Why Python?

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With inputs from Tanu Sharma

Climate Research and Services
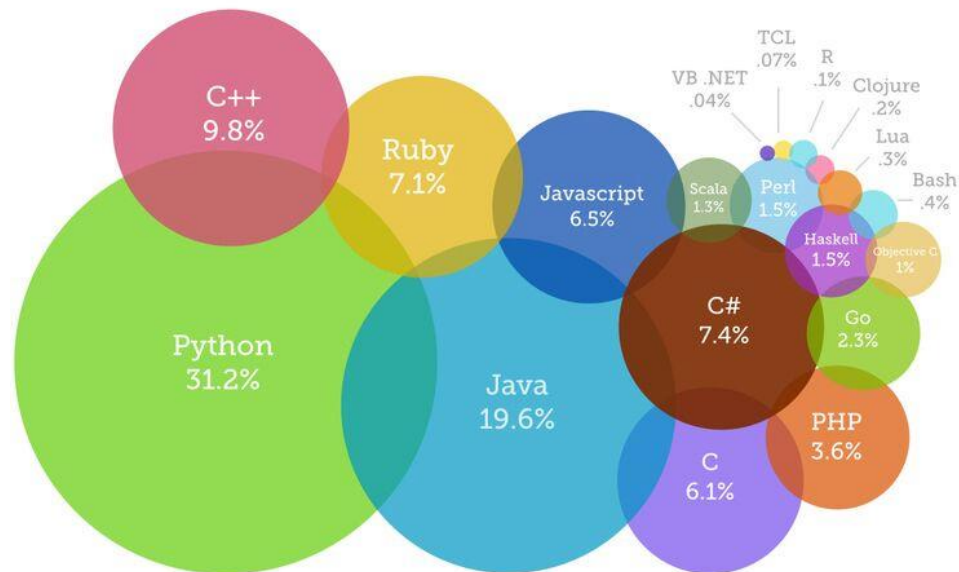India Meteorological Department
Pune

Training on Climate Data Analysis and Visualization with Python; CRS, IMD, Pune
11-15 September 2023

What is Python Programming Language?

- Python is an interpreted, general purpose high-level programming language.

- Python is simple with easy to learn syntax.

- Python supports modules and packages which encourages code reuse.

- Commonly used

- Lots of libraries for data-science

Why learn Python Programming?

- Most popular programming language is the recent years.

- Easy to learn and use.
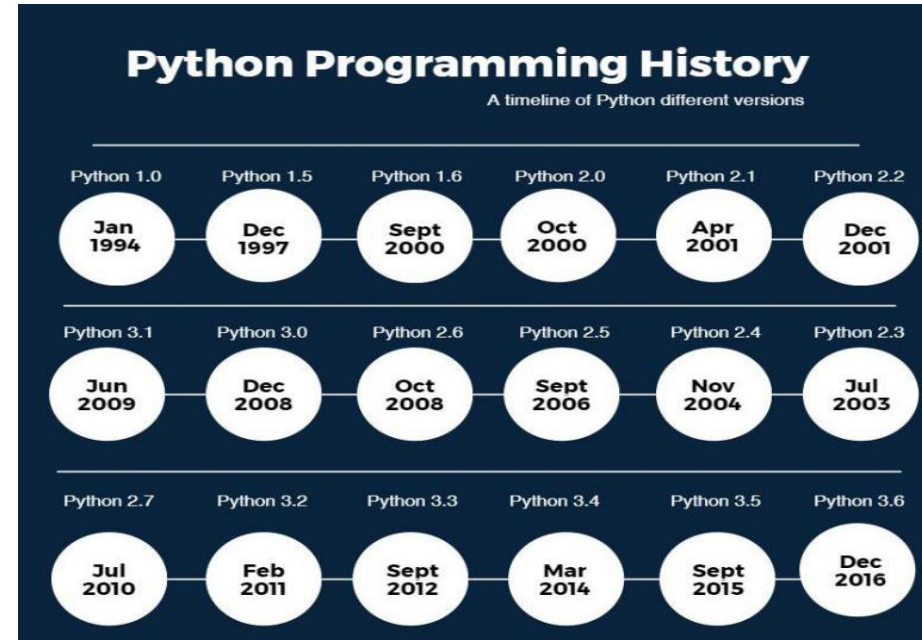
- Powerful libraries.

- Free and Open Source.

most_popular_programming_ languages_in_the_world_2022

History of Python

Guido van Rossum

- Creator of Python: **Guido van Rossum** (born in the Netherlands, master's in mathematics and computer science from the University of Amsterdam in 1982).

- Van Rossum started developing the new script in the late 1980s and finally introduced the first version of that programming language in 1991.

- The first ever version of Python (Python 1.0) was introduced in 1991. Since its inception and introduction of Version 1, the evolution of Python has reached up to Version 3.x (till 2017).

Source: Internet

Python Programming History
A timeline of Python different versions

Python 1.0	Python 1.5	Python 1.6	Python 2.0	Python 2.1	Python 2.2
Jan 1994	Dec 1997	Sept 2000	Oct 2000	Apr 2001	Dec 2001

Python 3.1	Python 3.0	Python 2.6	Python 2.5	Python 2.4	Python 2.3
Jun 2009	Dec 2008	Oct 2008	Sept 2006	Nov 2004	Jul 2003

Python 2.7	Python 3.2	Python 3.3	Python 3.4	Python 3.5	Python 3.6
Jul 2010	Feb 2011	Sept 2012	Mar 2014	Sept 2015	Dec 2016

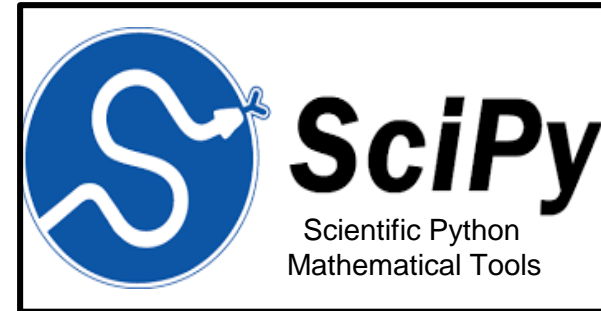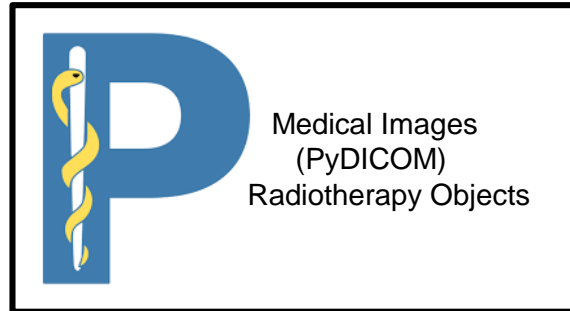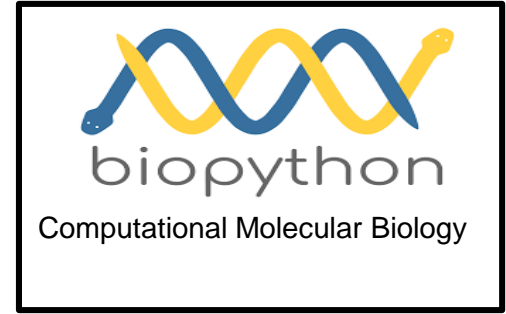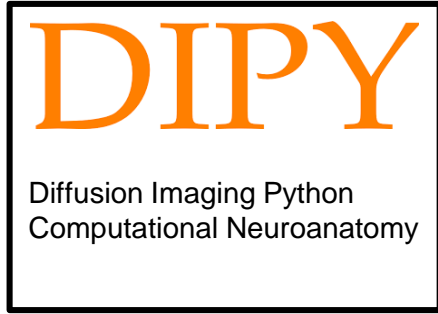# Why Van Rossum named it 'Python'?

- Interestingly, the name of the Python programming language, has absolutely nothing to do with the representative of the reptile world.

- Guido van Rossum was a big fan of *'Monty Python's Flying Circus'* (BBC tv comedy show appeared in the UK in the 1970s), so he named his development after the famous comedy show.

- But few people know the tv show, so later it was decided to link the programming language with snake.

Source: Internet
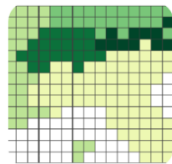
Use of Python in various fields

DIPY
Diffusion Imaging Python
Computational Neuroanatomy

astropy
A Community Python Library for Astronomy

biopython
Computational Molecular Biology

sunpy
A Community Python
Library for Solar Physics

Medical Images
(PyDICOM)
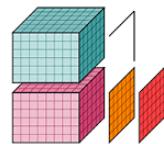Radiotherapy Objects

SciPy
Scientific Python
Mathematical Tools

Use of Python in Climate Science

So many python modules are coming up which are helpful in weather and climate data analysis and visualization.

Objectives of this Python training

- To make use of Python among the CRS, Pune officials

- To have a transition to Python from various other programming language currently being used at CRS, Pune

- To learn Data analysis from text, CSV, MS Excel and NetCDF format data

- To learn Data visualization using various types of data

Thank you