

Introduction to Python

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Fundamentals of Statistics



Introduction to Python

Python is an *interpreted high-level general-purpose* programming language. Python's design philosophy emphasizes code readability with its notable use of *significant indentation*. Its language constructs as well as its *object-oriented* approach aim to help programmers write clear, logical code for small and large-scale projects.



The designer of
Python, [Guido van Rossum](#), at [OSCON 2006](#)

Dynamically Typed

Garbage Collected

Community Support

Libraries

Multiple Paradigms

Libraries

Latest version 3.9

Uses of Python

Used as a **Scripting Language for Web Applications**. Notable Frameworks include Django, Flask.

Scientific Computing with the use of Libraries such as Scipy, Numpy, Pandas and specialized ones such as Biopython, Astrophysics, etc.

Extremely popular as the de-facto language of choice for **Data Science, Machine Learning, Deep Learning** Applications.

Non-web Application Development

Extensively used in **Information Security domain** including for exploit development

Notable use in the development of the **Raspberry Pi platform**

Topics to be covered in Python

Python Language Elements

Built-in Data Types

Working with Numpy Arrays

Pandas Series and DataFrames

Visualisations using Matplotlib

