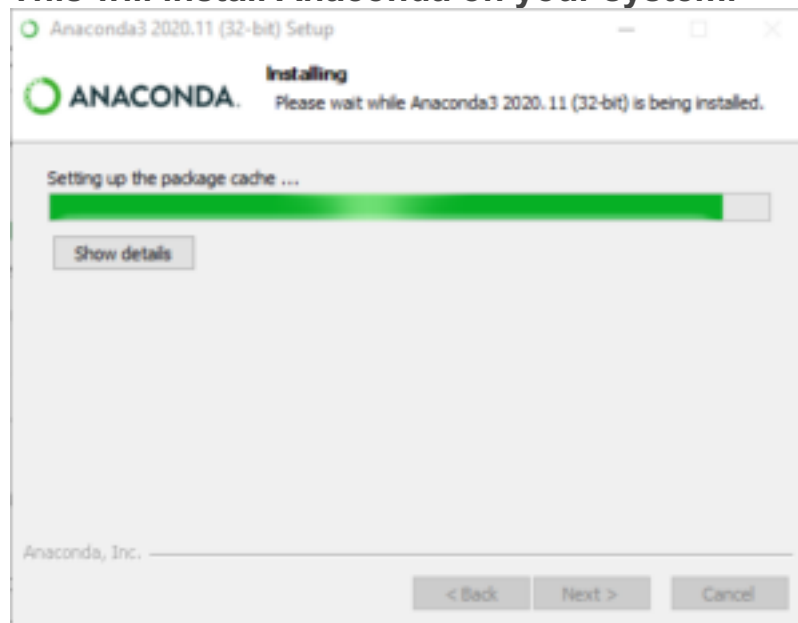
Now, select the installation location.



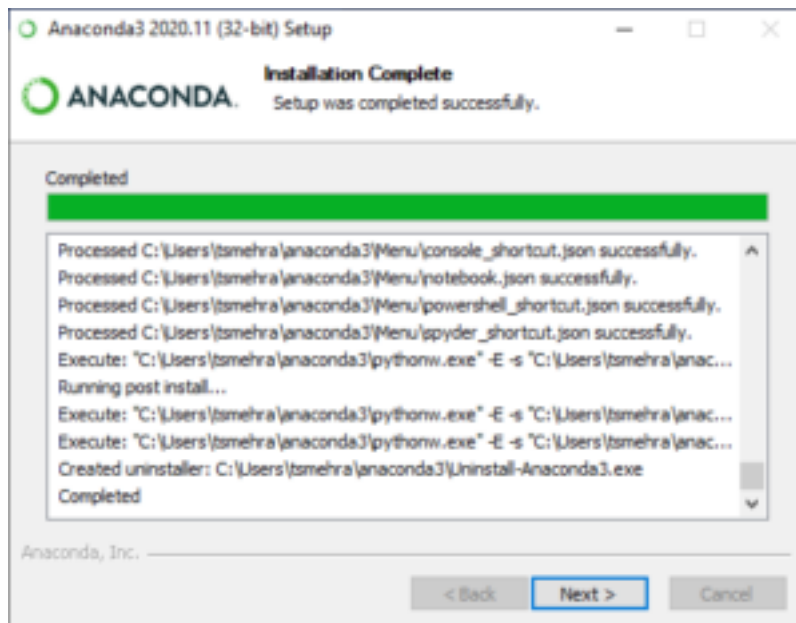
Register with **default Installed Python**.



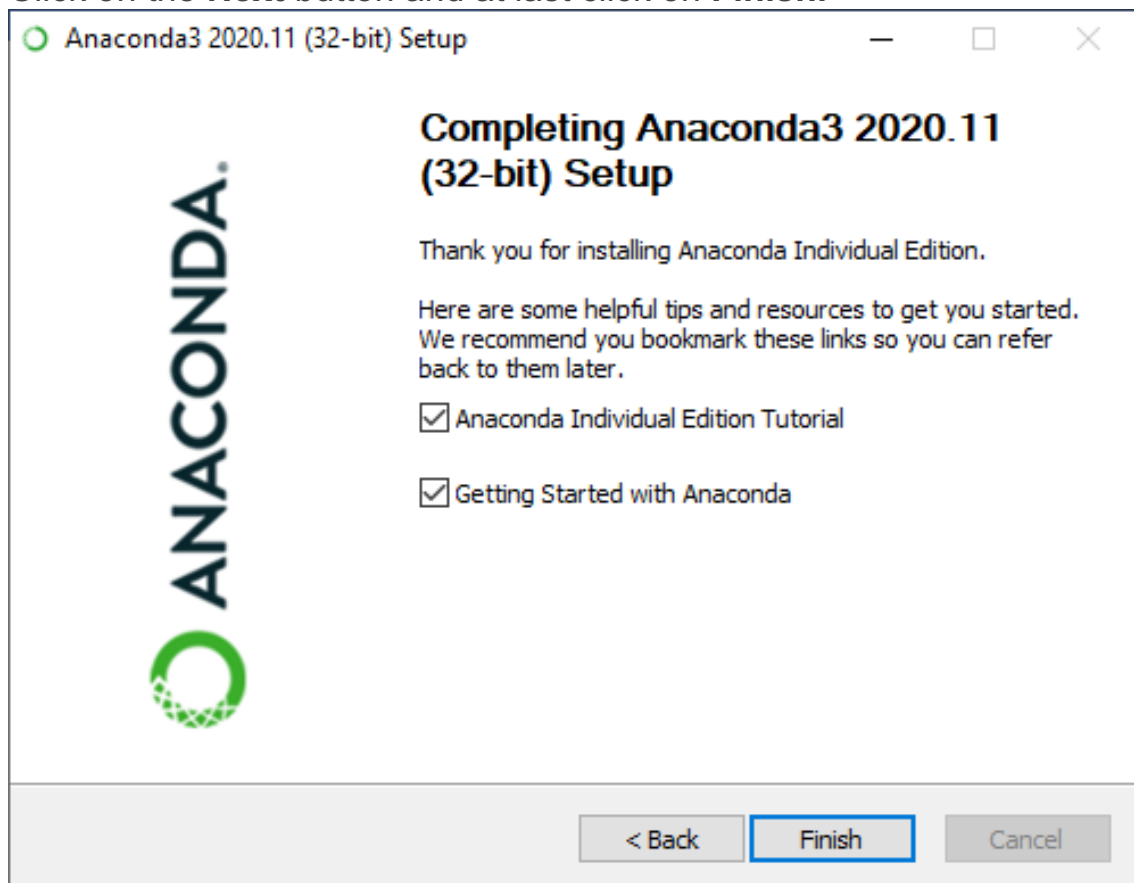
This will install Anaconda on your system.



Click on **the Next** button.



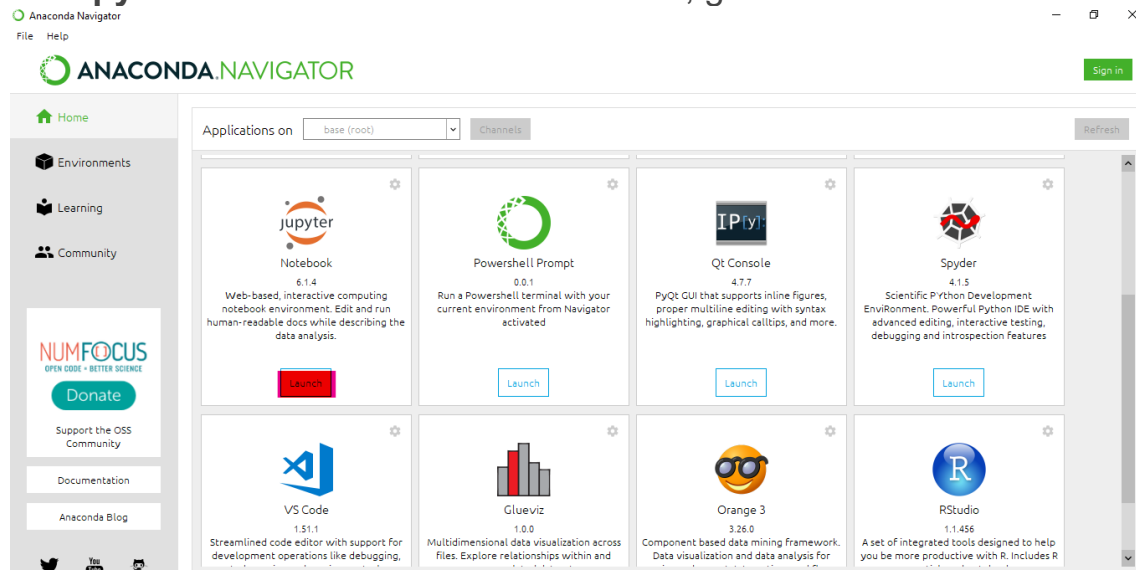
Click on the **Next** button and at last click on **Finish**.



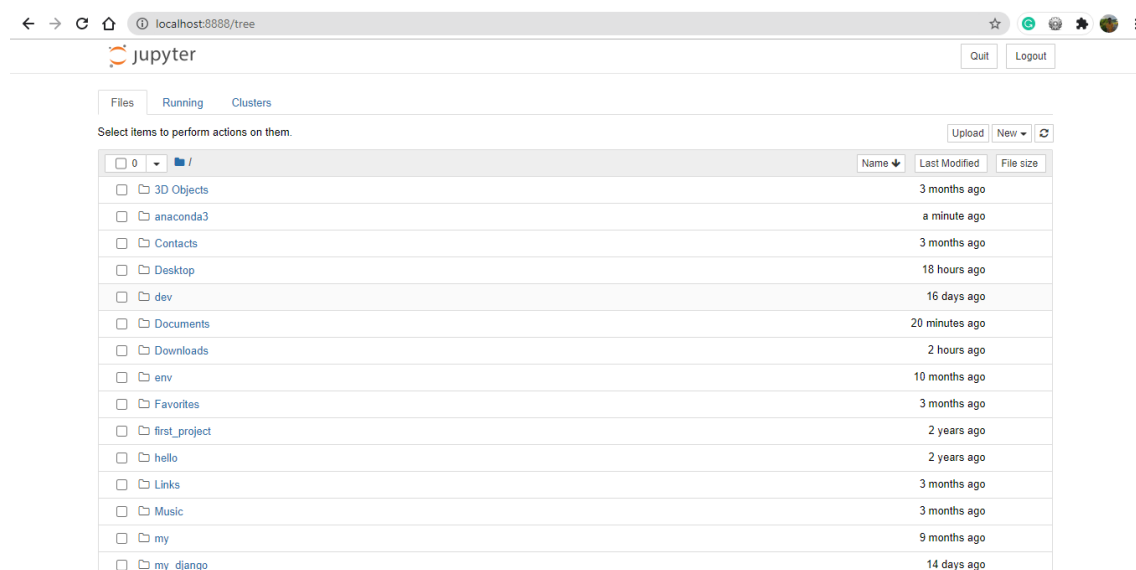
Step 2: Launch Anaconda Navigator



Jupyter Notebook will come pre-installed with the latest Anaconda version, so you just need to **Launch** it. If Jupyter Notebook is not pre-installed, you will see the option **Jupyter Notebook Install**, instead of **Jupyter Notebook Launch**. If this is so, go for it.



After Launching the Jupyter Notebook, you will see a similar screen like this:



Now Jupyter Notebook is running on your localhost. So now you can surf to the directory where you want to create your project and start coding.

How to Install Jupyter Notebook using Python pip

Anaconda is great, but it consumes many resources and may lag on your system. The pip is the python package manager that comes with the most Python distributions. And with a simple pip install command, Jupyter Notebook installs on your Python environment.

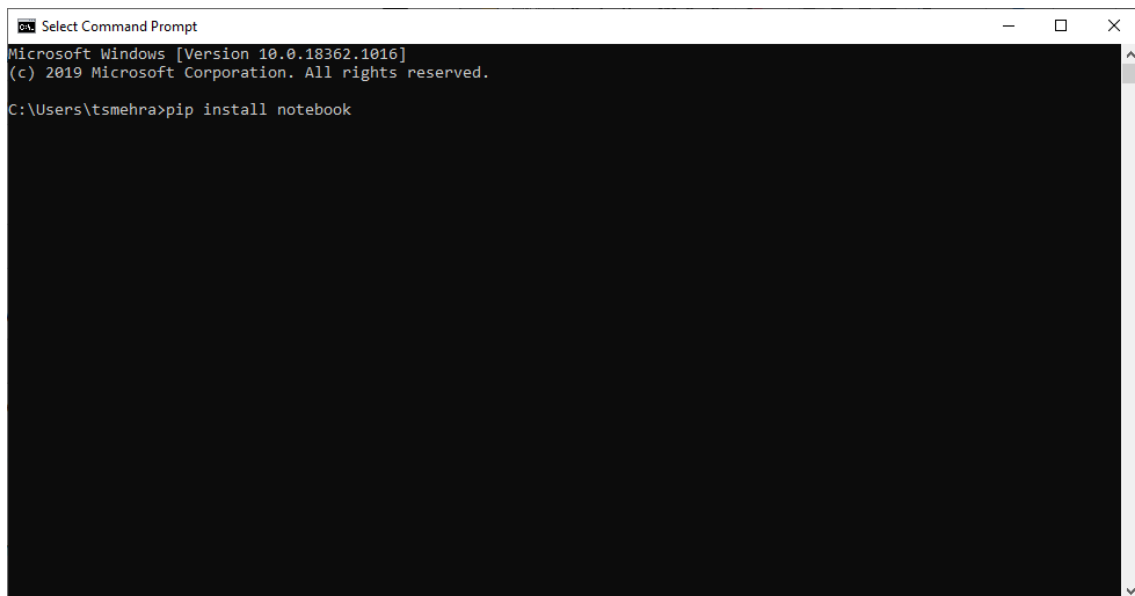
Installing Jupyter Notebook using pip is very straightforward. And within two steps, you can install and run Jupyter Notebook in your system. This is the reason why installing Python with pip is very popular.

<Note>: Before you use the pip command to install Jupyter Notebook make sure that Python and pip are installed on your system.

Step 1: Install Jupyter Notebook using pip

Using the pip install command, we can install Jupyter Notebook for our Python environment.

```
pip install notebook
```



This may take some time.

<Note> *There is **no** such command as `pip install jupyter`. So be careful when you install Jupyter Notebook using Python pip.*

Step 2: Launch Jupyter Notebook

Once the notebook package is installed, type the `jupyter notebook` command on your terminal or command prompt to launch the Jupyter Notebook.

```
jupyter notebook
```

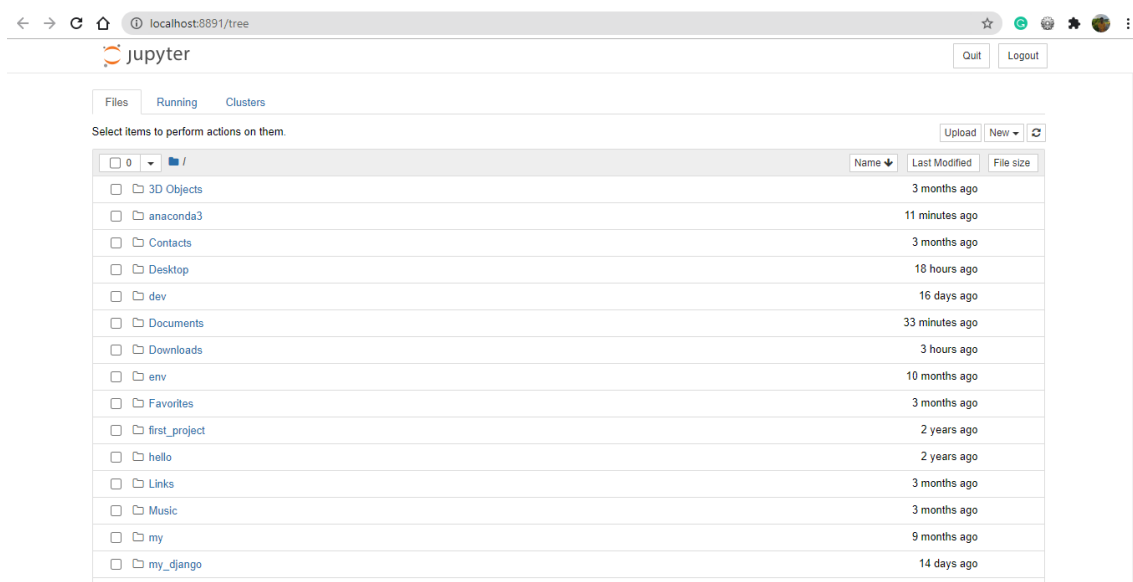
```
Select Command Prompt - jupyter notebook

Requirement already satisfied: pycparser in c:\users\tsmehra\appdata\local\programs\python\python39\lib\site-packages (from cffi>=1.0.0->argon2-cffi->notebook) (2.20)
Requirement already satisfied: parso<0.8.0,>=0.7.0 in c:\users\tsmehra\appdata\local\programs\python\python39\lib\site-packages (from jedi>=0.10->ipython>=5.0.0->ipykernel->notebook) (0.7.1)
Requirement already satisfied: wcwidth in c:\users\tsmehra\appdata\local\programs\python\python39\lib\site-packages (from prompt-toolkit!=3.0.0,!<3.0.1,<3.1.0,>=2.0.0->ipython>=5.0.0->ipykernel->notebook) (0.2.5)
Requirement already satisfied: pyparsing>=2.0.2 in c:\users\tsmehra\appdata\local\programs\python\python39\lib\site-packages (from packaging->bleach->nbconvert->notebook) (2.4.7)
WARNING: You are using pip version 20.2.3; however, version 20.3.1 is available.
You should consider upgrading via the 'c:\users\tsmehra\appdata\local\programs\python\python39\python.exe -m pip install --upgrade pip' command.

C:\Users\tsmehra>jupyter notebook
[I 18:21:57.273 NotebookApp] The port 8888 is already in use, trying another port.
[I 18:21:57.273 NotebookApp] The port 8889 is already in use, trying another port.
[I 18:21:57.274 NotebookApp] The port 8890 is already in use, trying another port.
[W 18:21:57.280 NotebookApp] Terminals not available (error was No module named 'winpty.cwinpty')
[I 18:21:57.480 NotebookApp] Serving notebooks from local directory: C:\Users\tsmehra
[I 18:21:57.480 NotebookApp] Jupyter Notebook 6.1.5 is running at:
[I 18:21:57.481 NotebookApp] http://localhost:8891/?token=3916e081090efecc4a173fef380e39df20d7f216fdcbea81
[I 18:21:57.481 NotebookApp] or http://127.0.0.1:8891/?token=3916e081090efecc4a173fef380e39df20d7f216fdcbea81
[I 18:21:57.481 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 18:21:57.526 NotebookApp]

To access the notebook, open this file in a browser:
file:///C:/Users/tsmehra/AppData/Roaming/jupyter/runtime/nbserver-17660-open.html
Or copy and paste one of these URLs:
http://localhost:8891/?token=3916e081090efecc4a173fef380e39df20d7f216fdcbea81
or http://127.0.0.1:8891/?token=3916e081090efecc4a173fef380e39df20d7f216fdcbea81
```

After launching the Jupyter Notebook, you will see a similar screen to this:



Note: After Launching the Jupyter Notebook from the command prompt or terminal, do not close the same as it will kill the Jupyter Notebook.

Create Your First Notebook

So now that you have successfully downloaded and installed Jupyter Notebook for your Python environment, it's time to create your first notebook. In this section, we will walk you through how to create and save a notebook. We will also discuss some of the core terms of Jupyter Notebook and write some Python code.

Run Jupyter Notebook

If you have installed Jupyter Notebook using Anaconda, you can run your Jupyter Notebook through the shortcut **Jupyter Notebook**

(**Anaconda**) from your start menu. Else, you can open your **Anaconda navigator** and launch the Jupyter notebook.

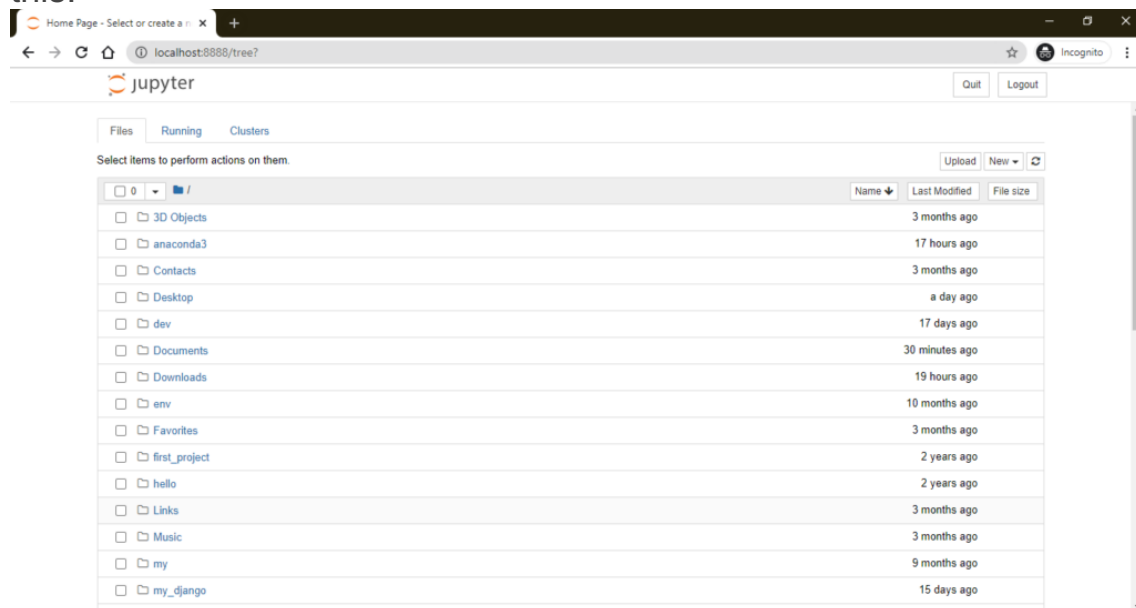
If you have Installed Jupyter Notebook using Python **pip**, you can use the *jupyter notebook* command in your command prompt, and it will open the Jupyter Notebook.

```
Command Prompt - jupyter notebook
Microsoft Windows [Version 10.0.18362.1016]
(c) 2019 Microsoft Corporation. All rights reserved.

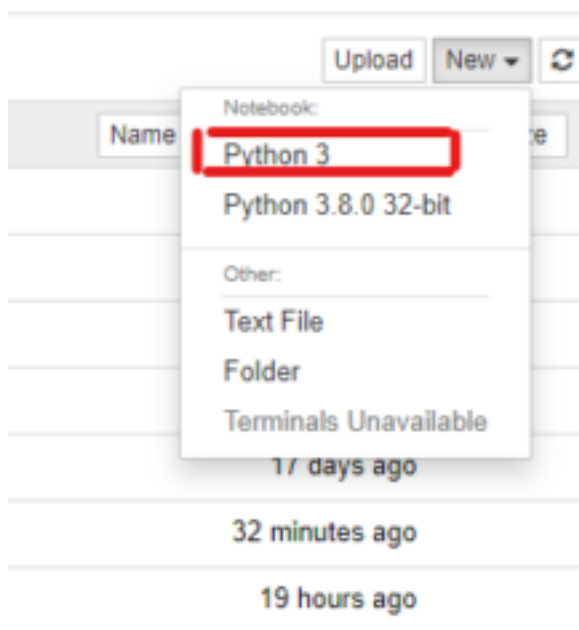
C:\Users\tsmehra>jupyter notebook
[W 11:03:22.558 NotebookApp] Terminals not available (error was No module named 'winpty.cwinpty')
[I 11:03:22.801 NotebookApp] Serving notebooks from local directory: C:\Users\tsmehra
[I 11:03:22.801 NotebookApp] Jupyter Notebook 6.1.5 is running at:
[I 11:03:22.801 NotebookApp] http://localhost:8888/?token=5582c9a83a5964abb51bf0de2f023a558703f01e8898e14e
[I 11:03:22.801 NotebookApp] or http://127.0.0.1:8888/?token=5582c9a83a5964abb51bf0de2f023a558703f01e8898e14e
[I 11:03:22.801 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 11:03:22.888 NotebookApp]

To access the notebook, open this file in a browser:
file:///C:/Users/tsmehra/AppData/Roaming/jupyter/runtime/nbserver-6972-open.html
Or copy and paste one of these URLs:
http://localhost:8888/?token=5582c9a83a5964abb51bf0de2f023a558703f01e8898e14e
or http://127.0.0.1:8888/?token=5582c9a83a5964abb51bf0de2f023a558703f01e8898e14e
```

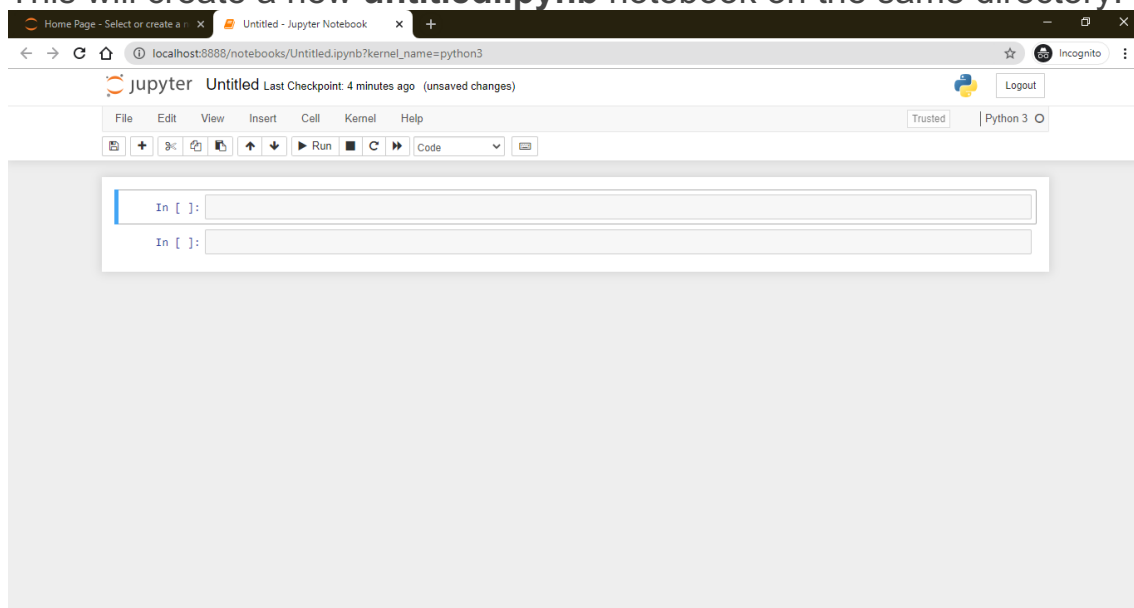
This will open the Jupyter notebook at the command prompt or terminal specified location. The command `jupyter notebook` will open the Jupyter Notebook in your browser, and you will see a similar screen to this:



The above screen is the dashboard, it's not a notebook. To create a new notebook, you need to click on the **New** button and select the **Python 3** option.



This will create a new **untitled.ipynb** notebook on the same directory.



The Notebook Interface

So far you have created a new Jupyter Notebook by the name **untitled. ipynb**. Now you can also rename your notebook by clicking on the untitled. The notebook is an advanced IDE, and here, you can write code. And like other IDEs and text editors, it also supports some shortcut commands.

To see all the available shortcut commands, type *Ctrl + Shift + P*.

There are two prominent terms associated with every notebook:

- Cell
- Kernel

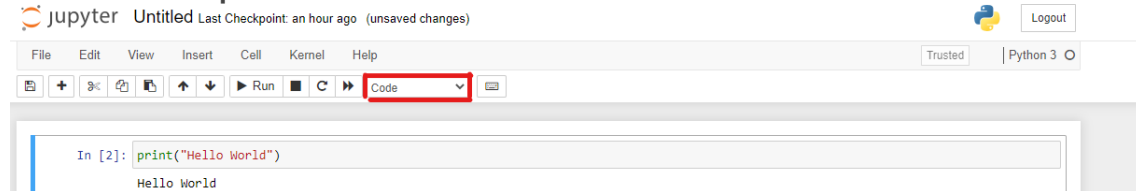
Each of them is explained as follows:

Cell

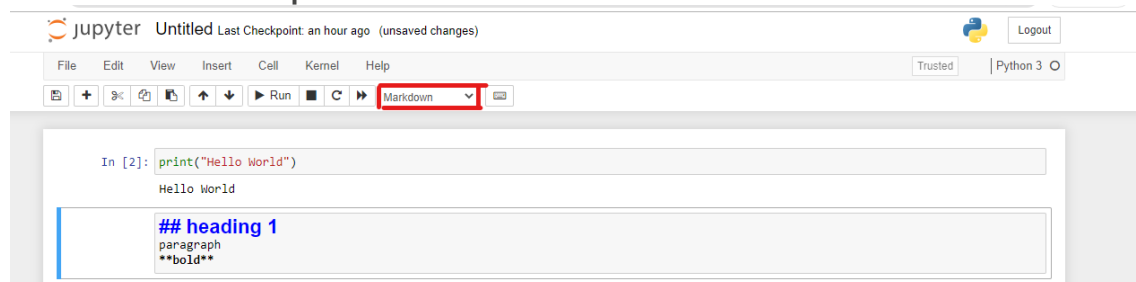
The cell is the notebook's body, and inside the cell, you can write the code and markdown. There are two types of cells:

- In the **Code Cell**, you write the code that will be executed by the kernel.
- In the **Markdown cell**, we use the markdown language to perform the text formatting.

Code Cell example



Markdown Cell Example



The type of Cell selected can be toggled from the menu.

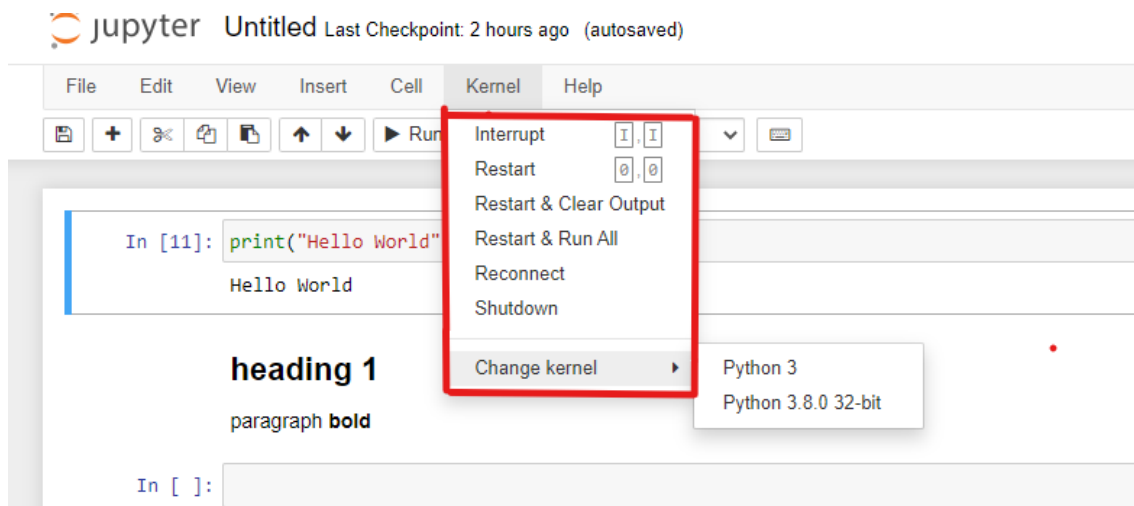
To execute the code and markdown written in the cell, use the *Shift + Enter*.

Kernel

Every notebook consists of a kernel. The kernel is the computing engine that executes the code written in the cell.

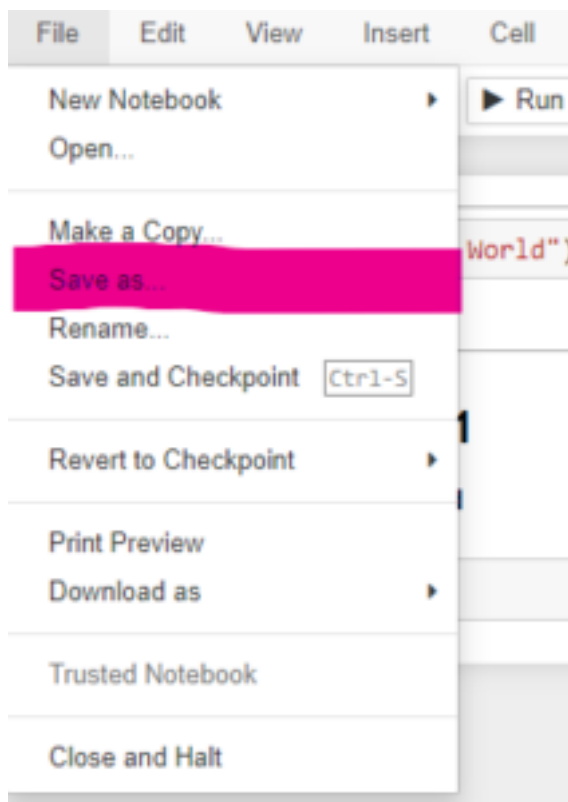
The kernel is responsible for executing and showing code output. When we create our New notebook, we select Python3, and this set Python3 as a kernel for our notebook.

Jupyter Notebook supports 40+ programming languages along with their different versions. And from the kernel menu, we can change our existing kernel.

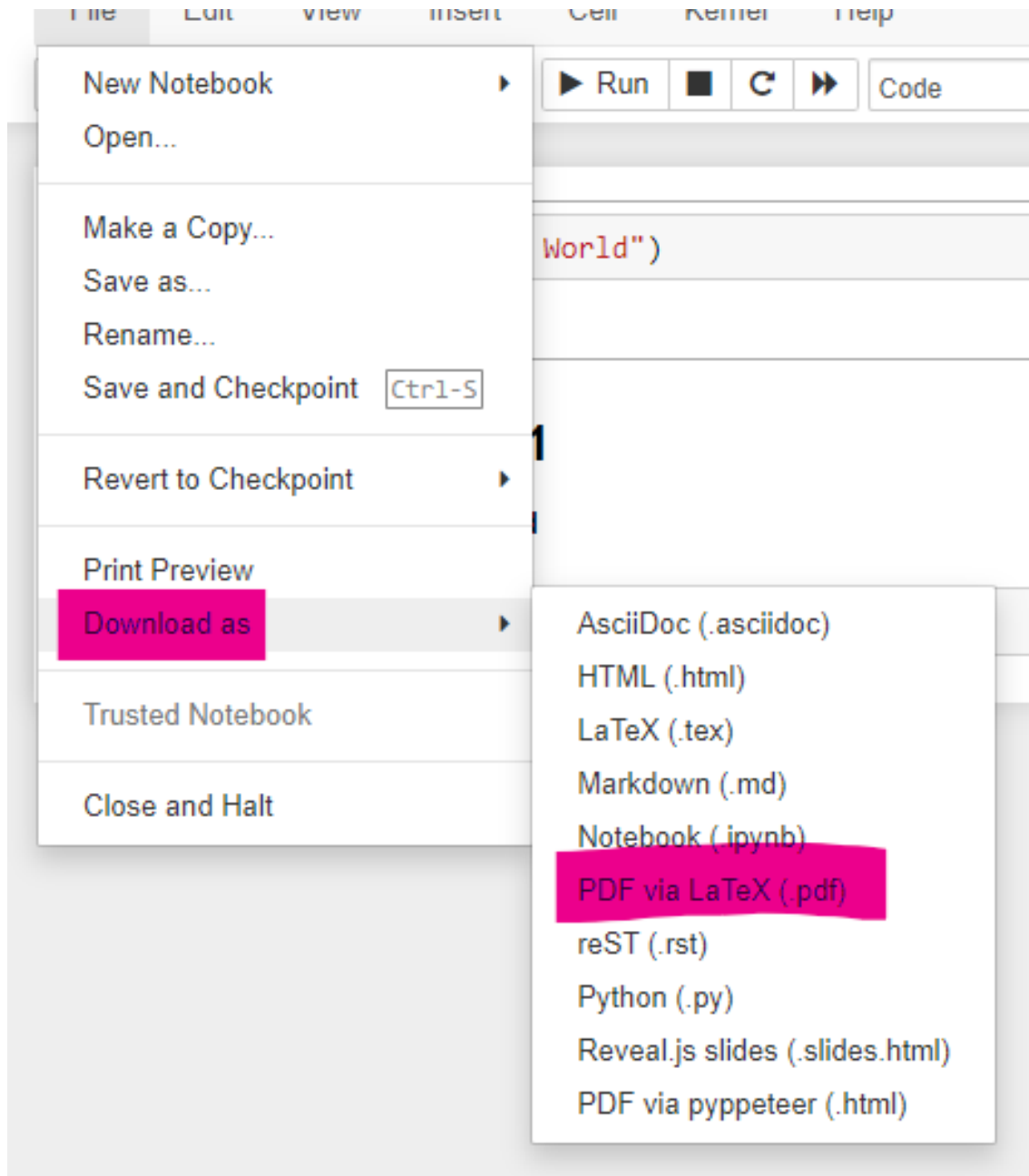


Save and download the notebook

Once you have written and executed the code, you can save the notebook from the File option.



In the **File** menu, you will also get an option **Download as** where Jupyter Notebook download is available in 9 different formats.



You can choose the one you find useful.

Conclusion

Here in this article, we learned how to install Jupyter Notebook using Anaconda and Python pip command. Jupyter Notebook is one of the [Best Python IDEs](#) for data scientists and machine learning engineers. Although Jupyter Notebook installation could be challenging through Anaconda, it makes it easy to use other data science packages and programming languages.

You can also install Jupyter Notebook using the pip command. For most of the cases, you will be using it as it is very convenient doing so.