



# What Is Python Used For?

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You've probably heard that Python is one of the most popular programming languages. Last year, [Stack Overflow](#) found that two-thirds of the developers who currently use the language love it and plan to continue doing so. But why is it so popular? What is it used for?

Python is a general-purpose [programming language](#) used in just about any kind of software you can think of. You can use it to build websites, artificial intelligence, servers, business software, and more.

Below, we explore some of the reasons behind Python's popularity, along with its uses and applications in different fields. Or, if you'd rather jump right in and start learning it right away, check out our [Learn Python 3](#) course.

## What are the advantages of Python?

Python's many advantages make it a favorite among amateur and professional programmers alike. One of its biggest advantages is its (relative) simplicity. Python's English-like syntax makes it easy to learn and read, and unlike some other languages, it uses simple line breaks instead of symbols to define code blocks.

Python also helps speed up development, with built-in classes and functions and an extensive selection of libraries that make writing code quicker and easier. Plus, as an interpreted language, you can execute and test your code right after writing it without an intermediate compilation process.

Another advantage Python holds over other languages is its versatility. Python is a portable, cross-platform language — meaning you can write and execute Python code on any operating system with a Python interpreter. With some other languages, you'd have to modify your code for each platform.

# What is Python used for?

Python's versatility enables it to be used in a wide range of applications across various industries. Let's take a look at some of the ways Python is used.

## Data science: analytics and visualization

Data science is one of the most popular uses for Python. [Data scientists and analysts](#) use programming languages like [Python and R](#) to manipulate data for reporting, predictive analysis, and more. But while R can be a great choice, many Data Scientists prefer to learn Python because its English-like syntax can be easier to learn. Check out our free course [Getting Started with Python for Data Science](#) if you want to learn how to use Python to work with data.

Harvesting insights from data is no easy task, and data scientists don't have time to waste with compiling and complicated syntax. Python's simple syntax and extensive selection of third-party libraries make it a great choice for anyone considering a [career in data science](#).

## Machine learning

While arguably a subfield of data science, machine learning deserves its own category because of its unique algorithms. Machine learning involves training systems to learn independently by using algorithms that constantly update themselves based on input data. These systems gradually learn to handle new situations by generating an output based on past datasets. Then, based on the outcome of this new

situation, they update themselves to deal with the new variables, thus constantly evolving.

## Web development: websites and web apps

Python is also widely used for back-end development, where it runs in the server of web applications and interacts with databases and APIs after a user requests data from the app's front-end in the browser.

Much of Python's popularity in web development stems from frameworks and libraries like [Django](#) and [Flask](#) that extend the language's utility.

## Financial analysis

In a [recent HackerRank survey](#), Python was the number one programming language FinTech companies looked for when hiring developers. But it's not only FinTech enterprises that use Python code. Python is used everywhere in the financial industry because of its data processing capabilities and various third-party libraries designed for financial analysis.

## Desktop applications

You can also use Python to build desktop applications. Many Linux and open-source desktop applications use Python. Plus, with GUI libraries like Tk, wxWidgets, and Qt, you can use Python to build cross-platform applications that run on Windows, Mac, or Linux.

## Business applications

Python lies at the heart of business software like Tryton and Odoo. These tools are used for enterprise development and can perform accounting, inventory, customer relationship management, and other tasks.

In short, many businesses rely on Python to do the heavy lifting. This has led to more and more startups including Python in their tech stacks for its ease of use and scalability.

## Scripting and utility software

Python started as a language for writing utility scripts, and it's still widely used for this purpose. Many of the utilities and scripts built into Linux operating systems are written in Python, and it's also installed by default in the Mac OS. This makes Python the language of choice for automating tasks in an engineer's day-to-day work.

## Getting started with Python

As you can see, Python is a programming language with a wide range of applications, such as [web development](#), [data science](#), and financial analysis.

Wanna start using it yourself? We'll teach you the basics of Python programming in [Learn Python 3](#). Or, if you want to take it a step further, we'll show you how to:

- [Get Started with Python for Data Science](#)
- [Build Chatbots with Python](#)
- [Analyze data with Python](#)
- [Get started with Machine Learning](#)

For a full list of our Python courses, check out our [catalog page](#). And for supplemental learning, consider reading a [Python programming book for beginners](#).