



1 The Procedure to Install Python on Ubuntu Linux OS

Install Python 3.6:

1. To follow the installation procedure, you need to be connected to the Internet.
2. Open the terminal by pressing "Ctrl + Alt + T" keys together.
3. Install Python 3:
 - (a) For Ubuntu 16.04:
 - i. In the terminal, run the command:
 - A. `sudo apt-get install python3.5`
 - B. `sudo apt-get install python3-pip`
 - ii. Make sure that you press Enter after entering every command.
 - iii. After entering the commands, the terminal will prompt you for your password, type it in to the terminal.
 - (b) For Ubuntu 16.10 and Ubuntu 17.04:
 - i. In the terminal, run the command:
 - A. `sudo apt-get install python3.6`
 - B. `sudo apt-get install python3-pip`
 - ii. Press Enter.
 - iii. The terminal will prompt you for your password, type it in to the terminal.
 - iv. Press Enter.
 - (c) For Ubuntu 17.10 and above, the system already comes with Python 3.6 installed by default.

Check if Python is Installed Correctly:

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 - (b) For Ubuntu 16.10 and Ubuntu 17.04:
 - i. In the terminal, run the command:
 - A. `sudo apt-get install python3.6`
 - B. `sudo apt-get install python3-pip`
 - ii. Press Enter.
 - iii. The terminal will prompt you for your password, type it in to the terminal.
 - iv. Press Enter.
 - (c) For Ubuntu 17.10 and above, the system already comes with Python 3.6 installed by default.

Check if Python is Installed Correctly:

1. Open the terminal by pressing Ctrl + Alt + T keys together.
2. Run the command `python3 --version` in the terminal and press Enter.

3. If you have installed Python 3.5, you should see "Python 3.5" (or an output resembling this) in the console. If you have installed Python 3.6, you should see "Python 3.6" (or an output resembling this) in the console

Install Numpy, IPython and Matplotlib Libraries

1. Open the terminal by pressing Ctrl + Alt + T keys together.
2. In the terminal, run the command `sudo apt-get install python3-tk`
3. The terminal may prompt you for your password, type it in to the terminal.
4. Press Enter
5. Type in the following commands followed by the Enter key:
 - (a) `sudo python3 -m pip install numpy`
 - (b) `sudo python3 -m pip install ipython`
6. Install matplotlib depending on the Python version you have.
 - (a) For Python 3.5 use the command: `sudo python3 -m pip install matplotlib==3.0.3`
 - (b) For Python 3.6 use the command: `sudo python3 -m pip install matplotlib`
7. The terminal may prompt you for your password, type it in to the terminal.

Check if Numpy, Matplotlib and IPython are Installed Correctly:

1. Open the terminal by pressing Ctrl + Alt + T keys together.
2. Run the command `ipython3` and press Enter to open the IPython console.
3. You should get the following output (or an output resembling this)

```
Python 3.6 (default, Oct 22 2018, 11:32:17) Type 'copyright', 'credits' or 'license' for more information
```

```
IPython 7.2.0 -- An enhanced Interactive Python. Type '?' for help. In[1]:
```

4. In the IPython console, type in the command `import numpy, matplotlib`
5. Press Enter
6. Type in the command
7. Press Enter
8. If all commands are executed without throwing any errors/exceptions as output (no other output will be displayed), then the packages are installed successfully.

2 The procedure to Install Python on Windows OS(10 or 11)

1. To follow the installation procedure, you need to be connected to the Internet.
2. Visit <https://www.python.org/downloads/release/python-368/>
3. At the bottom please locate Windows x86-64 executable installer for 64 bit OS and Windows x86 executable installer for 32 bit OS.
4. Click on the located installer file to download python.
5. Downloading takes a few seconds depending on your internet speed.
6. Python Windows installer file downloads to Downloads folder.
7. After the downloading of the exe file, double click on the installer file to start the installation procedure.
8. Follow the instructions as per the installation wizard.
9. **Important Note:** After double clicking the installer, Check the check box for Add Python 3.12.5 to PATH.

10. To set up the Python User, you need to set up the PATH of Python Application in Environment Variables at the top.
11. For example I am using the path as below:
C:\Users\Madhuri\AppData\Local\Programs\Python\Python312\
C:\Users\Madhuri\AppData\Local\Programs\Python\Python312\Scripts\
12. Generally Pip gets installed along with Python. If it does not install automatically. Use the command prompt to type the commands.
13. Open the command prompt window
14. Please press the Enter key after typing every command on the command prompt.
15. To show the python version type:
python -version
16. To download pip type:
curl https://bootstrap.pypa.io/get-pip.py -o get-pip.py
17. To run Pip type:
python get-pip.py
18. To verify the pip version type
pip -version
19. To import the IPython Console type:
python -m IPython
20. To import numpy and matplotlib type:
import numpy
import matplotlib