

PYTHON, PANDAS AND JUPYTER TUTORIAL



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What is Python?



Introduction

Python is simple, easy to learn, powerful, high level and very popular general-purpose programming language

- Open Source
- Dynamically Semantics
- Interpreted



Python Features

- Easy to Learn and Use
- Expressive Language
- Interpreted Language
- Cross-platform Language
- Free and Open Source
- Object-oriented Language
- Extensible
- Large Standard Library
- GUI Programming Library
- Integrated



Python Applications

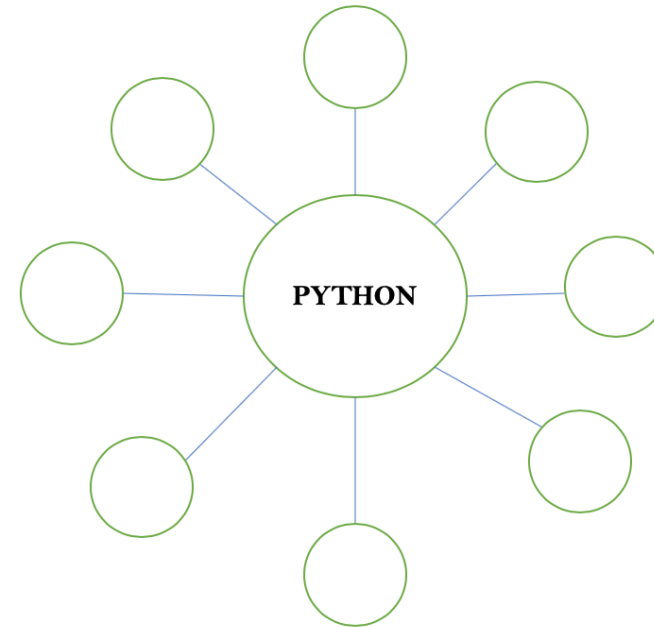
- Web Development (Django)
- Web Scraping (Beautiful Soup)
- Scripting Language
- Scientific Programming and Numeric Computing
- Automation and Embedded System
- Desktop GUIs and 3D Modeling



Importance of Python



Teaching



Multipurpose

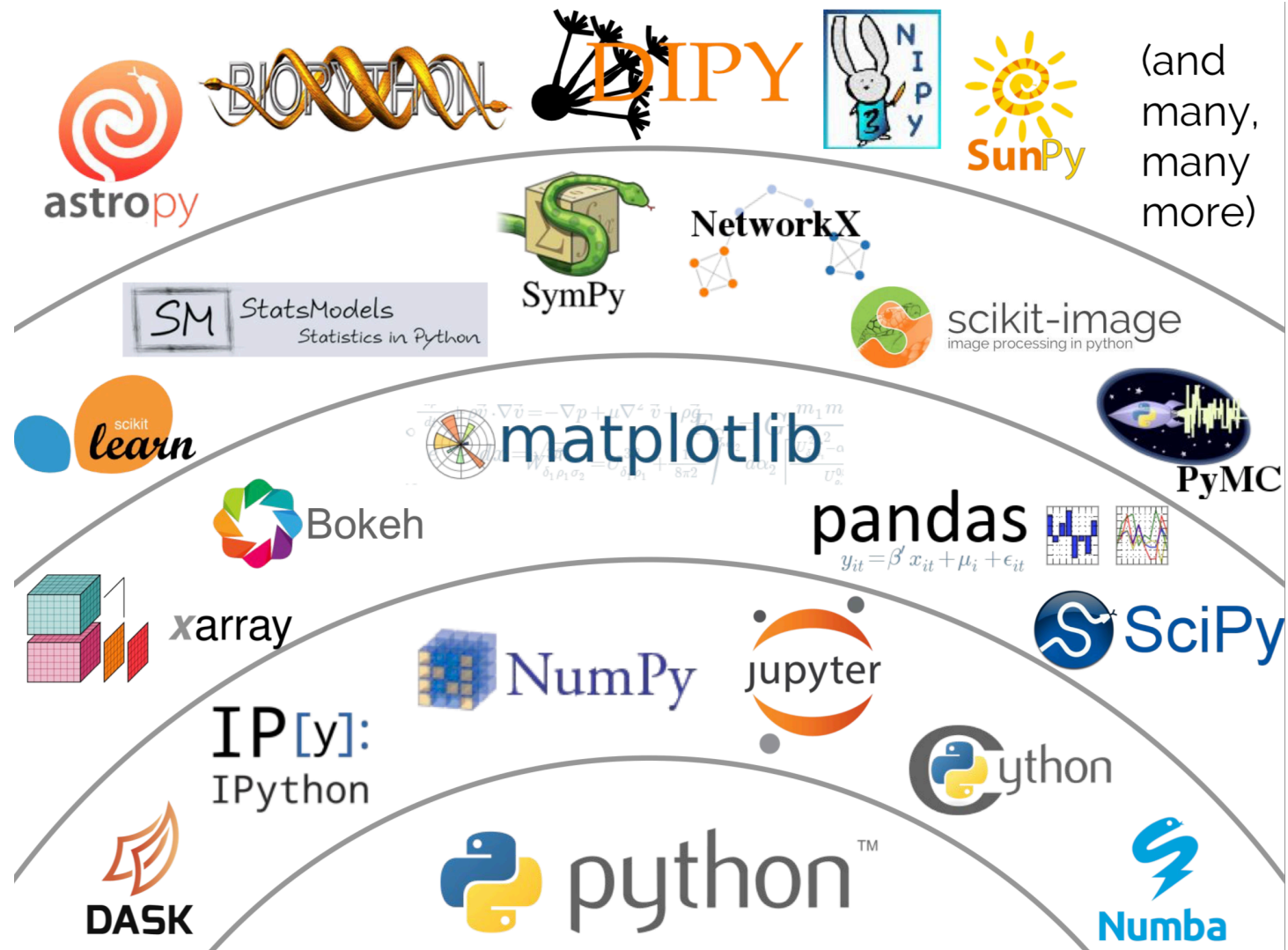


Python Version

Python Version	Released Date
Python 1.4	25 October 1996
Python 1.5	17 February 1998
Python 1.6	5 September 2000
Python 2.0	16 October 2000
Python 2.1	15 April 2001
Python 2.2	21 December 2001
Python 2.3	29 July 2003
Python 2.4	30 November 2004
Python 2.5	19 September 2006
Python 2.6	1 October 2008
Python 2.7	4 July 2010
Python 3.0	3 December 2008
Python 3.1	27 June 2009
Python 3.2	20 February 2011
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Python 3.8.3	13 May 2020



Python Packages for Data Science

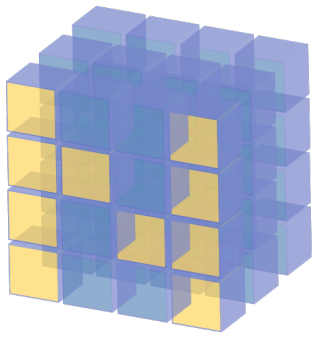


Jupyter

Open-source web application for interactive and exploratory computing



Numpy and Sci-py



NumPy

The fundamental Python
package for scientific computing



Collections of high level
mathematical operations



Matplotlib

Matplotlib is an excellent 2D and 3D graphics library for generating scientific figures



Pandas

A python package providing fast, flexible, and expressive data structures for data analysis

Pandas



Practical session

