**Python Packages**

Python is one of the most popular programming language for data science and analytics. It is widely used for a variety of tasks in startups and many multi-national organizations. The beauty of this programming language is that it is open-source which means it is available for free and has very active community of developers across the world. Python developers share their solutions in the form of package or module with other python users. This tutorial explains various ways how to install python package.

**Ways to Install Python Package**

**Method 1 : If Anaconda is already installed on your System**

[**Anaconda**](https://www.anaconda.com/distribution/)is the data science platform which comes with pre-installed popular python packages and powerful IDE ([Spyder](https://www.spyder-ide.org/" \t "_blank)) which has user-friendly interface to ease writing of python programming scripts.

If Anaconda is installed on your system (laptop), click on Anaconda Prompt as shown in the image below.

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| <https://1.bp.blogspot.com/-ZitMGQLx4-U/XKypYPCap2I/AAAAAAAAHfE/Vx2jahLR2GQeZ_8jV3WgfEiJqGuE3aedgCLcBGAs/s1600/Anaconda%2BPrompt.png> |
| Anaconda Prompt |

**To install a python package or module, enter the code below in Anaconda Prompt -**

pip install package-name

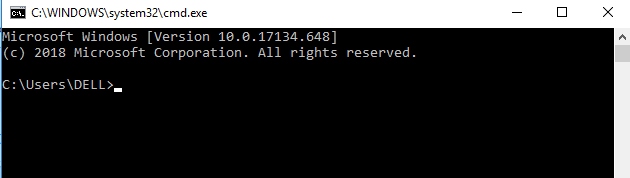
|  |
| --- |
| <https://3.bp.blogspot.com/-s8mPnoU0HB4/XKyuEhpMZiI/AAAAAAAAHfQ/E2BV4WUX8hUOCzxIkeIJhsZj9LXnyo_8gCLcBGAs/s1600/pip.png> |
| Install Python Package using PIP Windows |

**Method 2 : NO Need of Anaconda**

1. Open **RUN** box using shortcut Windows Key + R  
  
2. Enter cmd in the RUN box

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| --- |
| <https://2.bp.blogspot.com/-l0SpCK95fYs/XKywlQ1-eaI/AAAAAAAAHfc/kBLlABIt5CUWfkyuekhsf6oWs_HY6v3qQCLcBGAs/s1600/cmd.PNG> |
| Command Prompt |

Once you press OK, it will show command prompt screen.

[](https://4.bp.blogspot.com/-6qK3HiEYobQ/XKyzVYbvbUI/AAAAAAAAHfo/ujsm9K6ubwcVTnSKa08PRFjmN0uV0SdogCLcBGAs/s1600/scripts.png)

3. Search for folder named Scripts where pip applications are stored.

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| --- |
| <https://4.bp.blogspot.com/-uK8urOCHG4U/XKyzzfSrigI/AAAAAAAAHfw/_zPjSCKbMEQCp4URvC2-c5V3cs0HOY85ACLcBGAs/s1600/scripts.png> |
| Scripts Folder |

4. In command prompt, type cd <file location of Scripts folder>  
  
cd refers to change directory.

For example, folder location is **C:\Users\DELL\Python37\Scripts** so you need to enter the following line in command prompt :

cd C:\Users\DELL\Python37\Scripts

|  |
| --- |
| <https://3.bp.blogspot.com/-jrNtBSXSdGA/XKy0hBdrfII/AAAAAAAAHf8/zFqfyFQF0D0-kDeyOc4vr7kfTDlyPHrbwCLcBGAs/s1600/scripts.png> |
| Change Directory |

5. Type pip install package-name

|  |
| --- |
| <https://1.bp.blogspot.com/-lP92_xwm5F8/XKy1eMxil6I/AAAAAAAAHgE/LIpvFI4ergsXWX1zH_h8qWOB_4GlFlvzgCLcBGAs/s1600/pip%2Binstall.png> |
| Install Package via PIP command prompt |

**Method 3 : Install Python Package from IPython console**  
  
Make sure to use **!** before pip when you enter the command below in IPython console window. Otherwise it would return syntax error.

!pip install package\_name

The **!** prefix tells Python to run a shell command.  
  
  
**Syntax Error : Installing Package using PIP**  
  
Some users face error ***"SyntaxError: invalid syntax"*** in installing packages. To workaround this issue, run the command line below in command prompt -

python -m pip install package-name

**python -m pip tells python to import a module for you, then run it as a script.**  
  
**Install Specific Versions of Python Package**

python -m pip install Packagename==1.3     # specific version  
python -m pip install "Packagename>=1.3"  # version greater than or equal to 1.3

**How to load or import package or module**  
  
Once package is installed, next step is to make the package in use. In other words, it is required to import package once installed. There are several ways to load package or module in Python :  
  
1. import math loads the module math. Then you can use any function defined in math module using **math.function**. Refer the example below -

import math  
math.sqrt(4)

2. from math import \* loads the module math. Now we don't need to specify the module to use functions of this module.

from math import \*  
sqrt(4)

3. from math import sqrt, cos imports the selected functions of the module math.  
  
4.import math as m imports the math module under the alias m.

m.sqrt(4)