**These 17 Projects Will Teach You Python Way Better Than “Hello World”**

**These projects are fascinating, rewarding, and maybe a little challenging**



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I’ve made no secret of the fact that I love Python, and that I believe one of the best ways to learn Python is by finding an awesome project you care about to work on. There’s nothing more stimulating than passion and curiosity, and that makes the best projects for Python beginners usually something a little grittier than the standard tutorials.

While it’s fine to start with “Hello World”, it’s not exactly the most fascinating of projects and won’t keep you going when the going gets tough. It didn’t work for me — I had to get my hands dirty with a specific project involving the Instagram API. But that helped me learn Python way more than running 2+2 .

You might be sold on the concept of using a project to learn Python, but maybe you’re wondering how you can find the best Python projects for beginners. The good news is that thanks to the awesome community of Pythonistas out there, the prevalence of open source code and data, and the wide world of the internet, you’re bound to find a Python project for beginners that you’ll love.

Full disclosure, some of these will be harder than your usual Python projects for beginners. On the upside, these are fun, interesting projects that will actually teach you Python. You will struggle, you will have to Google stuff, but that’s all part of the experience. Here are 17 ideas to get you started.

[**5 Python Projects for Beginners Using Straight Python or Python Packages**](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#c6f9)  
· [1. Make a Twitter bot with `Tweepy`](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#37f1)  
· [2. Write a Create Your Own Adventure script](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#050a)  
· [3. Create a blog](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#5d69)  
· [4. Make a login system, Part 1 and Part 2](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#9416)  
· [5. Connect Python to StackOverflow](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#b249)  
**4** [**Python Projects for Beginners Using Courses or Lectures**](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#bd96)  
· [6. Complete Our Python Course](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#28e7)  
· [7. Coursera’s Python Project option](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#8673)  
· [8. YouTube lectures](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#e842)  
· [9. LinkedIn Learning](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#4697)  
**3** [**Python Projects for Beginners Using GitHub**](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#9b89)  
· [10. Matchmaker game](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#4135)  
· [11. Madlibs](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#a83e)  
· [12. Count Instagram followers and likes](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#dd7d)  
[**5 Python Projects for Beginners Using Your Own Data**](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#4bba)  
· [13. 538](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#ec3d)  
· [14. Tidy Tuesday](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#3c94)  
· [15. Buzzfeed](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#a9e1)  
· [16. NASA](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#41f5)  
· [17. AWS](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#a329)  
[**The best Python projects for beginners are deeply, deeply interesting.**](https://towardsdatascience.com/these-17-python-projects-will-teach-you-way-better-than-hello-world-14b28aa4c308#98c6)

**5 Python Projects for Beginners Using Straight Python or Python Packages**

These Python projects for beginners come straight from the source: they use vanilla Python, or they use some really cool Python packages. These Python projects for beginners will be loaded with helpful docs, commentary, and experiences of other Python beginners who have tried and loved these projects.

[**1. Make a Twitter bot with `Tweepy`**](https://realpython.com/twitter-bot-python-tweepy/)

Obsessed with social media? Me, too. I follow several bots (like [this hilarious one](https://twitter.com/kauIhiIoshudon) based on a great book I read) and always wondered how to make one.

While [this tutorial](https://realpython.com/twitter-bot-python-tweepy/) sounds advanced for a Python beginner, it’s also something that lets you indulge in your passion a little bit, and maybe your sense of humor too. This tutorial will walk you through 5 steps: installing the “Tweepy” package, signing up as a Twitter developer to use its API, using Tweepy to invoke the Twitter API, building Twitter bots, and deploying the bots to a server using Docker and AWS.

Yes, it’s a lot of work! But it’ll be fun, it’ll teach you a lot of skills, and be interesting enough to keep you going through the sticky patches.

[**2. Write a Create Your Own Adventure script**](https://coding-grace-guide.readthedocs.io/en/latest/guide/lessonplans/beginners-python-text-based-adventure.html)

I used to love these books when I was a kid, and I was really excited to learn that you can create your own using Python! [This tutorial](https://coding-grace-guide.readthedocs.io/en/latest/guide/lessonplans/beginners-python-text-based-adventure.html) is great because it runs through every single step you’ll need and explains a lot of the background code you’ll be using.

It’s also great because in the end, you’ll have created something by yourself with your own hands, that you really love. It’s something you can share with friends, with family, with strangers on the internet. Let your creativity take over and use these Python projects for beginners to learn the basics.

[**3. Create a blog**](https://djangocentral.com/building-a-blog-application-with-django/)

Hey, you’re reading this on a blog! Guess what? You can make a blog using a combination of Python and Django.

[This tutorial](https://djangocentral.com/building-a-blog-application-with-django/) will teach you how to build a blog application with Django that lets users create, edit and delete posts. You’ll have a home page that lists all your blog posts, and a dedicated detail page for each individual post.

This uses a common Python framework called Django. Django is an open-source web framework written in Python. A framework is just basically a shortcut. You could do this in pure Python, but Django will make it a lot easier. Again, this tutorial is really good because it doesn’t just give vague instructions — it gives you the full step-by-step walkthrough to setting up your environment, talking about database models, and actually creating the blog.

This project is perfect if you have something to say and need a place to say it. As a bonus, you can use your Python-built blog to impress potential employers and land your dream Python job.

**4. Make a login system,** [**Part 1**](https://www.youtube.com/watch?v=RHu3mQodroM) **and** [**Part 2**](https://www.youtube.com/watch?v=SUC1aTu092w&t=0s)

This Python project for beginners is great for anybody who wants to be a future web developer. Every good website needs a login system, and the great news is you can do that with Python. This option is less of a passion project and more of a practical project but it will teach you a lot of skills you need and the outcome is an interactive system that really works.

Rather than a written tutorial, you should watch these two YouTube videos to learn how to make a login system. They walk you through both the practical steps of what code you’re going to need, as well as the more theoretical steps explaining the concepts behind what you’re making.

[Part one](https://www.youtube.com/watch?v=RHu3mQodroM) is about 25 minutes long, while [part two](https://www.youtube.com/watch?v=SUC1aTu092w&t=0s) is 32 minutes long.

[**5. Connect Python to StackOverflow**](https://pypi.org/project/howdoi/)

Think of this option as less of a project for Python beginners, and more of something I think should be a requirement for every Python user ever.

Something I’ve learned about coding is that it’s rare that you are typing frantically at your keyboard and writing lines of code that magically fill your screen. Instead, it looks a little bit more like copying scrappy code from all around the internet and Googling it on StackOverflow when it doesn’t do what it’s supposed to.

That’s why I love [this tutorial](https://pypi.org/project/howdoi/) which is based on a package called howdoi. When properly set up, it gives you instant coding answers from the command line. Ideally, this means you won’t have to open your browser to look for help. If you’re extra ambitious once you set this up, you can go a step further and create a GUI or a flask web app that wraps the howdoi package.

Once you acknowledge how much time you spend Googling things, you’ll realize the value of using this as a Python project for beginners.

**4 Python Projects for Beginners Using Courses or Lectures**

While some of the best Python beginner projects are based on straight Python or use a couple of Python packages, you can also use courses as a way to do a more interactive, guided project. These options are billed as courses that teach you Python, but optionally can be used to complete your first Python project.

[**6. Complete a Python Course**](https://qvault.io/learn-python-course/)

There are tons of courses online to learn Python, but I like [this one](https://qvault.io/learn-python-course/) because you build the components of a real-life application — a movie review app.

Beyond that one project, the course itself has plenty of interactive coding challenges that kind of act as mini-projects. They will stretch your limits, but they’re great for a beginner who wants to learn Python.

[**7. Coursera’s Python Project option**](https://www.coursera.org/learn/python-project-for-data-science)

Coursera is normally what I recommend to people who want to secure a certificate for their Python experience, and not necessarily as a source of Python projects for beginners. However, it also is replete with courses that either act as a project or let you select a project yourself.

For example, [this Python project](https://www.coursera.org/learn/python-project-for-data-science) for data science is intended for you to demonstrate foundational Python skills for working with data. It has a bunch of lectures, but you’ll also be doing a hands-on project developing a simple dashboard using Python.

[**8. YouTube lectures**](https://www.youtube.com/watch?v=MrBzgvUNr4w&list=PL2-dafEMk2A6QKz1mrk1uIGfHkC1zZ6UU&index=5)

Have you ever wanted to make a neural network that makes images become really trippy using Python and Tensorflow, mimicking the effects of hallucinogenic drugs? Well, who wouldn’t? And now you can learn how with [this YouTube lecture/tutorial](https://www.youtube.com/watch?v=MrBzgvUNr4w&list=PL2-dafEMk2A6QKz1mrk1uIGfHkC1zZ6UU&index=6).

Siraj is an awesome tutor due to his energy and clear experience. He has a whole series of tutorials that make up his “Learn Python for Data Science” course. He links to the source code in all his videos, so you can try this out for yourself.

If you’re not a fan of this particular Python project for beginners, you can check out his other videos to see if there’s a project that does grab your attention.

[**9. LinkedIn Learning**](https://www.linkedin.com/learning/python-projects)

It surprised me to learn this as well, but it turns out LinkedIn is more than just a place for CEOs to make grandstanding claims about how cool their company is.

There’s actually a pretty complete product called LinkedIn learning full of courses about just about anything. [One of those courses](https://www.linkedin.com/learning/python-projects) is called Python Projects. In it, there are four potential Python projects for beginners you can try — my favorite would be creating a GUI weather application with Tkinter.

Again, like Coursera, it’s not free but you can start for free with their month-long free trial. If you love it, it costs $20 a month to continue.

**3 Python Projects for Beginners Using GitHub**

Ah, GitHub, one of my favorite places on the internet. GitHub is an awesome resource for a ton of reasons: first, it’s free! Second, for a language like Python, there is a robust and friendly community full of Pythonistas who have created projects, tutorials, articles, open-source code, etc, that they are so excited to share with you.

As you can imagine, that makes it a great place to find some awesome Python project ideas for beginners. These are my favorite three — definitely more simple beginner Python projects than others on this list — but feel free to explore for yourself and discover your own.

[**10. Matchmaker game**](https://github.com/ndleah/python-mini-project/tree/main/Matchmaker)

[This tutorial](https://github.com/ndleah/python-mini-project/tree/main/Matchmaker) is billed as a mini-project, and that’s absolutely the reality. All you need to do to run this game is open a terminal in the folder where your script is located and run the following command:

Python Matchmaker.py

That’s it, it’s up and running! What I love about this Python project for beginners is that it teaches you the basics, and it lets you see the power of Python. I consider it to be a little bit better than the Hello World example at getting Python beginners invested in learning Python.

[**11. Madlibs**](https://github.com/ShrutiSolani/python-mini-project/tree/main/Madlibs)

Who didn’t love Mad Libs as a kid? [This tutorial](https://github.com/ShrutiSolani/python-mini-project/tree/main/Madlibs) is another really simple mini-project that will help you get to terms with a lot of the basic Python environment elements and is just a fun way to see how cool Python can be.

All you need to do is install the random module and then head over to the directory where your Python file is saved and run the following command: `Python madlibs.py`

[**12. Count Instagram followers and likes**](https://github.com/ankitdobhal/Awesome-Python-Scripts/blob/master/Web-Scraping/Instagram/instagram_count.py)

[This project](https://github.com/ankitdobhal/Awesome-Python-Scripts/blob/master/Web-Scraping/Instagram/instagram_count.py) is for another one of the social media addicts out there like me. It’s a script that counts the number of followings, followers, and posts of any account. It takes the username from the terminal and shows you the output.

I like this tutorial because you can do what you want with it. If you want to just run it, run it! But you can also look into the more complex script and try to figure out what’s going on. Take what you want from this learning experience.

**5 Python Projects for Beginners Using Your Own Data**

What is a project, but just a question that needs data to answer it? If none of the above 12 Python projects for beginners interest you, the good news is that there’s literally an unlimited number of projects available for you. All you need is a pinch of creativity and a burning passion to know more.

With the state of the internet today, you can really easily find data from pretty much any source that interests you and create your very own project. It’ll be harder than the options above because there are no guardrails, but it’s also liable to be more satisfying when you finally find your answer.

Here are five great sources of internet data you can use to create your very own basic Python project for beginners. Consider these simple Python projects just a place to start.

[**13. 538**](https://data.fivethirtyeight.com/)

Nate Silver gets regularly dunked on these days, but the good news is his website 538 is still a really cool place to find easy beginner Python projects. Just check out [this website](https://data.fivethirtyeight.com/) and scroll down the list to see if there’s anything that’s interesting to you.

It’s constantly updating, so right now I’m looking at club soccer predictions, MLB predictions, political predictions, and more. Have a look for yourself and see what you want to dive into. See how 538 ran their analyses, and do your own alongside.

[**14. Tidy Tuesday**](https://github.com/rfordatascience/tidytuesday)

This is slightly cheeky because these programming projects are originally intended to be for R rather than Python. But they’re both great languages for data science. The [Tidy Tuesday GitHub repo](https://github.com/rfordatascience/tidytuesday) has new data every single Tuesday as well as some interesting ideas for beginner projects with Python and visualization ideas that you can borrow.

Examples from the past few weeks include transit costs, art collections, the Kenya census, wealth and income, and a lot more. Let yourself be inspired by the data or even the projects that other people are doing around that data.

[**15. Buzzfeed**](https://github.com/BuzzFeedNews)

Yep, I know, they do more than quizzes! [Their GitHub repo](https://github.com/BuzzFeedNews) is another fantastic source of open source data, analyses, libraries, tools and guides. Have a look, see what interests you, and start analyzing!

They look at H2 Visa certification data, firearm background checks, political donations, nursing home data, and more.

[**16. NASA**](https://pds.nasa.gov/datasearch/data-search/)

Space represents one of the greatest mysteries of our time. If you ever dreamed of being an astronaut, like me, this might be the place for you to investigate data. The planetary data system run by NASA Offers data based on tons of different targets that you can choose, including comets, asteroids, all the planets, and even solar wind.

[This potential project](https://pds.nasa.gov/datasearch/data-search/) might be a challenge for Python beginners, but if this is the kind of data that interests you, it’ll be worth it.

[**17. AWS**](https://github.com/awslabs/open-data-registry/)

It shouldn’t be a surprise to anybody that AWS has an [absolutely enormous registry of open data](https://registry.opendata.aws/). They have data sets from the Allen Institute for AI, Digital Earth Africa, Facebook data for good, more stuff from NASA, and even an Amazon sustainability data initiative.

Naturally, AWS doesn’t own this data — they just host it for a variety of government organizations, researchers, businesses, and individuals that have chosen to make this open. Their GitHub repo also contains a few examples of how to use the data.

Have a browse, poke around, and find what looks interesting to you.

**The best Python projects for beginners are deeply, deeply interesting.**

I reject the idea that Python programming projects for beginners have to be easy. Instead, I think it’s much more important that the projects be fascinating, gritty, challenging, and rewarding. This list of Python project topics for beginners will probably push you to your limits, will make you angrily smash your keyboard, and might even cause you to struggle.

But in the end, you will have completed a much more rewarding project than just a simple project in Python, like running hello world or any of the other bog-standard tutorials.

By no means consider this list of coding ideas for Python exhaustive. There’s more data than this world knows what to do with — the only limitation here is your imagination. Find something you care about, find the data to back it up, and learn Python to solve that problem. That’s always going to be the best Python project for a beginner like you.

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