

Python Introduction

Python is an popular object oriented programming language. It is general-purpose interpreted, high level dynamically typed language. It is developed by Guido Van Rossum in 1991. Python has their own documentation type PEP8, that increase code readiability. Its syntax is said to be clear and expressive similar to English. Python has a large and comprehensive standard library.

- Open Source and community driven
- Python is real-world, production language.
- Freely available to almost all Operating systems. e.g- mac, window, linux, resberryPI

Python Use Cases

- 1.Web Development
- 2.Data Science Implementations
- 3.Artificial Intelligence
- 4.Game Development
- 5.Internet Of Things
- 6.Dekstop GUI Applications Development
- 7.Enterprise Applications
- 8.Image Recognition And Text Processing
- 9.API

1. Web Development

Python are used on server to create web Applications. Applications that are accessed by using browser is called web app And Python is used in development of that application. Python has some frameworks. e.g - Django, Flask, Bottle, Falcon, TurboGears, Web2Py, CherryPy, CubicWeb, Quixote and Pyramid.

2. Data Science Implementations

In computer science everything is an data. Data science is another branch of computer science that uses scientific methods, processes, algorithm and systems to extract meaning full data and extend the knowledge to use that data in efficient way. e.g- Identification and prediction of disease, optimizing shipping and logistics routes in real-time, wheather forecast, detection of fraud and automating digital ads.

3. Artificial Intelligence

Python is being used for neural networks development of artificial intelligence. Python has scikit:learn machine learning framework. Framework used in developing machine learning models further model can be used for making neural networks. Something like human brains how a kids brain start learning, decoding information and prediction using previous learnings. e.g - Deep learning, Genetics Algorithms and Natural Language Processing.

4. Game Development

Python has various library and framework to develop games. e.g - PyGame, PyKira, Kivy, Panda3D, PyOpenGL, Pyglet, Cocos2d, Python-Ogre, Ren'Py.

5. Internet Of Things

Python used to develop IoT Devices that can be explained physical electronic device with sensors, processing capability, software that can communicate and exchange data with other devices and systems over communication network and internet. E-g – Alexa, Google Home, Smartwatches, Fitness Trackers.

6. Dekstop GUI Applications Development

Python has amazing GUI library that support desktop application. Frameworks use GUI library that used in developing the desktop applications. Python have GUI Frameworks. e.g - Tkinter, Kivy, Garadio, Plotly Dash, Streamlit, PyQt, WxPython, PyGUI. These frameworks are used to create Linux, OS X, And Window Application.

7. Enterprise Applications

Enterprise application is a kind of computer software. It is developed to satisfy the need of, organization, schools, business, clubs, charities and interest based user group rather than individuals. It is not open for public, python has frameworks or library to develop enterprise software. e.g - Django, Flask, Bottle, Zop, TurboGears, Web2Py, CherryPy, Sanic and Masonite.

8. Image Recognition And Text Processing

The program has ability to identify objects, place, people and writing action on image. Methods of analyzing electronic text, structures in a format, manipulation of text and generate new text comes in text processing. e.g - Traffic signal, ATM, printers and QR code reader.

9. API

API stands for application programming interface. It's like a bridge that connects two programs or softwares to interchange information and data.