**Python – Scientific Computing Packages**

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Analyzing and manipulating data is a big challenge nowadays, and Python's SciPy (Scientific Python), an open source software for scientific computing in Python is now making things easier for playing with data. Here are some of the core packages of Python for data analysis.

1. NumPy: NumPy is a blazing fast maths library for Python with a heavy emphasis on arrays. It is the core python package for scientific computing. It provides various multi-dimensional array objects and an assortment of routines on arrays; it also includes functions for sorting, selecting, I/O, discrete Fourier transforms, basic linear algebra, random simulation and much more.

2. Matplotlib: This is a plotting library which produces different quality of graphs in a variety of multiple formats and interactive environments across several platforms. Some of the most popular uses for Matplotlib, especially in recent years, are data processing, analysis, and visualization. People are now choosing Matplotlib over Matlab as it provides easy syntax.

3. Pandas: This high-performance Python subset has easy-to-use data structures and data analysis tools for the Python programming language. One of the most powerful features of Pandas is that it includes data frames, a data structure similar to spreadsheets or SQL tables. There are several functions in Pandas that can be used on data frames, which make things simpler and faster.

4. SciPy Library: SciPy is packed with mathematical algorithms and utility functions built on the NumPy extension of Python. With SciPy an interactive Python concourse becomes a data-processing and a system-prototyping environment, rivaling systems such as MATLAB, IDL, Octave, R-Lab, and SciLab.

Here are the commands for installing these packages. This requires pip (Python install packages)

If your system doesn't have Pip, use the following commands for installing pip in Windows:

1. First download get-pip.py file and run it from the shell using the command "python get-pip.py". In Ubuntu use the following commands "apt-get update", "apt-get -y install python-pip".

2. Now install the following packages:

pip install numpy

pip install pandas

pip install matplotlib

pip install scipy