**A Beginner’s Guide about Python. Why is it this famous and what it is?**

Python is a popular programming language, and it became the most popular language in the world because it has a simplified syntax and is not complicated, which gives more emphasis to natural language. Python codes can be easily written and executed much faster than other languages. Also, python is getting popular in the Data science, machine learning, and AI area which are important for us in the future.

Let’s take a closer look at what Python is, what it can do, and how you can start learning it.

**What is Python?**

Python is a computer programming language often used to build websites and software, automate tasks, and conduct data analysis. Python is a general-purpose language, meaning it can be used to create a variety of different programs and isn’t specialized for any specific problems. This along with its beginner-friendliness has made it one of the most-used programming languages in recent years. A lot of surveys found that it was the most popular programming language among developers.

**What is it used for?**

This brilliant language is commonly used for developing websites and software, task automation, data analysis, and data visualization. Since it’s relatively easy to learn, Python has been adopted by many non-programmers such as accountants and scientists, for a variety of everyday tasks, like organizing finances.

“You can write programs for many reasons, ranging from making your living to solving a difficult data analysis problem to having fun to helping someone else solve a problem.”

Here’s a closer look at some of the common ways Python is used.

**Data analysis and machine learning**

Python has become a staple in data science, allowing data analysts and other professionals to use the language to conduct complex statistical calculations, create data visualizations, build machine learning algorithms, manipulate, and analyze data, and complete other data-related tasks.

It can build a wide range of different data visualizations, like line and bar graphs and 3D plots. It also has several libraries that enable coders to write programs for data analysis and machine learning more quickly and efficiently, like TensorFlow and Keras.

**Web development**

Python is often used to develop the back end of a website or application—the parts that a user doesn’t see. Python’s role in web development can include sending data to and from servers, processing data and communicating with databases, URL routing, and ensuring the security

**Automation or scripting**

If you want to work more efficiently in tasks that you do yourself repeatedly, Python can help you in this by automating it. Writing code used to build these automated processes is called scripting. Automation can be used to check for errors across multiple files, convert files, execute simple math, and remove duplicates in data.

Simple tasks like renaming files, finding, and downloading online content or sending emails or texts at desired intervals can be done by relative beginner fairly easily.

Software testing and prototyping

In software development, Python can aid in tasks like build control, bug tracking, and testing. With Python, software developers can automate testing for new products or features. Some Python tools used for software testing include Green and Requestium.

**So why is Python so popular....**

* Because it has a simple syntax that mimics natural language
* It’s versatile
* It’s beginner friendly
* It’s open source
* Python’s archive is huge in terms of modules and libraries
* And lastly, Python has a large and active community that contributes to Python’s pool of modules and libraries, and acts as a helpful resource for other programmers