

1 System Requirement

System requirements for Python Installation:

1. Operating system: Linux- Ubuntu 16.04 to 17.10, or Windows 7 to 10, with 2GB RAM (4GB preferable)
2. You have to install Python 3 and related packages, please follow the installation instructions given below as per your operating system.

2 The procedure to install Python 3 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:

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 `%pylab`
 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. Type in the following commands followed by the Enter key:
 - (a) `python -m pip install numpy`
 - (b) `python -m pip install ipython`
 - (c) `python -m pip install matplotlib`

3 The procedure to install Python 3 on Windows OS:

Install Python 3.6:

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 locate Windows x86-64 executable installer for 64 bits OS and Windows x86 executable installer for 32 bits OS
4. Click on the located installer file to download.
5. After download completes, double click on the installer file to start the installation procedure.
6. Follow the instructions as per the installer

Important Note: After double clicking the installer, check mark the option “Add Python 3.6 to PATH”

Check if Python is Installed Correctly:

1. Open the cmd window
2. Run the command `python --version` in the cmd window and press Enter.
3. You should get an Output Python 3.6 (or an output resembling this)

Install Numpy, Matplotlib and IPython:

1. Open the cmd window

Check if Numpy, Matplotlib and IPython are Installed Correctly:

1. Open the cmd window
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 `%pylab`
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.

Note:

1. For Windows users, after typing `%pylab`, in case you encounter the error;

```
ImportError: DLL load failed: %1 is not a
valid Win32 application.
```

You can fix the issue by downloading and installing the Visual C++ Redistributable for Visual Studio 2015 from the link given here - <https://www.microsoft.com/en-US/download/details.aspx?id=48145>