

Python

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.

What is Python used for?

Python 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.

What can you do with python? Some things include:

- Data analysis and machine learning
- Web development
- Automation or scripting
- Software testing and prototyping
- Everyday tasks

- **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.

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

- **Web development (Not Important)**
- **Automation or scripting (Not Important)**
- **Software testing and prototyping (Not Important)**
- **Everyday tasks**

Python isn't only for programmers and data scientists. Learning Python can open new possibilities for those in less data-heavy professions, like journalists, small business owners, or social media marketers. Python can also enable non-programmers to simplify certain tasks in their lives. Here are just a few of the tasks you could automate with Python:

- Keep track of stock market or crypto prices
- Send yourself a text reminder to carry an umbrella anytime it's raining
- Update your grocery shopping list
- Renaming large batches of files
- Converting text files to spreadsheets
- Randomly assign chores to family members
- Fill out online forms automatically

Why is Python so popular?

Python is popular for a number of reasons. Here's a deeper look at what makes it so versatile and easy to use for coders.

- It has a simple syntax that mimics natural language, so it's easier to read and understand. This makes it quicker to build projects, and faster to improve on them.
- It's versatile. Python can be used for many different tasks, from web development to machine learning.
- It's beginner friendly, making it popular for entry-level coders.

- It's open source, which means it's free to use and distribute, even for commercial purposes.
- Python's archive of modules and libraries—bundles of code that third-party users have created to expand Python's capabilities—is vast and growing.
- 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. The vast support community means that if coders run into a stumbling block, finding a solution is relatively easy; somebody is bound to have encountered the same problem before.