

The logo for ScHARe, featuring the text "ScHARe" in a bold, dark blue font inside a white circle.

# Data Management and Analysis in Python

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# ScHARe

Python tutorials  
and resources



BE A PART OF THE FUTURE  
OF KNOWLEDGE GENERATION

# Python resources

You can take advantage of the dozens of “**Python for data science**” **online tutorials** for beginners and advanced programmers listed here:

- [Stackify - 30+ Tutorials to Learn Python](#)
- [FreeCodeCamp - Code Class for Beginners](#)
- [Harvard – Free Python Course](#)
- [Coursera – Free and Paid Python Courses](#)
- [LearnPython – Free Interactive Python Tutorials](#)
- [BestColleges – 10 Places to Learn Python for Free](#)

# Python resources

## Stackify

### 30+ Tutorials to Learn Python

#### Top 30 Python Tutorials

In this article, we will introduce you to some of the best **Python tutorials**. These tutorials are suited for both beginners and advanced programmers. With the help of these tutorials, you can learn and polish your coding skills in Python.

1. [Udemy](#)
2. [Learn Python the Hard Way](#)
3. [Codecademy](#)
4. [Python.org](#)
5. [Invent with Python](#)
6. [Pythonspot](#)
7. [AfterHoursProgramming.com](#)
8. [Coursera](#)
9. [Tutorials Point](#)
10. [Codementor](#)
11. [Google's Python Class eBook](#)
12. [Dive Into Python 3](#)
13. [NewCircle Python Fundamentals Training](#)
14. [Studytonight](#)
15. [Python Tutor](#)
16. [Crash into Python](#)
17. [Real Python](#)
18. [Full Stack Python](#)
19. [Python for Beginners](#)
20. [Python Course](#)
21. [The Hitchhiker's Guide to Python!](#)
22. [Python Guru](#)
23. [Python for You and Me](#)
24. [PythonLearn](#)
25. [Learning to Python](#)
26. [Interactive Python](#)
27. [PythonChallenge.com](#)
28. [IntelliPaat](#)
29. [Sololearn](#)
30. [W3Schools](#)

# Python resources

## FreeCodeCamp

Code Class for Beginners

A screenshot of a webpage from FreeCodeCamp. The page has a dark blue header with the FreeCodeCamp logo and a tagline. Below the header, there are two main sections of text, each with a bold title and a paragraph of description. The first section is titled 'Python Tutorial for Beginners (Learn Python in 5 Hours)' and describes a course by TechWorld with Nana. The second section is titled 'Scientific Computing with Python' and describes a certification course.

freeCodeCamp (🔥)  
Learn to code — [free 3,000-hour curriculum](#)

## Python Tutorial for Beginners (Learn Python in 5 Hours)

In [this TechWorld with Nana YouTube course](#), you will learn about strings, variables, OOP, functional programming and more. You will also build a couple of projects including a countdown app and a project focused on API requests to Gitlab.

## Scientific Computing with Python

In [this freeCodeCamp certification course](#), you will learn about loops, lists, dictionaries, networking, web services and more.

# Python resources

## Harvard

### Free Python Course

Catalog > Computer Science Courses > HarvardX's Computer Science for Web Programming



## Harvard University: CS50's Introduction to Computer Science

An introduction to the intellectual enterprises of computer science and the art of programming.



**12 weeks**

6–18 hours per week



**Self-paced**

Progress at your own speed

### There is one session available:

4,974,616 already enrolled! After a course session ends, it will be [archived](#) .

**Starts Jul 19**

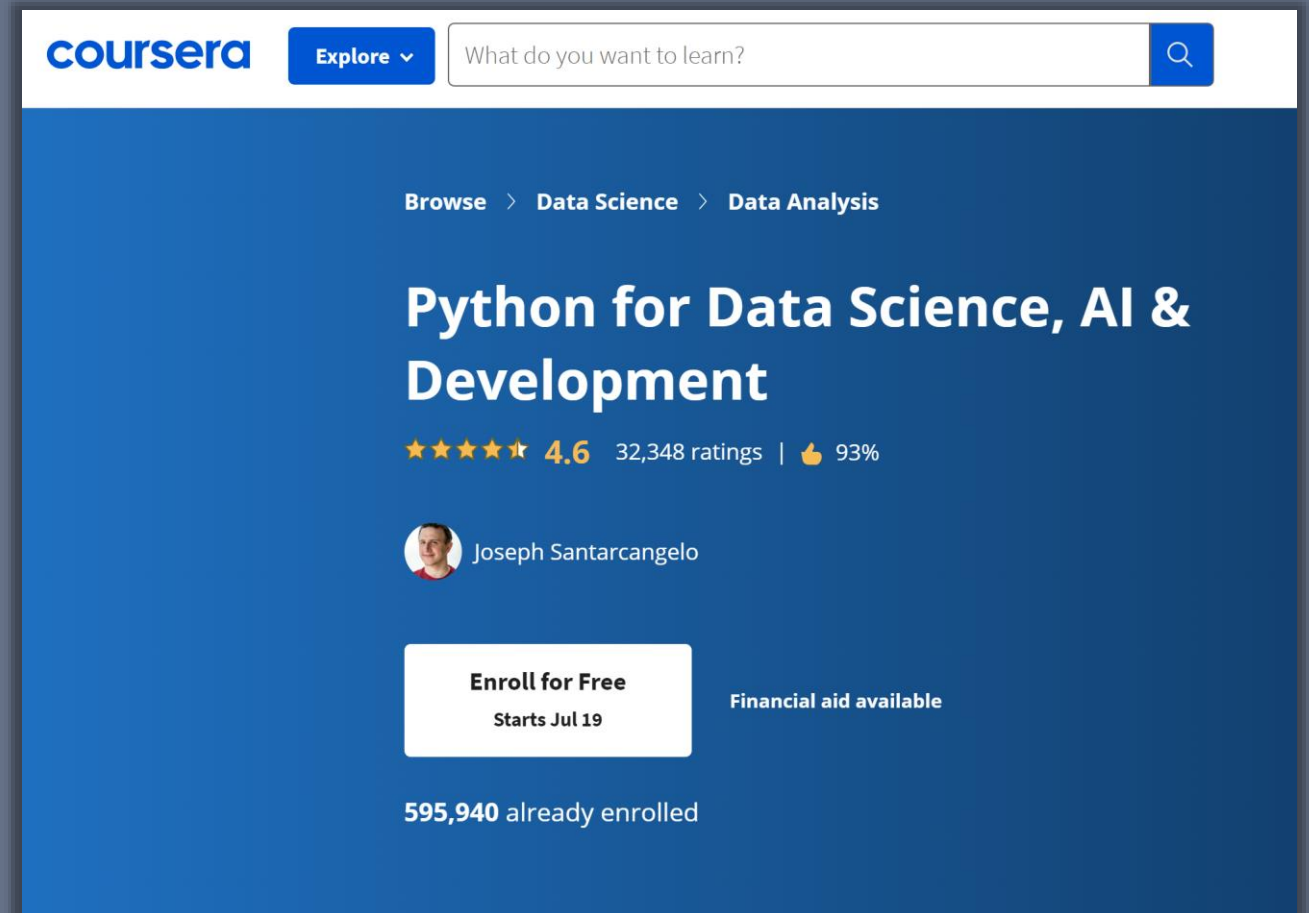
Ends Dec 31

Enroll

# Python resources

## Coursera

Free and Paid Python Courses




The screenshot shows the Coursera website interface. At the top, there is a navigation bar with the Coursera logo, an 'Explore' dropdown menu, and a search bar containing the text 'What do you want to learn?'. Below the navigation bar, the breadcrumb trail reads 'Browse > Data Science > Data Analysis'. The main heading for the course is 'Python for Data Science, AI & Development'. Below the heading, there is a rating of 4.6 stars based on 32,348 ratings, and a thumbs-up icon indicating a 93% approval rate. The instructor's name, Joseph Santarcangelo, is displayed next to his profile picture. A prominent white button with the text 'Enroll for Free' and 'Starts Jul 19' is visible, along with the text 'Financial aid available' to its right. At the bottom of the course card, it states '595,940 already enrolled'.

**coursera** Explore ▾ What do you want to learn? 🔍

Browse > Data Science > Data Analysis

## Python for Data Science, AI & Development

★★★★☆ 4.6 32,348 ratings | 👍 93%

 Joseph Santarcangelo

**Enroll for Free**  
Starts Jul 19

Financial aid available

595,940 already enrolled

# Python resources

## LearnPython

Free Interactive Python Tutorials

### Learn the Basics

- [Hello, World!](#)
- [Variables and Types](#)
- [Lists](#)
- [Basic Operators](#)
- [String Formatting](#)
- [Basic String Operations](#)
- [Conditions](#)
- [Loops](#)
- [Functions](#)
- [Classes and Objects](#)
- [Dictionaries](#)
- [Modules and Packages](#)

### Data Science Tutorials

- [Numpy Arrays](#)
- [Pandas Basics](#)

### Advanced Tutorials

- [Generators](#)
- [List Comprehensions](#)
- [Lambda functions](#)
- [Multiple Function Arguments](#)
- [Regular Expressions](#)
- [Exception Handling](#)
- [Sets](#)
- [Serialization](#)
- [Partial functions](#)
- [Code Introspection](#)
- [Closures](#)
- [Decorators](#)
- [Map, Filter, Reduce](#)



# Python resources

## BestColleges

### 10 Places to Learn Python for Free

Bootcamp Types ▾ Reviews ▾ Resources ▾ About ▾ BestColleges.com

## Top 10 Free Python Courses

### Google's Python Class

Students with some programming language experience can learn Python with Google's intensive two-day course. While there are no official prerequisites, students need a basic understanding of programming language concepts, such as if statements.

Learners initially explore strings and lists using lecture videos and written materials. A coding exercise follows each section, and the exercises become increasingly complex.

This Python course gives students hands-on practice with complete programs, working with text files, processes, and HTTP connections.

### Microsoft's Introduction to Python Course

Students can learn Python online and build a simple input/output program with Microsoft's introductory Python course. There are no prerequisites for this short, eight-unit, 16-minute class.

This online Python course is part of Microsoft's Python learning paths. It prepares students with the concepts and basic skills to pursue more advanced learning.

Students explore Python code, where to run Python apps, learn how to declare variables, and use the Python interpreter. They also learn how to access free resources.

# Terra resources

If you are new to Terra, we also recommend exploring the following resources:

- [Overview Articles](#): Review high-level docs that outline what you can do in Terra, how to set up an account and account billing, and how to access, manage, and analyze data in the cloud
- [Video Guides](#): Watch live demos of the Terra platform's useful features
- [Terra Courses](#): Learn about Terra with free modules on the Leanpub online learning platform
- [Data Tables QuickStart Tutorial](#): Learn what data tables are and how to create, modify, and use them in analyses
- [Notebooks QuickStart Tutorial](#): Learn how to access and visualize data using a notebook
- [Machine Learning Advanced Tutorial](#): Learn how Terra can support machine learning-based analysis

# ScHARe

Thank you



# Evaluation poll

1. Rate how useful this session was:

- Very useful
- Useful
- Somewhat useful
- Not at all useful

# Evaluation poll

2. Rate the pace of the instruction for yourself:

- Too fast
- Adequate for me
- Too slow

# Evaluation poll

**3. How likely will you participate in the next Think-a-Thon?**

- Very interested, will definitely attend
- Interested, likely will attend
- Interested, but not available
- Not interested in attending any others

# SchARE

Next Think-a-Thons:



[bit.ly/think-a-thons](https://bit.ly/think-a-thons)

Register for SchARE:



[bit.ly/join-schare](https://bit.ly/join-schare)



[schare@mail.nih.gov](mailto:schare@mail.nih.gov)

