

Pattern and Anomaly Detection Lab Experiment -1

Installing Anaconda and Setup up Environment

Submitted By:

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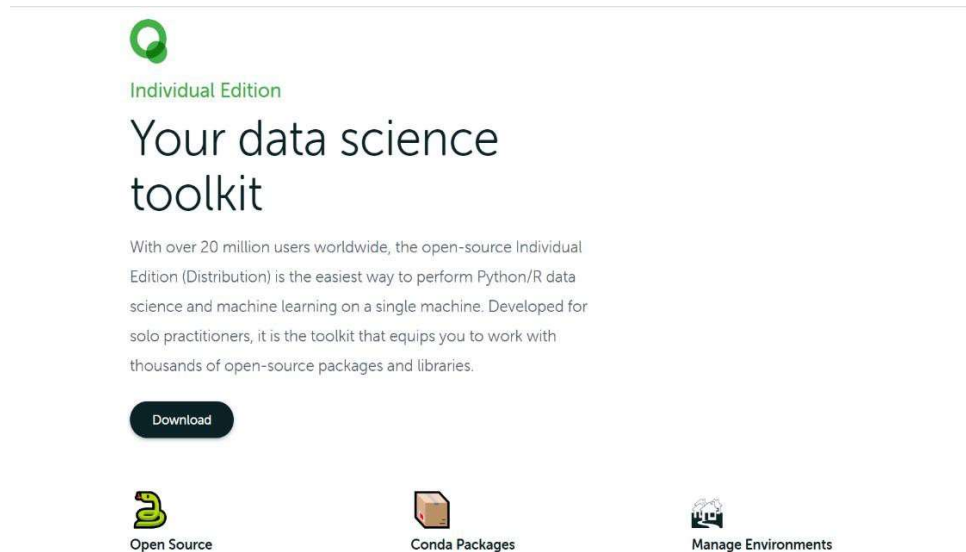
Submitted To:

**Dr. Gopal Phartiyal
Professor
SOCS
UPES**

Anaconda & Spyder Installation for windows

1. Click on the link below to open the download page

<https://www.anaconda.com/download/#windows>



2. Click on the **Download** button and check for the compatibility of your system. Then, it will start downloading.

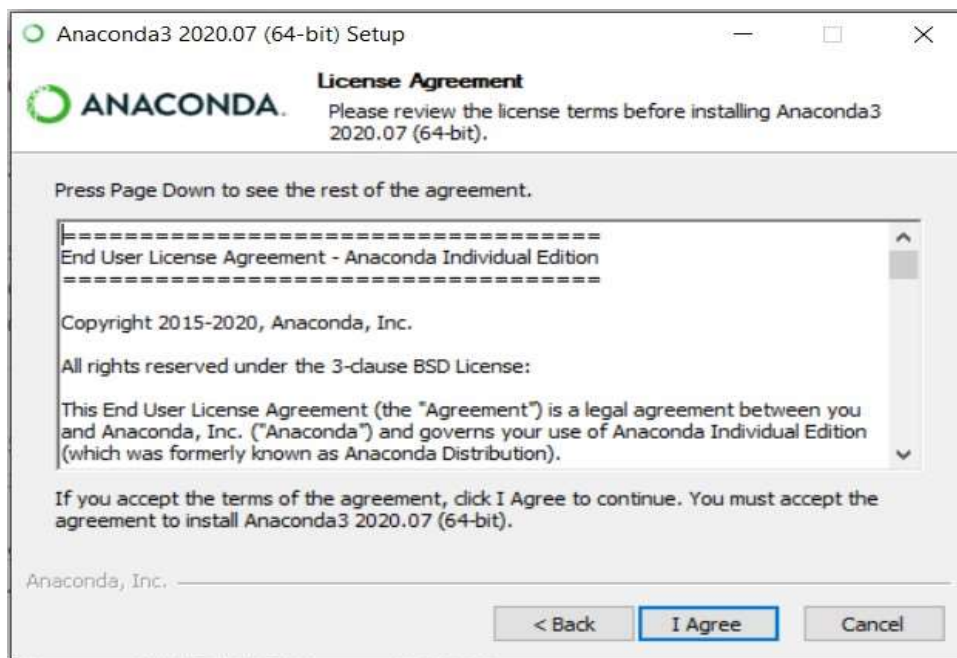


3. **Double click** the installer to launch.

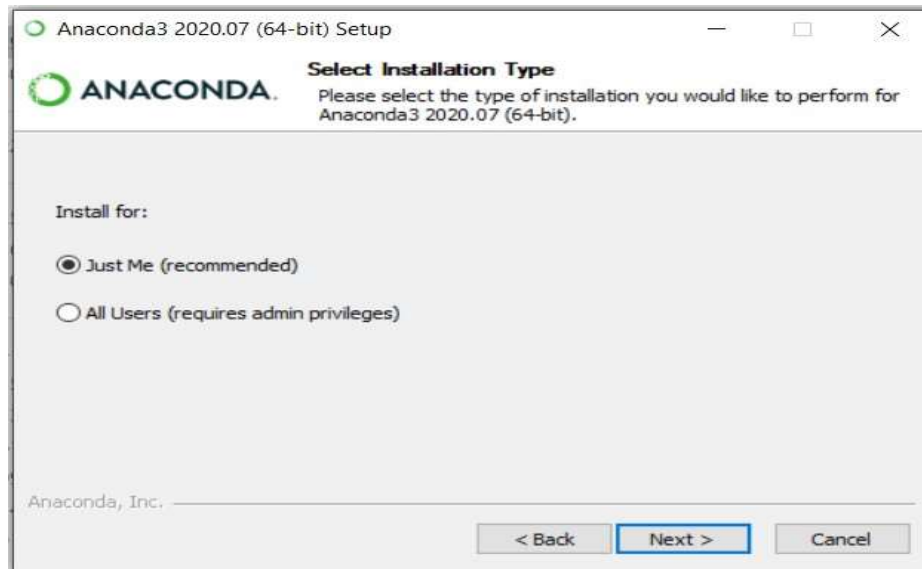
4. Click on **Next**.



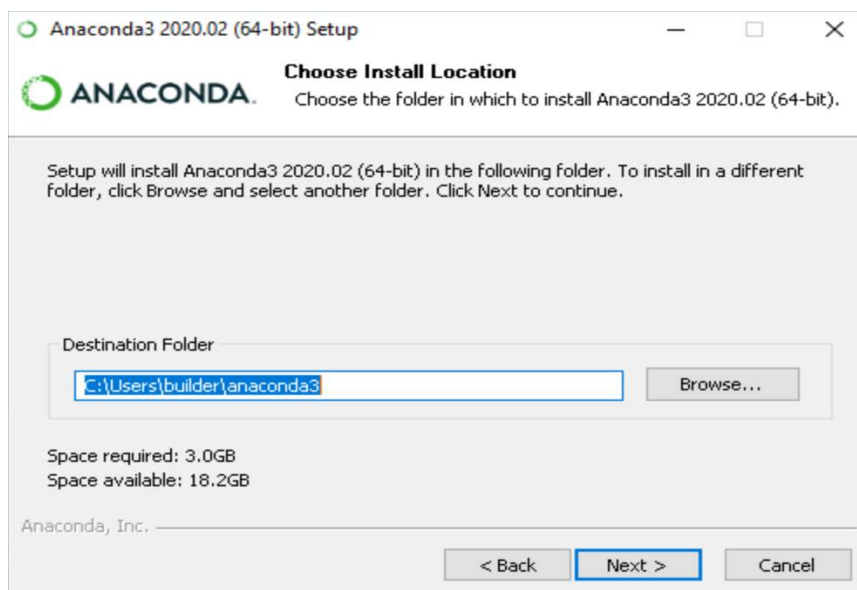
5. Read the license agreement and click on **I Agree**.



6. Select installation type “**Just Me**” unless you’re installing it for all users (which require Windows Administrator privileges) and clickon **Next**.



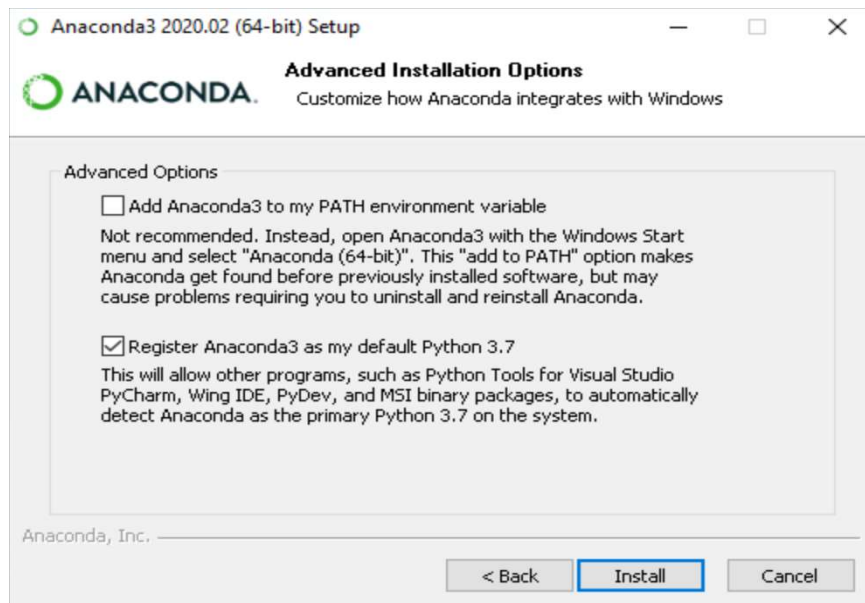
7. Select a destination folder to install Anaconda and click the **Next** button.



8. Choose whether to add Anaconda to your **PATH** environment variable. We recommend NOT adding Anaconda to the **PATH** environment variable, since this can interfere with other softwares. Instead, use Anaconda software by opening **Anaconda Navigator** or the **Anaconda Prompt** from the Start Menu

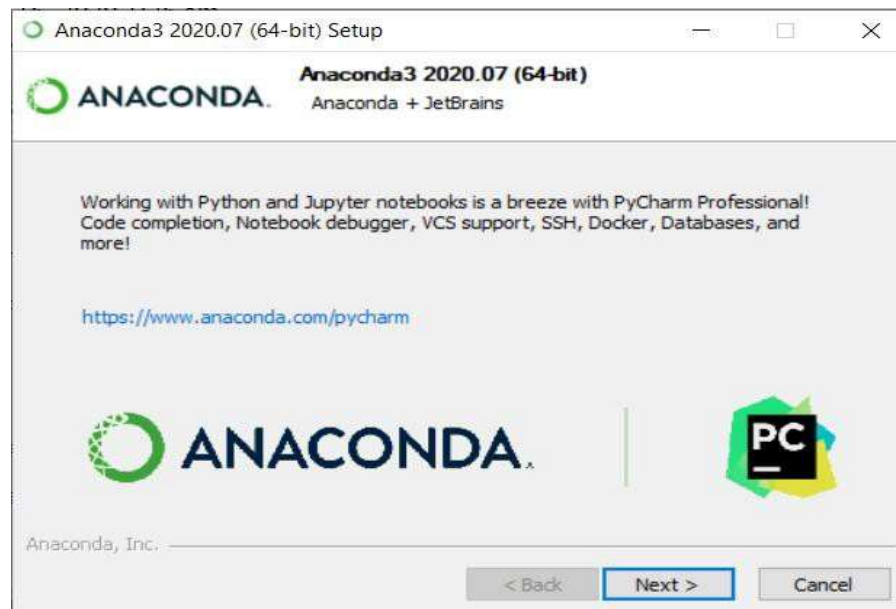
Choose whether to register Anaconda as your default Python. Unless you plan to install and run multiple versions of Anaconda or multiple versions of Python, accept the default version and leave this box checked.

9. Click the **Install** button.

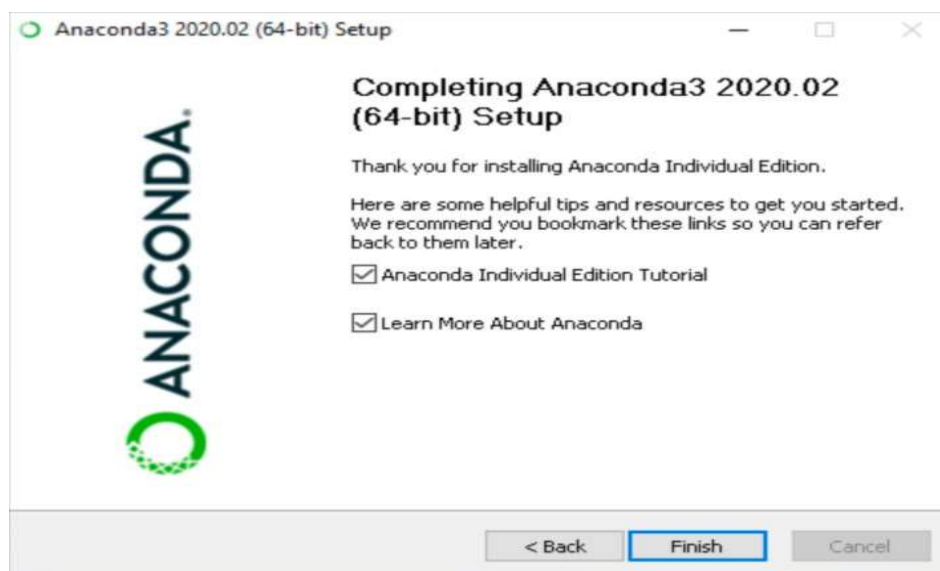


If you want to watch the packages Anaconda is installing, click on **Show Details**.

10. Click on the **Next** button.

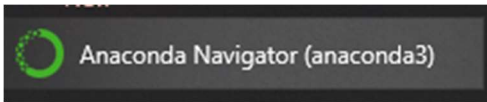


11. And then click the **Finish** button.

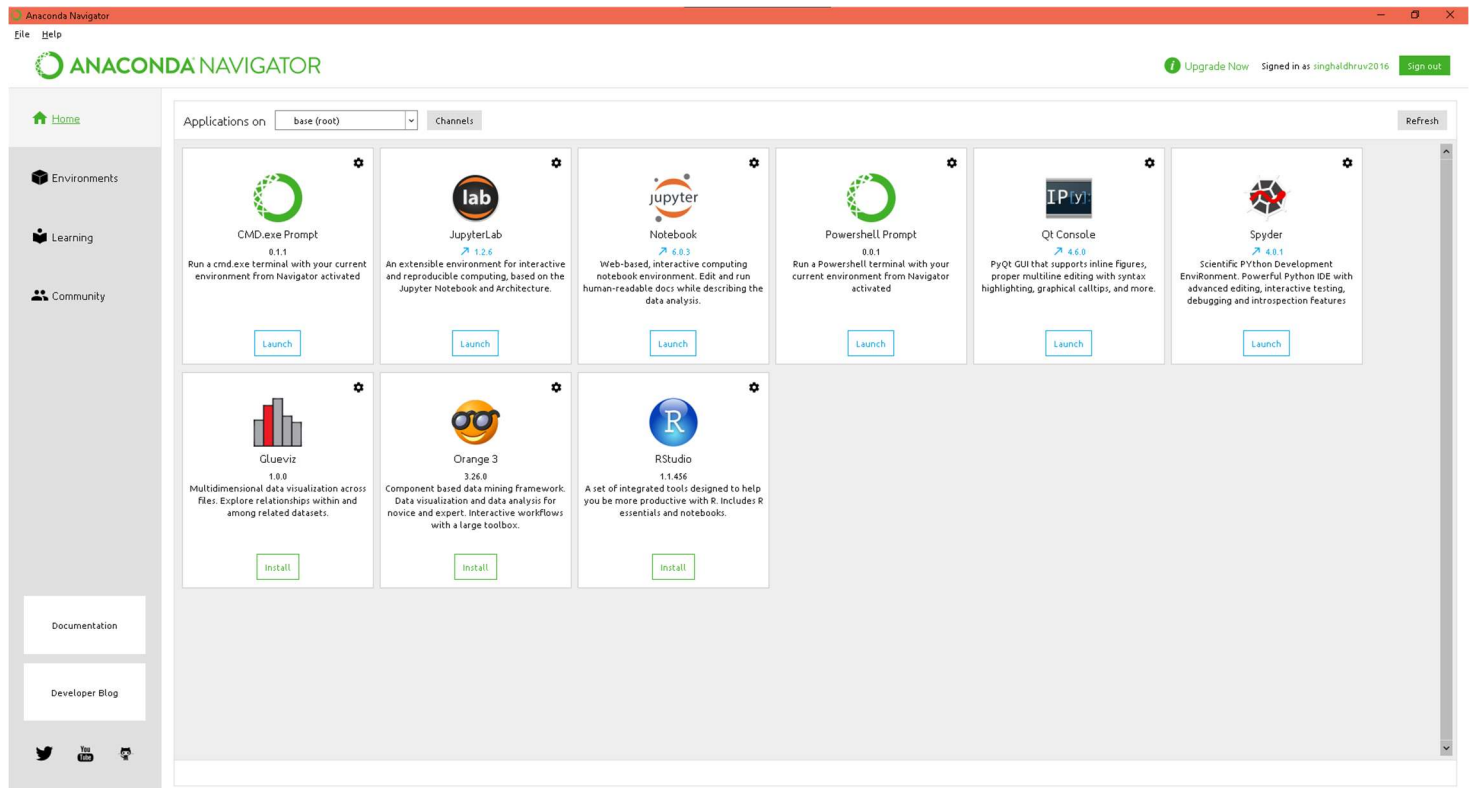


12. After a successful installation you will see the
“**Thanks for installing Anaconda**” dialog box.

13.Open Anaconda navigator.



14. This screen will pop up.



15.Go to “Environments “ from Left Side panel.

base (root)

Name	Description	Version
_ipyw_lab_nb_ex...	A configuration metapackage for enabling anaconda-bundled jupyter extensions	0.1.0
alabaster	Configurable, python 2+3 compatible sphinx theme.	0.7.12
anaconda	Simplifies package management and deployment of anaconda	2020.02
anaconda-client	Anaconda.org command line client library	1.7.2
anaconda-project	Tool for encapsulating, running, and reproducing data science projects	0.8.4
argh		0.26.2
asn1crypto	Python asn.1 library with a focus on performance and a pythonic api	1.3.0
astroid	A abstract syntax tree for python with inference support.	2.3.3
astropy	Community-developed python library for astronomy	4.0
atomicwrites	Atomic file writes.	1.3.0
attrs	Attrs is the python package that will bring back the joy of writing classes by relieving you from the drudgery of implementing object protocols (aka dunder methods).	19.3.0
autopep8	A tool that automatically formats python code to conform to the pep 8 style guide	1.4.4
babel	Utilities to internationalize and localize python applications	2.8.0
backcall	Specifications for callback functions passed in to an api	0.1.0
backports		1.0
backports.functools		1.6.1
backports.functools.lru_cache	Backport of functools.lru_cache from python 3.3 as published at activatestate.	1.6.1
backports.shutil-get-terminal-size		1.0.0
backports.shutil.get_terminal_size	A backport of the get_terminal_size function from python 3.3's shutil.	1.0.0
backports.tempfile		1.0

336 packages available

Create Clone Import Remove

16. From Bottom Left click “Create” and choose version and name of the environment.

Create new environment

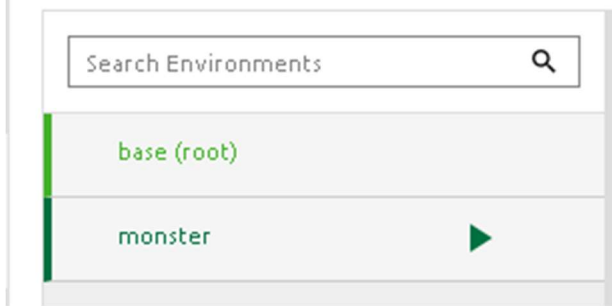
Name: monster

Location: C:\Users\Dhruv Singhal\anaconda3\envs\monster

Packages: ☒ Python 2.7 ☐ R r

Cancel Create

17. Create environment.



18. Activate Environment from Anaconda Prompt and Launch Spyder(After installing From Anaconda Navigator)

Spyder:

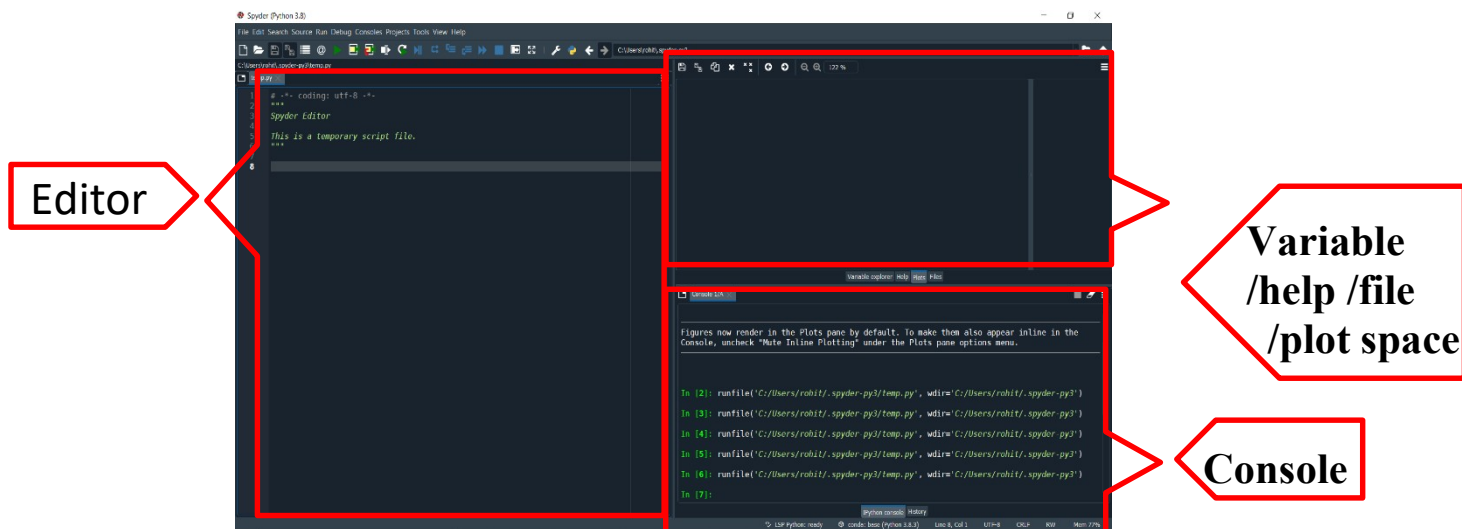
Spyder, the Scientific Python Development Environment, is a free integrated development environment (IDE) that is included with Anaconda.

It includes:

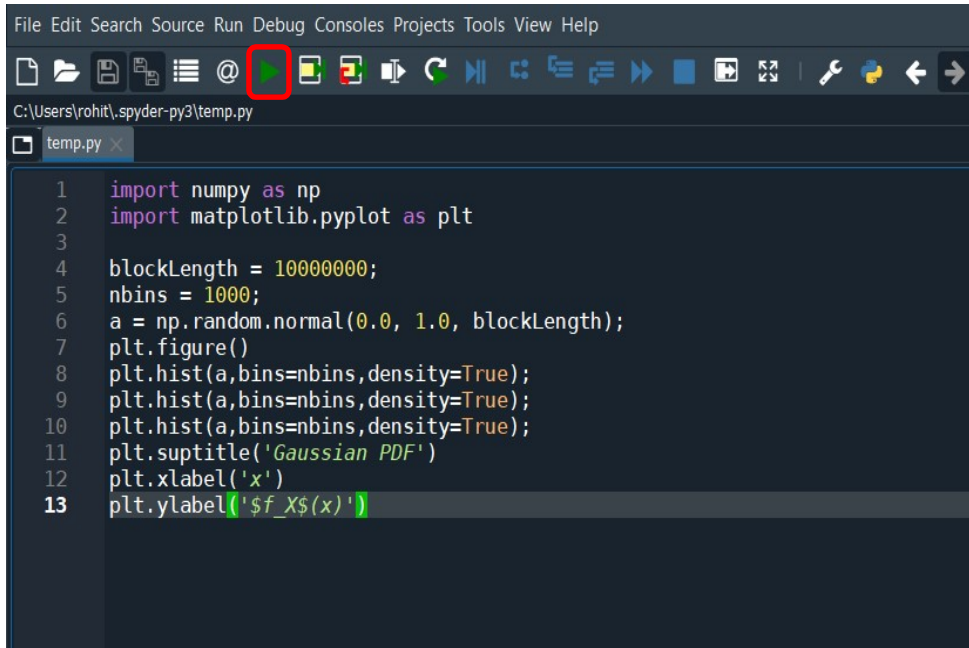
- Editing
- Interactive testing
- Debugging
- Introspection features

Steps for Spyder setup and run a test code:

1. In Window search box, type **Spyder** and press **Enter**.
2. Spyder IDE opened and you can see a total of 3 area:
 - a. Editor
 - b. Console
 - c. Variable/help/file/plot space

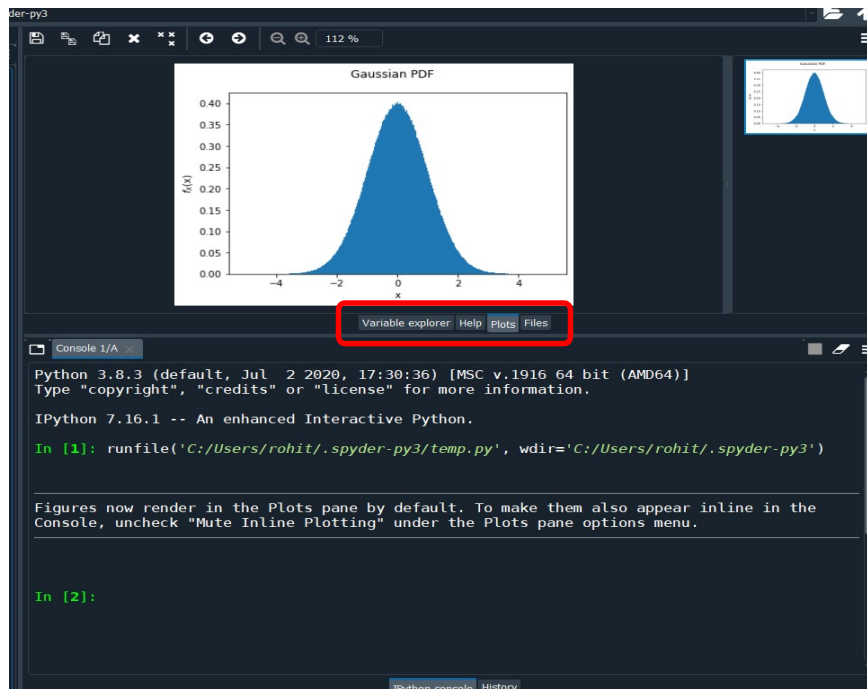


3. Let's **write a test code** in the Editor and run the code by clicking on **Run** button.



```
File Edit Search Source Run Debug Consoles Projects Tools View Help
C:\Users\rohit\spyder-py3\temp.py
temp.py x
1 import numpy as np
2 import matplotlib.pyplot as plt
3
4 blockLength = 10000000;
5 nbins = 1000;
6 a = np.random.normal(0.0, 1.0, blockLength);
7 plt.figure()
8 plt.hist(a,bins=nbins,density=True);
9 plt.hist(a,bins=nbins,density=True);
10 plt.hist(a,bins=nbins,density=True);
11 plt.suptitle('Gaussian PDF')
12 plt.xlabel('x')
13 plt.ylabel('$f_X(x)$')
```

4. You can see the **variable, plot, files** on right side of IDE by clicking appropriate tabs as highlighted with **Red color** below.



5. As a whole **Spyder screen** looks like as below.

