

Python Tutorials

Python is a computer programming language. This is a complete Python programming tutorial (for both Python 2 and Python 3!). Suitable for both beginner and professional developers.

Python Courses:

- Complete Python Bootcamp: Go from zero to hero in Python
- Automate the Boring Stuff with Python Programming

Beginner

- Introduction
- <u>Text input and output</u>
- String slices
- Variables
- Lists
- If statements
- Functions
- Global and Local variables
- Scope
- Loops
- Range
- <u>Tuples</u>

- <u>Dictionaries</u>
- Datatype casting
- Random numbers
- Read file
- Write file
- Objects and classes
- Python class
- Encapsulation
- Method overloading
- Inheritance
- Polymorphism
- Inner classes
- Factory method
- Recursive functions
- <u>Logging</u>
- <u>Subprocess</u>
- Threading
- <u>Lambda</u>
- Sets
- Modules
- Graphs
- State Machine
- Tree
- Binary numbers
- Python Debugging

Data and databases

- Read and write files
- Flat database (Spreadsheets)

- Database: SQLite
- Database: MySQL
- Database: ORM with SqlAlchemy

Web

- Python Web Development
- Flask Getting started
- Flask Jinja2 template engine
- Flask Create an Epic Web App
- Flask Login authentication
- Flask Login authentication with Google
- Flask Login authentication with Twitter
- Flask JSON and Google Charts API
- Flask Web Forms
- Flask Loading static pages
- Flask Boilerplate template
- Flask and great looking charts using Chart.js
- JSON encoding and decoding
- Creating a webbrowser with Python and PyQT
- Creating a gmail wordcloud
- <u>Django Getting started</u>
- Django Building a note taking app

GUI (Graphical Interfaces)

- Introduction to GUI
- PyQt4
- <u>PyQt5</u>
- Tkinter
- wxPython

Network

- HTTP client and server (network sockets programming tutorial)
- HTTP client with requests library
- HTTP download file
- HTTP parse HTML and XHTML
- FTP client in Python
- Building an IRC (ro)bot
- Read Email using POP3
- Extract links from web page

Plotting

- Matplotlib Line chart
- Matplotlib Histogram
- Matplotlib Bar chart
- Matplotlib Pie chart
- Matplotlib Legend
- Matplotlib save figure to image
- Matplotlib update plot
- Matplotlib time plot

Advanced

- Regular Expressions
- An Introduction to Building Quantum Computing
 Applications with Python

Other

- Create a chrome plugin with Python
- Fun tricks with Python
- Speech engines with Python (tutorial)

Android

- SL4A Android Python Scripting
- Android Development in Python with QPython

Computer Vision

- Image data and operations
- Image histogram
- Car tracking with cascades
- Detect faces in Google Hangouts video
- Object detection with tempate matching
- Netflix like Thumbnails with Python

Game

- Simple guessing game (text based)
- Game programming with PyGame
- Make the game Snake with PyGame
- How to draw a maze in PyGame
- Computer AI in PyGame
- <u>Sidescroller in Pygame</u>

Robotics

- Speech Recognition using Google Speech API
- Personal Assistant (Jarvis)

Search

- <u>Beginner</u>
- Graphical Interfaces (GUI)
- Web development
- <u>Database</u>
- Robotics
- Matplotlib
- Network
- Machine Learning

