

Using Anaconda and the Jupyter Notebook

netLabs!UG

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1 Getting started with Anaconda

The Anaconda Python/R distribution comes installed with over 1500+ data science and machine learning packages.[1] The environment has two access options, through the graphical user interface (GUI) or through the terminal.

1.1 Accessing the Anaconda Environment through the GUI

1. Open the terminal and enter the following command.

```
$ anaconda-navigator
```

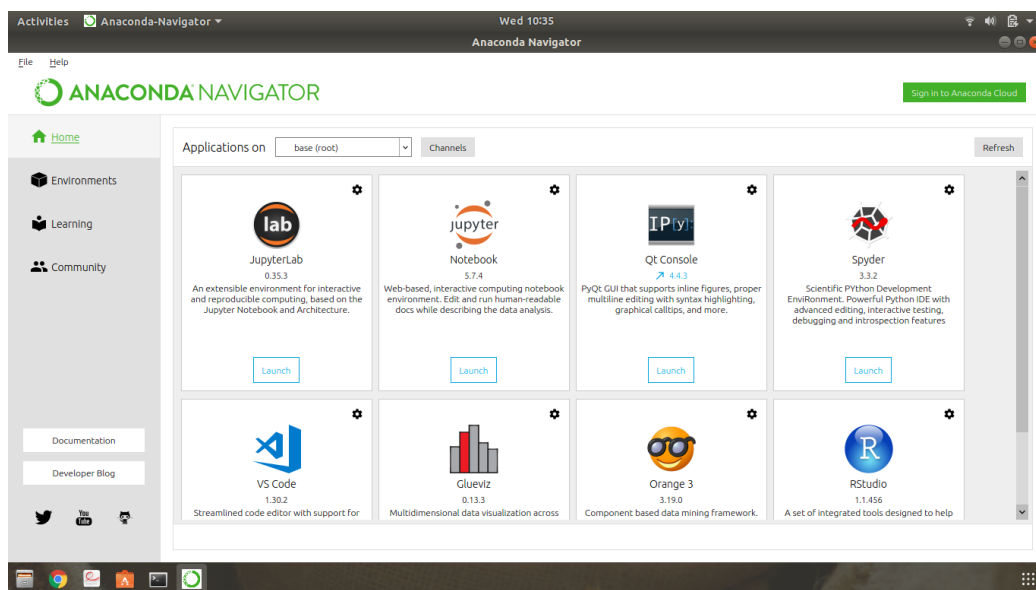


Figure 1: This command opens the navigation window as shown above.

2. Select the launch option in the box with Jupyter Notebook.

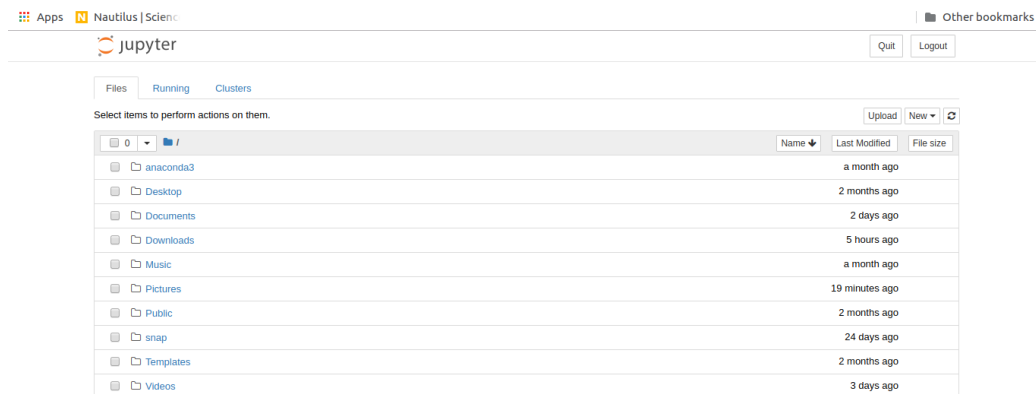


Figure 2: The home page of the Jupyter Notebook as shown in a web browser.

2 Accessing Anaconda Environment through the terminal

Access through the terminal allows for more options than the GUI option.

2.1 Creating and using a virtual environment in Anaconda

1. Open the terminal and enter the following command.¹

```
$ conda create --name your_env_name python=python_version -y
```

python_version allows the selection of the python version to use for the particular environment.

2. The created environment can be accessed using the following command.

```
$ conda activate your_env_name
```

¹Creating an environment and installing the different packages requires an internet connection preferably without firewalls

3. To install packages within a given environment, anaconda offers two options. The command used depends on where the repository is located.

```
$ conda install package_name or
```

```
$ pip install package_name
```

4. To access the jupyter notebook with support for the installed packages within a given environment. Ensure you are in the right environment and run the following command.

```
$ jupyter notebook
```

5. To close a a virtual environment, type the following command

```
$ conda deactivate
```

2.2 Commands for managing the environment

1. To list all the existing environments, type the following command;

```
$ conda info --envs
```

2. To remove/delete a given environment, run the following command;

```
$ conda remove --name your_env_name --all
```

The *-all* flag is to remove all packages with in that environment.

3. To see a list of all installed packages, enter the following command.

```
$ conda list
```

4. To find out about using the environment, the following command is very helpful;

```
$ conda -h
```

The *-h* also *-help* means help, the command displays an exhaustive list of all the possible that can be used.

3 Using the Jupyter Notebook

The Jupyter Notebook can be accessed through the GUI or the terminal as shown in the steps above.

3.1 Creating a notebook

1. To create a notebook, go to the New Tab, select Python 3.

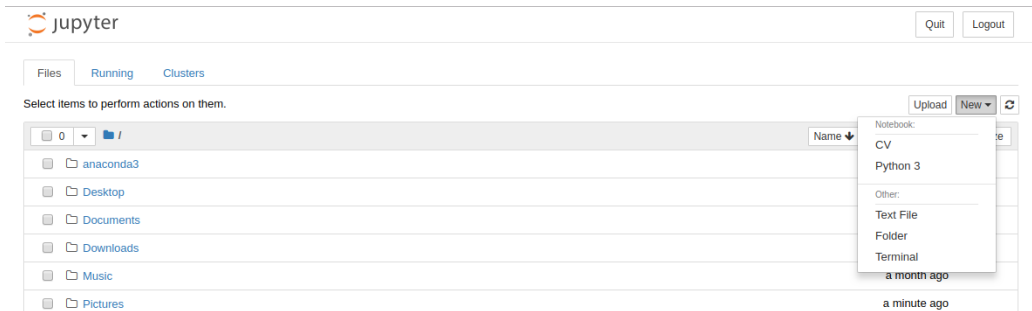


Figure 3: Creating a new notebook.

2. A new tab opens automatically with an active cell, enter your code.

```
print('netLabs!UG')
```

3. Press *Shift + Enter* to run the cell.

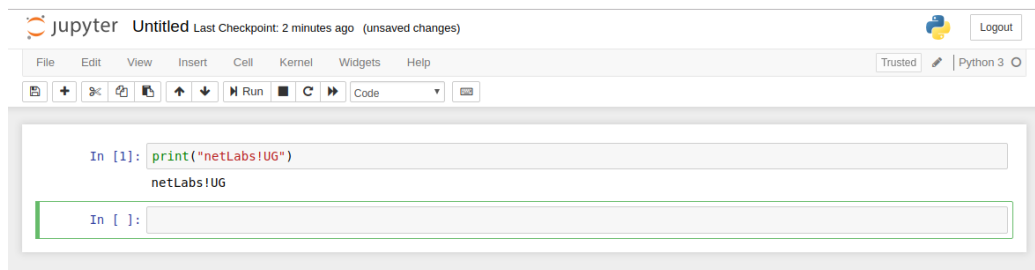


Figure 4: Running a cell.

4 Further Reading

Anaconda User Guide

<http://docs.anaconda.com/anaconda-cloud/user-guide/>

Official User Guide for the Anaconda environment, has links to resources on how to install, update, use and maintain the environment.

Jupyter Notebook Documentation

<https://jupyter-notebook.readthedocs.io/en/stable/>

This documentation covers a wide range of topics including but not limited to starting a Jupyter Notebook, creating notebooks, sharing notebooks among others topics.

Python Virtual Environments

<https://realpython.com/python-virtual-environments-a-primer/>

Delves into what virtual environments are, why they are needed and more.

References

- [1] Anaconda Contributors. Anaconda Python/R Distribution - Anaconda.
<https://www.anaconda.com/distribution/>.