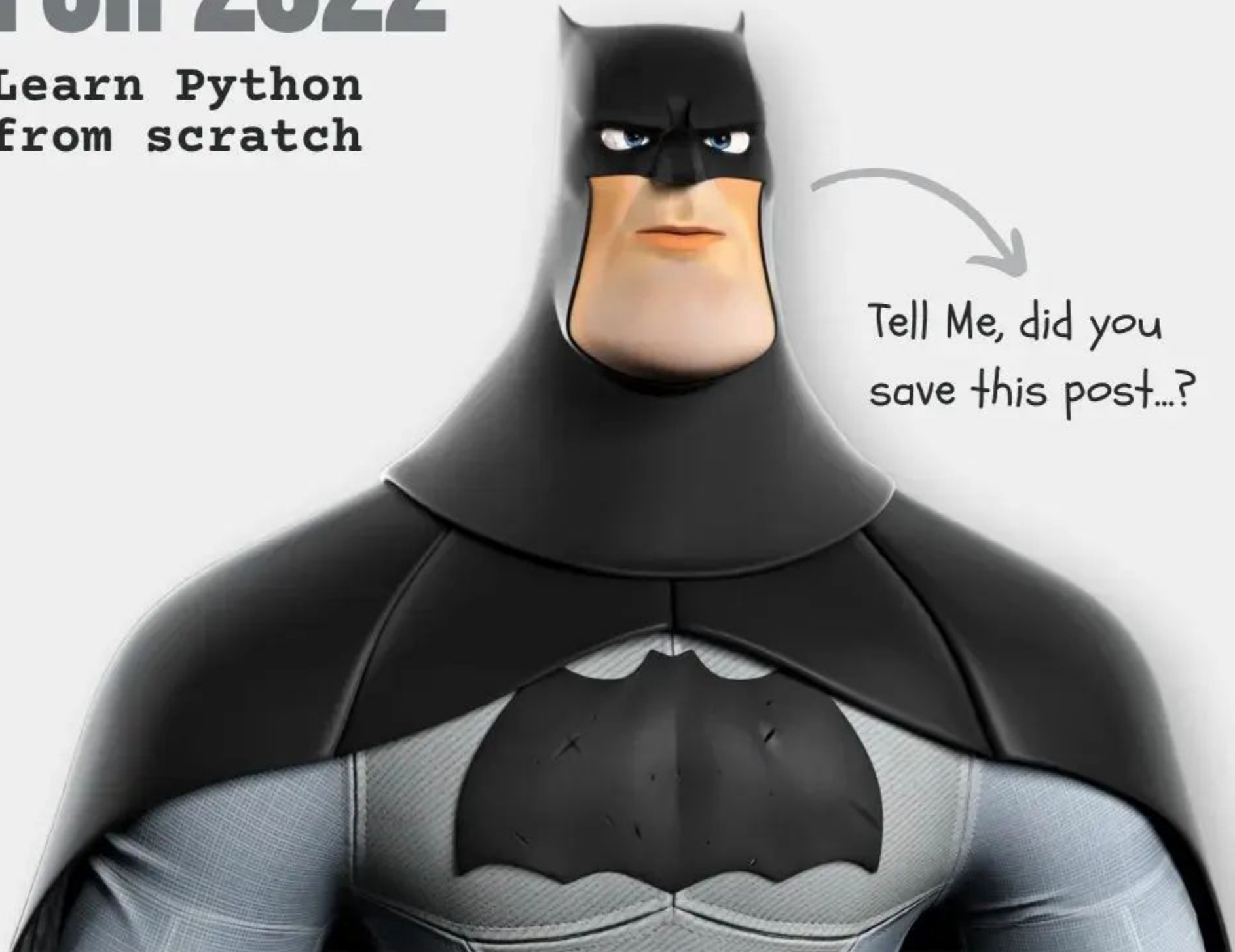


ELECTRIFYINGCODES



PYTHON ROADMAP FOR 2022

Learn Python
from scratch



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Why Python? (Decide Your End Goal)

Python is a multi-purpose language, you can use Python to build **web apps, mobile apps, and desktop apps** as well as **software testing, data analysis and visualization, artificial intelligence, and Machine Learning** can also be done by using python.

Now let's get straight into the **Roadmap (The Game Plan)**.



LEARN SYNTAX AND BASICS

- The Python shell, basic arithmetic.
- Control structures.
- Accepting user input, Strings & Typecasting.
- Looping in Python: For & While loops.
- Exception handling.
- Functions, modules & Imports.



OOPS CONCEPTS, BUILT-IN DATA STRUCTURES, AND OTHER STUFF

- OOP in Python
- Lists & List functions
- Regular Expressions
- List comprehension
- List slicing
- String formatting
- Lambdas
- List, Dictionaries & Tuples



FRAMEWORKS FOR WEB DEV

We have so many frameworks for web dev in Python like Django, Flask, Bottle, Tornado, & Pyramid.

→ Django

A high-level web framework mostly used in startups and enterprises for web development, If you are a complete beginner then it will take some time to learn **Django**.

→ Flask

Flask is one of the easiest microframeworks to learn in Python. If you wish to develop a simple and lightweight web application then Flask is suitable for that.



FOR BUILDING DESKTOP APPS

Tkinter, PyQt, Kivy, WxPython, or PyGUI libraries are very good for building desktop-based applications.

→ Tkinter

Tkinter is open source library and it allows you to build desktop GUI applications using Python.

→ PyQt

PyQt is one of the most powerful cross-platform GUI library owned by Nokia.

→ Kivy

It can be used to create desktop applications also it supports platforms like Android, iOS, Linux & Raspberry Pi.



FOR DATA ANALYSIS

Numpy, Pandas, Seaborn, Bokeh, SciPy, Matplotlib these libraries are good for data analysis.

→ Numpy

It is an array-processing package and provides high-performance array objects.

→ Pandas

Pandas is also a very good open-source library that is used for data analysis. It provides high-level data structures (such as DataFrame) for analysis.



FOR MACHINE LEARNING

→ TensorFlow

The most popular **deep learning** library developed by Google uses a computational framework.

→ Scikit-Learn

A machine learning library for Python, designed to work with numerical libraries such as SciPy & NumPy.

→ PyTorch

It can handle dynamic computation graphs on the go. It also provides easy to use API.



BONUS TIPS

- Have patience.
- Stick with your goal and language.
- Frustration and pain is a part of the learning process, embrace it instead of avoiding it.
- Be consistent
- Build Projects

