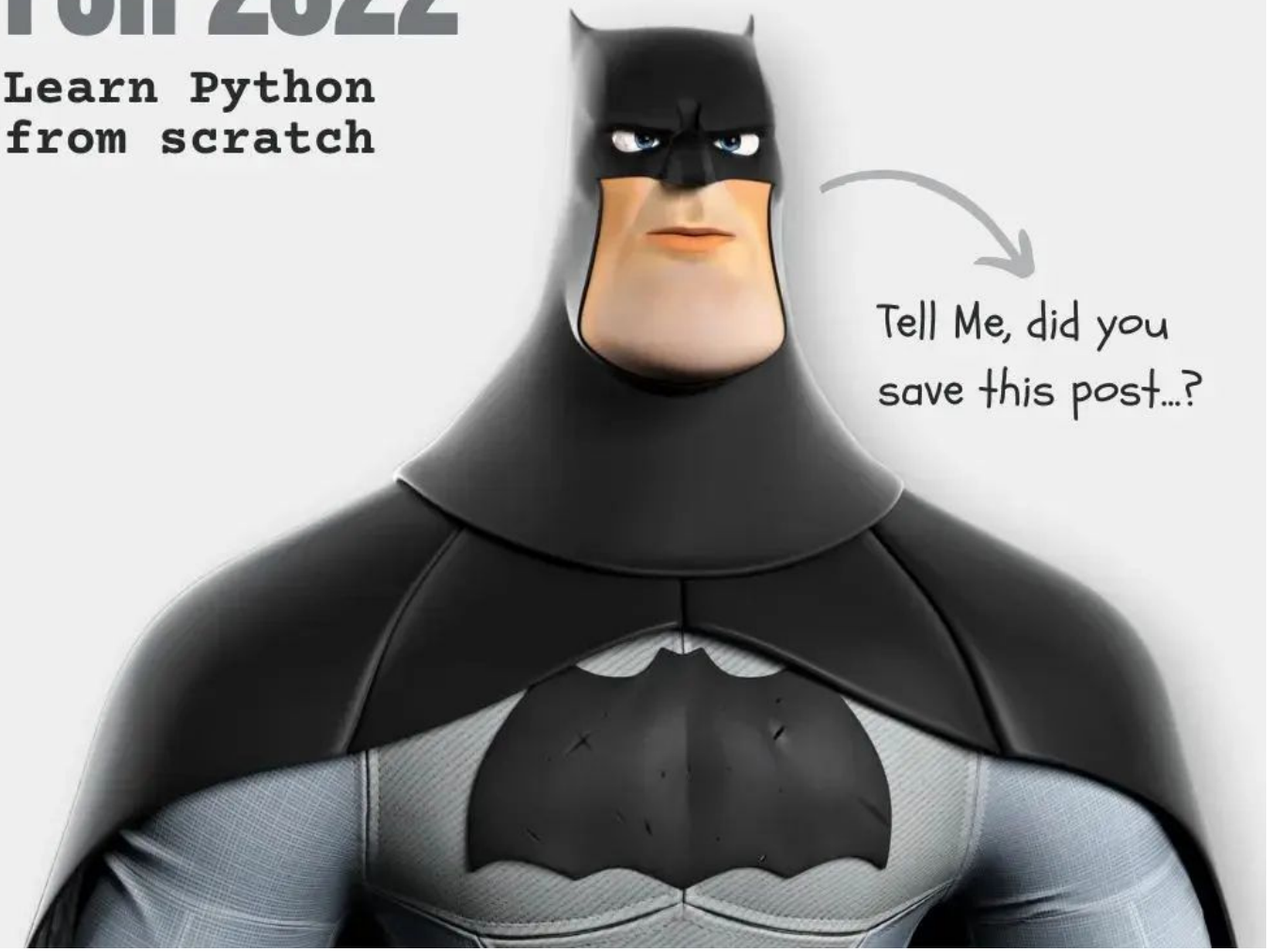
ELECTRIFYINGCODES

PYTHON ROADMAP FOR 2022

Learn Python
from scratch



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**).

03

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.

04

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

ELECTRIFYINGCODES

05

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.

06

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.

07

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.

08

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