



Python Launchpad Internship

Duration: 30 Days

Course Objectives

- Understand the fundamentals of programming using Python.
- Learn how to manipulate data (strings, lists, dictionaries, tuples).
- Apply control structures (conditions, loops, functions) effectively.
- Work with files, regular expressions, and structured/unstructured data.
- Build networked applications (web clients, API integration).
- Understand database concepts using SQLite with Python.
- Visualize and analyze real-world datasets.

Prerequisites

- Basic computer usage skills (installing software, using files/folders).
- No prior programming knowledge required.
- Curiosity and willingness to learn problem-solving through coding.

Tools & Environment

- **Python 3.x** (Interpreter + Standard Library)
- **Code Editor** (IDLE, VS Code, or PyCharm Community Edition)
- **SQLite Browser** for database projects
- **Command Line (Terminal/PowerShell)** for running scripts
- **APIs (Twitter, Google Geodata, etc.)** for web services & data access

Beyond Objectives Learning

- Gain confidence to build small-to-medium Python projects.
- Learn to connect Python with databases and web services.
- Develop data handling and visualization skills useful in **Data Science**.
- Build a strong foundation for advanced areas like **Machine Learning, AI, and Web Development**.
- Develop problem-solving and logical thinking skills required in technical interviews.



Sr.	Title	Topic	Objective
1	Introduction to Programming	Why Program? & Hardware Architecture	Understand the need for programming and how computers process instructions.
2	Setting up Python	Installing Python (Windows/Mac)	Learn how to install and set up Python on different operating systems.
3	Python Basics	Variables, Expressions, Statements	Explore fundamental syntax, variables, and expressions in Python.
4	Conditional Logic	Conditional Execution	Learn decision-making using if/else structures.
5	Functions	Defining & Using Functions	Write reusable blocks of code with user-defined functions.
6	Loops & Iteration	Definite Loops, Idioms, Patterns	Master iteration using for/while loops and common looping patterns.
7	Strings	String Operations & Manipulation	Perform operations like slicing, searching, and modifying text data.
8	File Handling	Reading Files	Learn how to read, parse, and process data from files.
9	Lists	List Operations, Strings vs. Lists, Guardian Pattern	Use lists effectively for data storage and iteration.
10	Dictionaries	Counting, Word Frequency	Understand key-value data structures and apply them to text processing.
11	Tuples	Sorting & Using Tuples	Learn how to store ordered pairs and sort data structures.
12	Regular Expressions	Pattern Matching & String Parsing	Extract useful data from unstructured text using regex.
13	Networked Programs	Sockets, urllib, HTML Parsing	Learn the basics of networking and build simple web clients.
14	Web Services	XML, JSON, APIs (Twitter, GeoJSON)	Work with external web services and process API data securely.
15	Python Objects	OOP Concepts, Lifecycle, Inheritance	Understand object-oriented programming principles in Python.
16	Databases	SQLite, Relationships, Joins	Learn relational database concepts and interact with SQLite using Python.
17	Applied Database Projects	Email DB, Twitter Spider, Tracks DB	Apply Python and SQL to real-world database projects.
18	Data Visualization	Geodata, PageRank, Gmane Data	Create visualizations for large datasets and understand graph-based data.



Minimum Completion Criteria:

- Complete all modules and MCQs
- Attempt weekly marathons
- Submit at least 2 out of 5 projects in the final level
- Attend minimum 80% of lessons

Certificate Details

- Upon successful completion of the Internship, learners will receive a Government-Recognized Certificate from Vidyawan, a registered MSME enterprise (*Udyam Registration No: UDYAM-WB-14-0205610*).



One Month Internship Certificate



Weekly Marathon Participation Certificate

Performance-Based Badge System

- Gold Badge – For Top Performers (90%+ score, completed 4+ projects)
- Silver Badge – For consistent performance (70–89%)
- Copper/Participant Badge – For all learners who complete the program

Contact Information

For queries, registration, or collaboration, feel free to contact us:

Vidyawan – Internship & Skill Development Platform

(A Government-registered MSME – UDYAM-WB-14-0205610)

- Email: contact.vidyawan@gmail.com
- Website: www.vidyawan.in (Get in touch section)
- Location: West Bengal, India
- Follow us for updates and upcoming internships