



DataTeach.ai

# Python full Stack CURRICULUM

Online/Offline





## PYTHON FULL STACK

### Syllabus

#### **Introduction:**

- Introduction to python
- Features of python
- Advantages of python over other programming language
- Anaconda installation
- Jupyter notebook Basics

#### **Data Types & Data Structures**

- Variables
- Data Types
- Operators
- Strings
- Lists
- Sets
- Tuples
- Dictionaries

#### **Control Flow & Conditional Statements**

- Operators
- if
- elif and else statements
- range
- while loops and control flow.

- for loops and nested loops
- pass, break and continue
- Nested loops and list
- dictionary comprehensions.

#### **Functions and Modules**

- What is function and types of functions
- Code optimization and argument functions
- Lambda functions.
- Map, filter
- Manual higher order functions & nested functions
- Importing a module
- Namespace & scope of a variable using help() and dir() aliasing or renaming
- Some Important Modules In Python: math module
- random module
- datetime and os module.

#### **Class and Objects**

- Create A Class And Objects
- \_\_init\_\_()
- self parameter
- Class Properties
- Instance Properties & Static Properties
- Modifying Object Properties
- Delete Object
- Pass Statements
- 4 pillars of oop
- Inheritance
- Encapsulation
- Polymorphism
- Abstraction
- Multiple dispatch & abc modules.

#### **File Handling**

- Errors and Exception Handling,
- Create, Read, Write files
- Operations in File Handling.

#### **MySQL Database**

- Learn about MySQL database its operators
- string functions
- working with MySQL workbench
- MySQL joins and more

#### **Python for Web Development – Flask**

- Learn about Flask, a Python web framework
- Flask introduction and installation
- Building routes with Flask
- Learn how to install Flask, its components
- Importance of a virtual environment for project development.

#### **Building routes with Flask**

- Learn about dynamic routes
- Redirection
- URL building
- URL converters, requests, and responses in Flask.

#### **Getting into Front-end Web Development**

- HTML
- Learn basic HTML concepts, including page structure
- formatting content
- creating lists and links
- controlling styling.

#### **CSS3**

- Learn about CSS3, its core concepts
- Flask request handling
- Jinja 2 template engine
- Dynamic web pages with Flask-Jinja2.

#### **CSS**

- Learn about typography
- layouts
- login system with Flask
- server-side sessions
- file handling with Flask
- advanced layouts.

#### **JavaScript**

- Learn about typography
- Layouts
- Login systems with Flask
- Server-side sessions
- File handling with Flask
- Advanced layouts.



## KEY HIGHLIGHTS OF THE TRAINING

- |                              |                           |
|------------------------------|---------------------------|
| 100+ hours of learning       | 20+ Use Cases             |
| Instructor-Led LIVE Sessions | Mock Interviews           |
| Life-time LMS Access         | Learners Community Access |
| LIVE Doubt Resolution        | Guaranteed Internship     |
| Topic-wise Assignments       | Soft Skills               |
| Weekly Quizzes               | Resume Building           |
| Monthly Assessments          | 100% Job Assistance       |

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