A Review on Python Programming

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Abstract: **Python is a general purpose programming language is created by the "Guido van Rossum" which is high level easy to learn and dynamically in Nationalized the development of python started out as a hobby for its creator and roll them because he wanted to make a language that was beautiful and easy for everybody. In this paper Firstly introduction of the python programming and why the python programming is popular to other language and some features of this language. Some other features are included in this paper to easily understand the python programming. This includes ten reasons to learn python and the various application of python programming.**

Keywords: **Artifical Intelligence, Big data, Python.**

1. Introduction

Python is a general purpose programming language which is high level easy to learn and dynamically in Nationalized the development of python started out as a hobby for its creator and roll them because he wanted to make a language that was beautiful and easy for everybody to read indentations instead of curly braces to be secured describe the blocks of code that came inside the language point on but not received love as it was compared to the other languages machine learning and artificial intelligence Python has come into the spotlight because it makes the work much more productive and much more easy why is that when it is because of the amazing computing power that we have we just won't work to be much more productive even if it takes a lot of time so that basically raps of this topic of what is python latest movie add and understand.

2. Why Python is Popular Comparing it to the Other Languages?

Best language to get started off and high level features make it one of the best language for anybody to get started off with programming didn't get is the language for everybody is the pattern is an open source language meaning that it is free for anybody to use every day there are thousands of programmers to come together online in making fights in better and efficient modified can you make a call Python can be used to make almost anything applications web applications mobile app server side coding artificial intelligence machine learning algorithms anything that you want to make by us and we'll always have to be to do it lastly there is a huge community of people who come together to make the libraries on what you are so that can be used to obtain a solutions just one example algorithms are already available and you can use them to obtain

your solution for your productivity right up there is much more as you can see why people around the world for Python so much.

3. Features of Python Programming

Features make a language attractive and that is what Python is made up of features that anybody want to start coding method that is now see the different features and by that has in store for us Python Programming fun because it is simple solution and syntax feature is it open source language which means that it is free for anybody to use notifications to Python or also love without any problems which brings us to the next teacher portability and supports portability which means that you can write your code and share it with anybody that you want and it would work the same way as a trusted you when you have a sweet moments of projects and Systems much more easier on x teacher other meeting properties chances are that certain language is we perform certain functions better than Python but that doesn't stop you as Python supports adding code of other languages into itself to run two functions which means by them all the more powerful with atletismo over to the next feature interpretation is integrated line by line which means the management of memory and CPU and debugging of the cold much more simple if you want to buy now whether the language to get started open let me tell you that it's huge library support which would help you to obtain solutions to problems easier you can get started on the go with it need to do mean that is because of object oriented concepts support meaning of problem at your code and have security for its such that access to them is restricted to replicate it was not yours now that we know all the amazing creatures that person has for us.
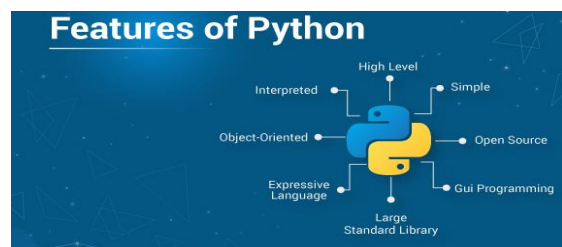

Fig. 1. Features of python

Some Features of Python Programming,
1) Simple
A Python is simple and is it is easy to understand because it

is written in high level it is high level programming language and not only that it is programmer friendly language which website Python is most simple compared with other programming languages that you come across one once you start learning Python programming language.

2) Interpreted language

Python is interpreted language where the interpreter executes the code line by line working your application is more easier interpreted languages are more efficient than compared always not always ok so Python is interpreted language where it will try to interpret the code line by line in where the debugging application because what very easy.

3) Cross-platform language:

It was the Python can be Run equally on different platforms right you can run this Python programs on Windows Linux Unix Macintosh written on any operating system where is a Python is a portable language because Python is a high level programming language and all high level language.

4) Free and open source

Now-a-days there is a lot of demand for open source Technologies ok I Python is an open source it is freely available resources available so Python language is freely available the source code is also available freely know that is where you say that is an open source emits for developing applications in a Python is not required any license.

5) Object oriented

It was helped by the you can write a program using object oriented I mean when a given problem because very complex you make it simple by writing the code using object oriented because that is what is it in the beginning a Python support multi paradigm I can write a program using structural I can write a program using functional I can write a program using object oriented and write a program using aspect-oriented number of number of Programming Paradigms ok it depends on my application requirement I am use a particular programming paradigm

6) Extensible

It was I can integrate other languages within by the an easily that is vital that is extensible so when programming because very complex and by the UN I can use a program which are already exist in C and C++. I can use a program which are written in C and C++ that is what you called as extensible.

B. Application of Python

A schedule a Python is having use library which can be used for developing any type of application using Python. Write Python is used right so here I return sum of some of them ok so by the UN is used for developing.

1) Console based applications

Character user interface control based applications so Python can be used to develop console based applications for example I python hello to listen this Python can be used.

2) Audio or video based applications

It provides in multimedia section some of real time applications are like Time player play these are some of the applications which are developed in Python language Python I can develop audio and video based applications because it provides that library bright and not only that I can use a Python for developing.

3) 3D CAD applications

Like this is one application real time application for CAD and cam right and not only that Python can be used for developing.

4) Web applications

A Python is having web Framework with help of that you can develop internet applications this definition by turn can also be used to develop a web based application as some important developments are back Python week engines and Python block software on these are the things which are developed in Python language and not only that you can use of Python for developing.

5) Enterprise applications

Python can use to create applications which can be used within Enterprises what organization which you can call it is ERP the best example for that is open ERP and Tryton, picalo etc., these are some of the sum of the enterprise applications which have written in what Python language.

6) Application of images

Image processing now using python several developed images Application Developed are Vpython, Gogh, imgSeek etc.

4. Ten Reasons to Learn Python Programming
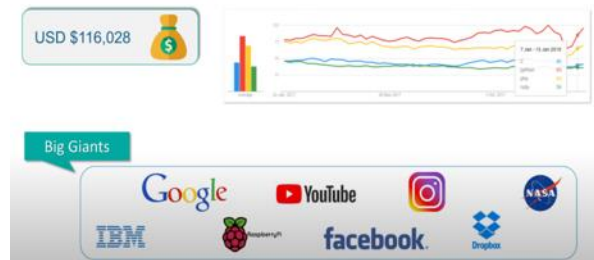
1) Popularity and High Salary

Fig. 2. Popularity and high salary

Its popularity and high salary some of the highest salary in the industry to the average Python developer salary in the United States is approximately 100$- 16028$ and if you're still there and has a stroke bike in popularity over the last one year using Python rest then we have YouTube in Instagram Dropbox Facebook and many company using Python
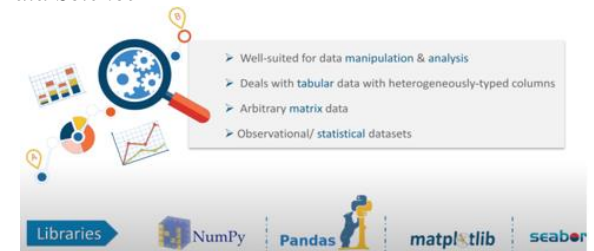
2) Data Science

Fig. 3. Data science

Data science Scholars and researchers were using the mat lab language for scientific research know that changed with the release of by the numerical engines such as and Pandas by the also deals with the tabular Matrix as well as statistical data visualization with the library and see what is middle used in the data science.
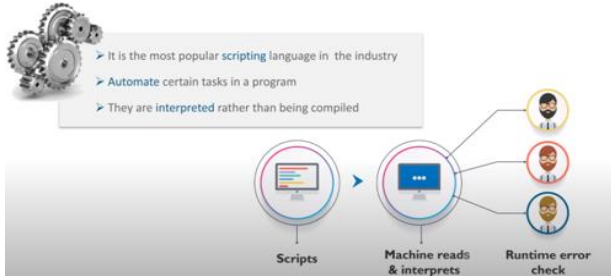
3) Scripting: Automation

Fig. 4. Scripting: Automation

Automation is a programming language but it can also be used as a scripting language interpret support during time and it can be used several times to the difference between is compiled at runtime that is the happens when you run the program cast in program status of automation plays a major role in Python.

4) Big Data

Fig. 5. Big data

Big data and data computing write a map reduce programming by thermal process state of spirit in the exteriors html and you can use Python in order to process big data.

5) Testing Frameworks

Fig. 6. Testing frameworks

Editing ideas of products for established companies including a software is not an easy task as it contains many processes starting from S design school Under test cases in software testing out to be the most important process of software lifecycle it is also the challenging task for software tester to choose a best programming language for automation testing and I think is the best solution for this problem has many

built-in testing frameworks that covers and fastest most used inter IIT sports testing with cross platform and cropped trouser with frameworks such as by test and Robert breaker testing supports and tools available to complete a work in less time definitely go for it.

6) Computer Graphics

Fig. 7. Computer graphics

It is used to start a graphical user interface it is also used for desktop application and then we have game development is the standard library for Python tkinker, it provides a fast and easy way to create application that provides access to Java simply write a logic of the day module called as by and its applications and devices.

7) Artificial Intelligence

Fig. 8. Artificial Intelligence

It is combined with library such as keras and tensor flow machine learning it into the mix human brain it has a part of thing analyze and make decisions that help you can take a phase or a color everything is available in Python all this is a part of AI and machine learning artificial intelligence is a broader concept of Machines be able to carry on tasks in a way that we consider also boast of the activity of the company.

8) Web Development

Fig. 9. Web development

Programming with Python provide a lot of choices as a Framework for developing website pylons and tip top correlation between the quote a lot faster and stable than there

is another but it is tiny PHP details of any other website and storing it in your local system you will also be impressed as many websites such as Instagram with bucket Pinterest a balloon these members only in the web development.

9) Portable and Extensible

Fig. 10. Portable and Extensible

School table and extensible PlayStation can you can completely integrated java.net components and even if you wish you can also see and it is the libraries as well for you can perform C and C++ operations with Python.
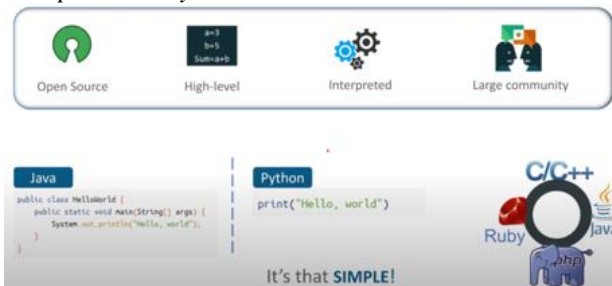
10) Simple and easy to learn

Fig. 11. Simple and easy to learn

Extremely simple and easy to read is it is known since it closely resembles the English language it is a very powerful language and its absolutely no skills to learn Python is free and open source it is the high level language me one does not to bother about low level English language me one does not to bother about low level IT instantly write a code in English and fine on vehicle details also Python is interpreted language ki machine read and interpret the code all the errors during the runtime as a large community of any doubt any technical issue Facebook Sign spinner much everywhere dance Plus Python as outside all spheres don't have to deal with Complex index for example if you want to print hello world you have to write these three lines in Java the lies in the simplicity of the code which makes the best for beginners.

Table 1
Advantages and Disadvantages of Python

Advantages of python	Disadvantages of python
Easy to read, learn and write	Slow Speed
Interpreted Language	Weak in mobile computing
Improve Productivity	Run-time Errors
Free and open-source	Database Access
Extensive Support Libraries	Not Memory Efficient

5. Conclusion

According to the TIOBE index, Python is the 4th most popular programming language out of 100 with the rise of Ruby on Rails and Node.js, Python's usage as the main prototyping language for backend web development has diminished somewhat, especially since it has a fragmented MVC ecosystem. it can be integrated into web applications and open source project the python is active working on with a moderate update cycle. Pushing out new versions every year or so to make sure it remains relevant. In terms of search volume for anyone Interested in learning Python, it has skyrocketed to the first place when compared to other languages.

Table 2
Comparison of programming languages

Sep 2020	Sep 2019	Change	Programming Language	Ratings	Change
1	2	^	C	15.95%	+0.74%
2	1	v	Java	13.48%	-3.18%
3	3		Python	10.47%	+0.59%
4	4		C++	7.11%	+1.48%
5	5		C#	4.58%	+1.18%
6	6		Visual Basic	4.12%	+0.83%
7	7		JavaScript	2.54%	+0.41%
8	9	^	PHP	2.49%	+0.62%
9	19	^	R	2.37%	+1.33%
10	8	v	SQL	1.76%	-0.19%
11	14	^	Go	1.46%	+0.24%
12	16	^	Swift	1.38%	+0.28%
13	20	^	Perl	1.30%	+0.26%
14	12	v	Assembly language	1.30%	-0.08%
15	15		Ruby	1.24%	+0.03%
16	18	^	MATLAB	1.10%	+0.04%
17	11	v	Groovy	0.99%	-0.52%
18	33	^	Rust	0.92%	+0.55%
19	10	v	Objective-C	0.85%	-0.99%
20	24	^	Dart	0.77%	+0.13%

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