Top 10 Python Applications in the Real World You Need to know.

Python is a Dynamic Typing, Built-In Data structures, Powerful Libraries, Frameworks, Community Support are just some of the reasons which make Python an attractive language for rapidly developing any sort of application. In this article, we will see some of the areas where Python excels in application development.

Introduction of Python –

Python is free and simple to learn. Its primary features are that is high-level dynamically typed and interpreted. This makes debugging of errors easy and encourages the rapid development of application prototypes, making itself as

the language to code with. Python was developed in 1989 by Guido Van Rossum and emphasizes on the DRY (Don't repeat Yourself) principle and readability.

Without wasting your time, let's move on straight into the Python Application.

Python Applications:

Python support cross-platform operating systems which makes building application with it all the more convenient. Some of the globally known applications such as You Tube, BitTorrent, Dropbox etc. use Python to achieve their functionality.

1. **Web Development -**

   Python can be used to make web-application at a rapid rate. It is because of the frameworks Python uses to create these applications. There is common-backend logic that goes into making these frameworks and a number of libraries that can help integrate protocols such as HTTPS, FTP, SSL etc. and even help in the processing of JSON, XML, E-MAIL and so much more.

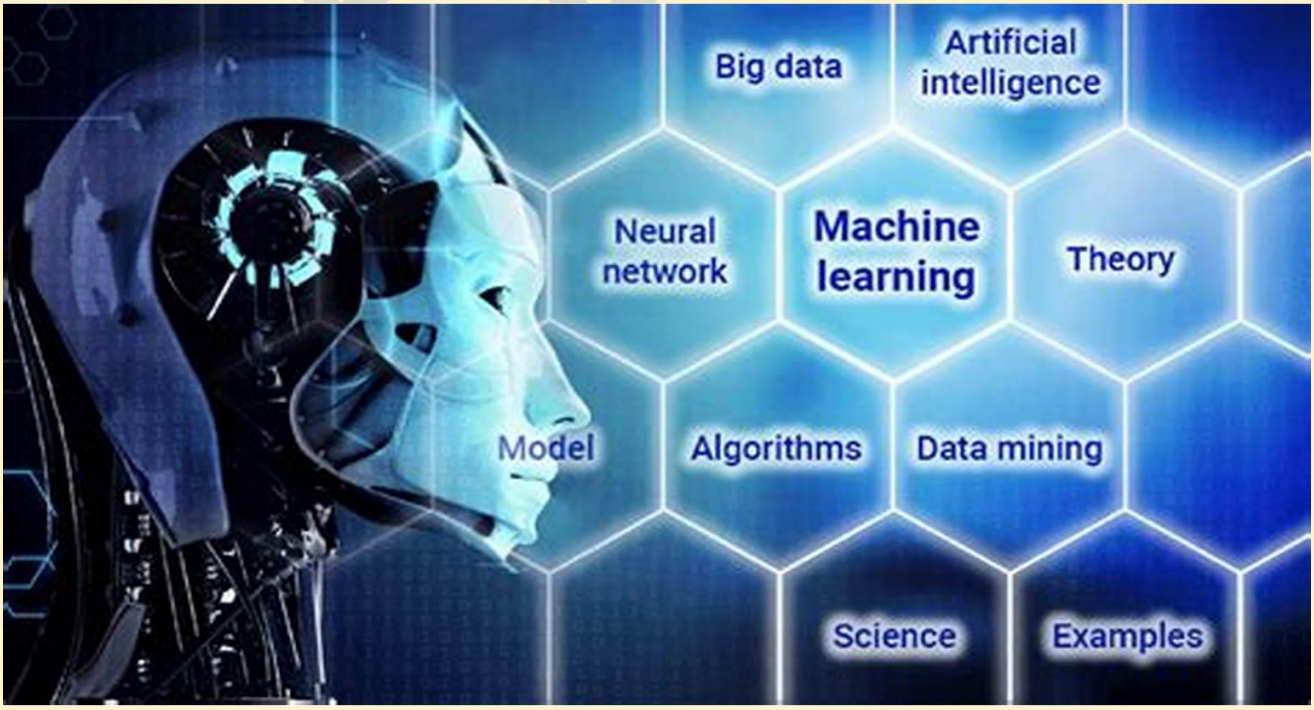
Some of the most well-known frameworks are Django, Flask, Pyramid. The security, scalability, convenience that they provide is commendable if we compare it to starting the development of a website from scratch.

2. **Game Development -**
   Python is also used in the development of interactive games.

There are libraries such as PYSOY which Is a 3D game engine supporting Python3, PYGAME which provides functionality and a library for game development. Game such as Civilization-IV, Disney's TOONTOWN Online, Vega strike etc. have been using Python.

3. **Machine Learning and Artificial Intelligence -**
   Machine learning and Artificial intelligence are the talks of the town as they yield the most promising careers for the future. We make the computer learn based on past experiences through the

data stored or better yet, create algorithms which makes the computer learn by itself. The programming language that mostly everyone chooses, Support for these domains with the libraries that exist already such as Pandas, Scikit-learn, NumPy and so many more.



Learn the algorithm, use the library and you have your solution to the problem. It is that simple. But if you want to go the hardcore way, you can design your own code which yields a better solution, which still is much easier when we compare it to other languages.

4. **Data Science and Data Visualization-**

   Data is money if you know how to extract relevant information which can help you take calculated risks and increase profits. You study the data you have, perform operations and extract the information required. Libraries such as Pandas,

NumPy help you in extracting information.

You can even a visualize the data libraries such as Matplotlib, Seaborn, which are helpful in plotting graphs and much more. This is what python offers you to become a Data Scientist.

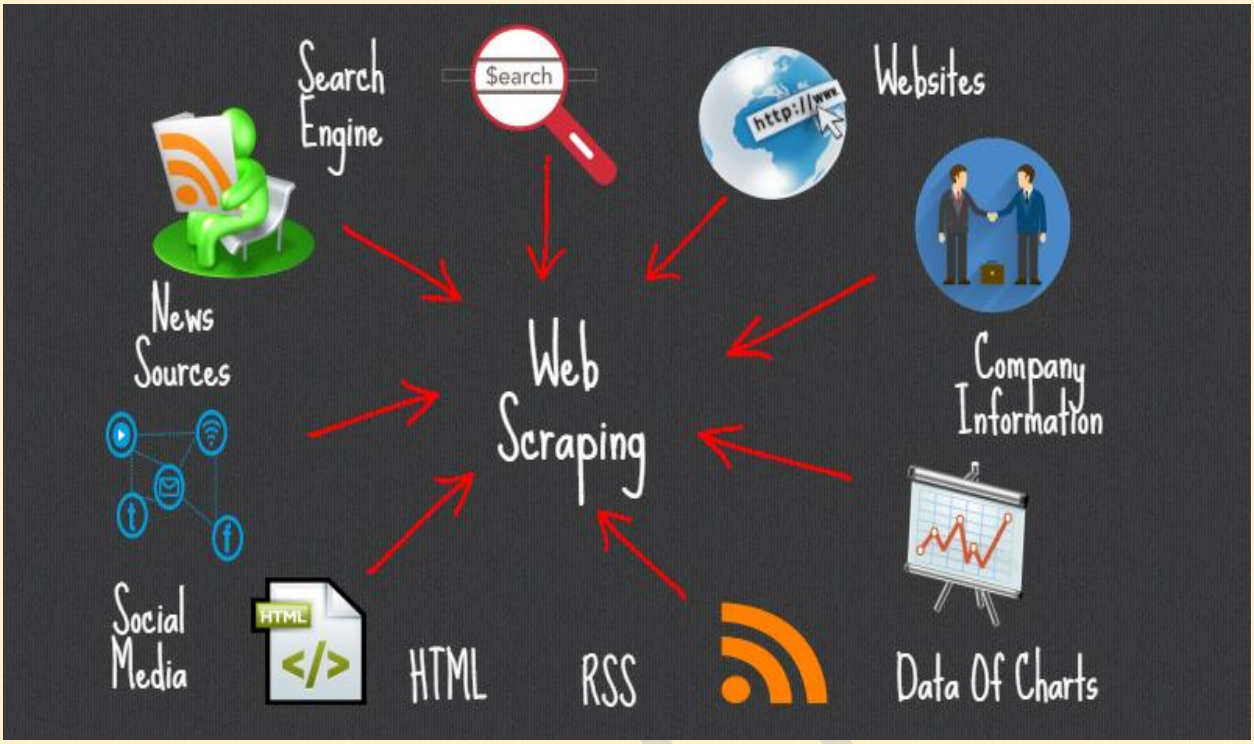
5. Desktop GUI -

We use Python to program desktop applications. It provides the TKINTER library that can be used to develop user interfaces. There are some other useful toolkits such as the WXWIDGETS, KIVY, PYQT that can be used to create applications on several platforms.

You can start out with creating simple application such as calculators, to-do apps and go ahead and create much more complicated applications.

6. **Web Scraping Applications -**
   Python is a savior when it comes to pull a large amount of data from websites which can then be helpful in various real-world processes such as price comparison, job listings, research and development and much more.

   Python has Beautiful Soup which we use to pull such data.



Here’s is a full-fledged guide to learn Web Scraping with Python.

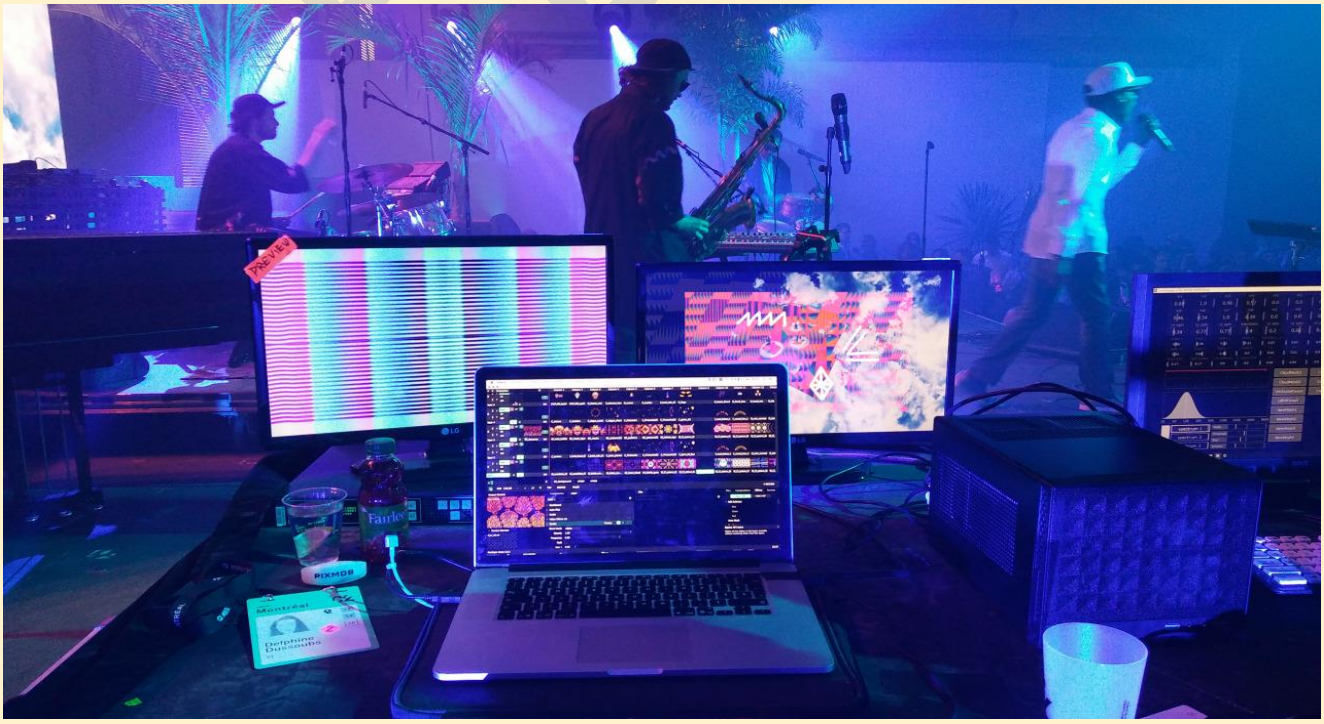
7. **Business Applications -**

   Business applications are different than our normal applications covering domains such as e-commerce, ERP and many more.

They require applications which are scalable, extensible and easily readable and python provides us with all these features. Platforms such as TRYTON is available to develop such business applications.

8. Audio and Video Applications -

We use Python to develop to applications that can multi-task and also output media. Video and audio application applications such as TIMPLAYER, CPLAY have been developed using Python libraries. They provide better stability and performance in comparison to other media players.



9. CAD Applications –

Computer-Aided Designing is quite challenging to make as many things have to be taken care of. Objects and their representation, Functions are just the tip of the iceberg when it comes to something like this. Python makes this simple too and the most well-known application for CAD is Fandango.

10. Embedded Application –

Python is based on C which means that it can be used to create Embedded C software for embedded applications. This helps us to perform higher-level application on smaller devices which can compute Python.

The most well-known embedded application could be the Raspberry Pi which uses python for its computing. We can also use it as a computer or like a simple embedded board to perform high-level computations. We use python in a variety of applications. No matter what field you take up, Python is rewarding. So I hope you have

understood the python applications and what sets python apart from every other programming language. Now that you have understood python application.