



**NewbieGet**

INNOVATION THROUGH LEARNING

UDYAM MSME · GEM REGISTERED

PROFESSIONAL TRAINING PROGRAM

# Python Programming

## [Web · Automation · Data]

Learn Python the way it is actually used - clean fundamentals first, then web development, practical automation and hands-on data analysis.

**32**

HOURS

**7**

MODULES

**1**

CAPSTONE

**10**

TOOLS COVERED

### TOOLS & PLATFORMS COVERED

Python 3

Flask

Django

pandas

NumPy

Requests

SQLite

pytest

Jupyter

Git

**Live**

INSTRUCTOR LED

**Lab**

HANDS-ON GUIDANCE

**Project**

CAPSTONE REVIEW

**Certificate**

ON COMPLETION

**Enrol for the upcoming batch**

Live instructor-led · Weekday & weekend batches

**+91 87912 95762**

contact@newbieget.com

newbieget.tech

# One language, **three career paths**

Python opens three doors - **web development, automation and data** - and this programme walks you through all of them. You will write clean, idiomatic Python from the start, build a real web application with **Flask and Django**, automate the tedious parts of your day, and analyse actual datasets with **pandas**.

**DURATION****32 hours****PROGRAMME****8 Weeks****FOCUS****Fundamentals to applied****LEVEL****Beginner****Who this is for**

- Complete beginners starting their first programming language
- Professionals automating repetitive spreadsheet and file work
- Analysts moving beyond Excel into pandas
- Students preparing for developer or data roles

**What you will master**

- Core Python: types, control flow, functions and error handling
- Data structures and idiomatic, readable Python
- Object-oriented design with classes and inheritance
- Web applications with Flask and Django
- Scripting, file handling and API automation
- Data analysis and visualisation with pandas

## OUTCOMES

## What you walk away with

**01****A working application**

A deployed Python web app plus a set of automation scripts you can reuse at work.

**02****A data notebook**

A cleaned, analysed and visualised real dataset you can walk anyone through.

**03****Completion certificate**

A NewbieGet certificate recognised by our industry partners on finishing the programme.

# Core Python & OOP

01

## Python Fundamentals

6 hrs

**Syntax · Types · Control flow · Functions · Errors**

Installing Python and setting up an editor; variables and dynamic typing; numbers, strings and f-strings; conditionals; for and while loops; defining functions, arguments and return values; default and keyword arguments; scope; try/except error handling; reading tracebacks; writing your first useful script.

02

## Data Structures & Idiomatic Python

5 hrs

**Lists · Dicts · Sets · Comprehensions · Modules**

Lists, tuples, dictionaries and sets and when each is right; slicing; iteration patterns and enumerate/zip; list and dict comprehensions; sorting with keys; the standard library worth knowing (os, pathlib, datetime, json, collections); modules, imports and virtual environments; pip and requirements files; PEP 8 and readable code.

03

## Object-Oriented Programming

5 hrs

**Classes · Inheritance · Encapsulation · Dunder methods**

Why objects help once a script grows; defining classes and `__init__`; instance vs class attributes; methods and self; inheritance and composition; overriding and `super()`; encapsulation conventions; dunder methods such as `__str__` and `__repr__`; dataclasses; structuring a multi-file project; a practical refactor from script to classes.

# Web, automation & data

04

## Web Development with Flask & Django

6 hrs

[Routing](#) · [Templates](#) · [Forms](#) · [ORM](#) · [Admin](#)

HTTP request/response basics; a Flask app from scratch - routes, templates and static files; forms and validation; sessions; then Django - project vs app structure, models and the ORM, migrations, the admin site, class-based views, templates and URL routing; connecting a database; when a micro-framework beats a batteries-included one.

05

## Scripting & Automation

4 hrs

[Files](#) · [APIs](#) · [Scheduling](#) · [CLI tools](#)

Reading and writing text, CSV and JSON files; pathlib for filesystem work; bulk renaming and organising; consuming REST APIs with requests; authentication headers and pagination; parsing responses; building command-line tools with argparse; logging instead of print; scheduling scripts; a light introduction to web scraping and its etiquette.

06

## Data Analysis with pandas

4 hrs

[Series](#) · [DataFrames](#) · [Cleaning](#) · [Grouping](#) · [Plots](#)

NumPy arrays and vectorised thinking; pandas Series and DataFrames; loading CSV and Excel data; selecting with loc and iloc; handling missing values and duplicates; type conversion; filtering and deriving columns; groupby and aggregation; merging datasets; pivot tables; quick visualisations with matplotlib; working in Jupyter.

### MODULE 7 · 2 HOURS

## Capstone Project

Choose your track - a Django web application, an automation toolkit, or a data analysis notebook - then scope it, build it with the practices from the programme, add tests, document it in a README and present a walkthrough for review and feedback.

Plan



Build



Test



Present

# Start with the **early-bird batch**

★ **EARLY BIRD SALE**

~~₹19,999~~ **₹6,499** + 18% GST / \$79 USD

Limited early-bird seats · EMI available · Corporate and group rates on request. Fees include all course material, lab guidance and the capstone review.

## Hands-on projects

Real-world work that mirrors industry challenges and builds a portfolio you can show.

## Industry mentors

Taught by practitioners working on production systems every day.

## Practical curriculum

Built around the tools teams actually deploy - not textbook theory.

## Certificate on completion

Recognised by our industry partners, issued when you finish the capstone.

**ENROL NOW**

## Let's get you started.

Call or write to us for the next batch dates, the detailed session plan, or a corporate training proposal for your team.

CALL

**+91 87912 95762**

EMAIL

**contact@newbieget.com**

WEB

**newbieget.tech/training**

Government of India **Udyam-registered MSME** · **GeM-registered** technology company

