

Introduction to Python

Python is a versatile and powerful programming language that has gained immense popularity in recent years. It is known for its readability, ease of use, and vast libraries.



by Shivam

History and evolution of Python

1

Early Years

Python was conceived in the late 1980s by Guido van Rossum, who wanted a language that was both powerful and easy to use. It was released in 1991.

2

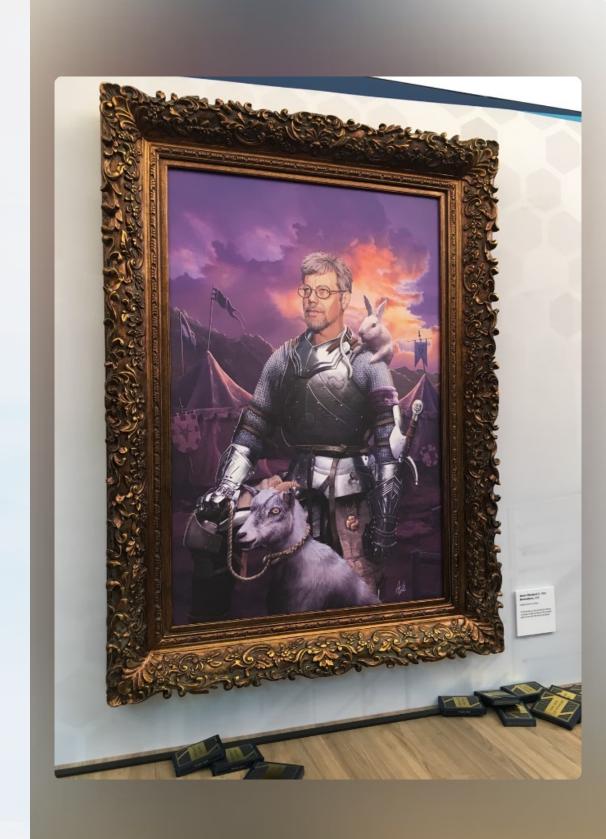
Growth and Popularity

Python's popularity grew steadily throughout the 2000s, due in part to its use in web development, data analysis, and scientific computing.

3

Modern Python

Python continues to evolve with new features and improvements being released regularly. It is now one of the most widely used programming languages in the world.



Functions in Python

Defining Functions

Functions are blocks of reusable code that perform specific tasks. They are defined using the keyword "def" followed by the function name and parentheses.

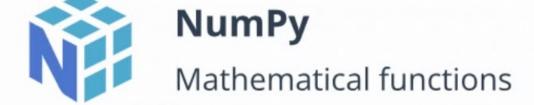
Calling Functions

Once defined, functions can be called by using their name followed by parentheses. This executes the code within the function.

Arguments and Return Values

Functions can accept arguments (input values) and can return a value (output).
This allows for flexible and modular code.









SeaBorn

Data vicualizations

Modules and libraries in Python

1 What are Modules?

Modules are files containing Python code that can be reused in other programs. They provide functionality for various tasks, from data manipulation to web development.

2 Importing Modules

Modules can be imported into a program using the "import" keyword. This allows access to the functions and classes defined in the module.

3 Popular Libraries

Python has a vast ecosystem of libraries, including NumPy for numerical computation, pandas for data analysis, and Django for web development. 4 Benefits of Using Modules

Modules promote code reusability, reduce code complexity, and improve maintainability.

Applications of Python Language

Use cases and applications of Python

Web Development

Python is widely used in web development, with frameworks like Django and Flask providing powerful tools for building dynamic websites and web applications.

Scripting and Automation

Python is excellent for automating tasks, such as system administration, web scraping, and data processing. Its simple syntax and extensive libraries make it ideal for scripting.

Data Science and Machine Learning

Python is a dominant language in data science and machine learning, thanks to libraries like scikit-learn, TensorFlow, and PyTorch. It enables data analysis, model training, and prediction.

Game Development

Python's libraries like Pygame provide tools for creating games. It's a good choice for beginners due to its readability and ease of use.