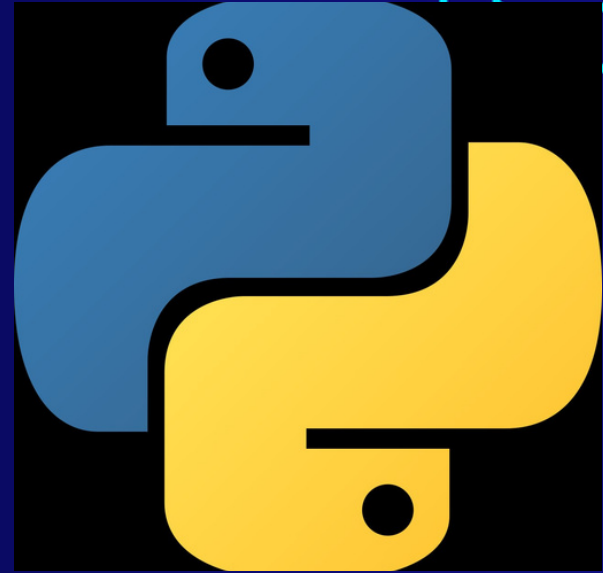




SAI TECH ACADEMY

Python FullStack +AI



+91-9148531106



admin@saitechacademy.com



info@saitechacademy.com



www.saitechacademy.com

Course Overview

This comprehensive training program is designed to transform beginners into job-ready Python Full Stack Developers. Learn front-end development, back-end development, databases, REST APIs, version control, deployment, and real-time project implementation through hands-on practical sessions.

Course Objectives

By the end of this course, participants will be able to:

- Master Python programming fundamentals and advanced concepts.
- Build responsive websites using HTML5, CSS3, Bootstrap, and JavaScript.
- Develop dynamic web applications using Django.
- Design and consume REST APIs using Django REST Framework. Work with MySQL/PostgreSQL databases.
- Use Git & GitHub for version control.
- Deploy applications to cloud platforms.
- Build real-time industry projects.
- Prepare for technical interviews.

Course Syllabus

Module 1: Python Fundamentals

- **Introduction to Python**
- **Python Installation and IDE Setup**
- **Variables and Data Types**
- **Operators and Expressions**
- **Input and Output Operations**
- **Conditional Statements**
- **Loops (For & While)**
- **Functions and Arguments**
- **Exception Handling**
- **File Handling**
- **Modules and Packages**
- **Python Coding Best Practices**

Module 3: Advanced Python

- **Lambda Functions**
- **Map, Filter & Reduce**
- **List, Dictionary, Set Comprehensions**
- **Iterators and Generators**
- **Decorators**
- **Regular Expressions**
- **Date & Time Module**
- **Virtual Environments (venv)**
- **pip Package Manager**

Module 5: CSS3 & Bootstrap

- **Introduction to CSS**
- **CSS Selectors**
- **Colors and Fonts**
- **Box Model**
- **Flexbox**
- **CSS Grid**
- **Responsive Design**
- **Media Queries**
- **Bootstrap Grid System**
- **Bootstrap Components**
- **Forms and Navigation**
- **Landing Page Design**

Module2:Object-Oriented Programming (OOP)

- **Classes and Objects**
- **Constructors**
- **Instance & Class Variables**
- **Methods**
- **Inheritance**
- **Polymorphism**
- **Encapsulation**
- **Abstraction**
- **Method Overloading & Overriding**
- **Python Packages**

Module 4: HTML5

- **Introduction to HTML**
- **HTML Document Structure**
- **Text Formatting**
- **Lists and Tables**
- **Images and Multimedia**
- **Hyperlinks**
- **Forms and Input Controls**
- **Semantic HTML**
- **Audio & Video**

Module 6: JavaScript

- **JavaScript Fundamentals**
- **DOM Manipulation**

Module 7: Database (SQL)

- Database Fundamentals
- MySQL Installation
- Database Design
- CREATE, ALTER & DROP
- INSERT, UPDATE & DELETE
- SELECT Queries
- WHERE, GROUP BY & ORDER BY
- Joins
- Subqueries
- Constraints

Module 9: Django Fundamentals

- Introduction to Django
- Django Installation
- Project Structure
- Django Apps
- URL Routing
- Views
- Templates
- Static Files
- Forms
- Model Creation
- Migrations
- Django Admin Panel

Module 11: Django REST Framework

- Introduction to REST APIs
- API Architecture
- Serializers
- API Views
- ViewSets
- Routers
- CRUD APIs
- Authentication
- Token & JWT Authentication
- Pagination
- Filtering
- API Testing using Postman

Module 13: AI Integration with Python

- Python AI Ecosystem
- REST APIs & LLM APIs
- JSON & API Keys

Module 8: Git & GitHub

- Version Control Concepts
- Git Installation
- Repository Creation
- Git Commands
- Commit, Push
- Branching
- Merging
- Pull Requests

Module 10: Django ORM

- Models
- CRUD Operations
- QuerySets
- Model Relationships
- Forms
- File Uploads
- Pagination
- Search Functionality
- Admin Customization

Module 12: Authentication & Security

- User Registration
- Login & Logout
- Password Reset
- Session Management
- Permissions
- Groups & Roles
- CSRF Protection
- Environment Variables

- OpenAI SDK & Gemini API
- Lang Chain & Llama Index
- Fast API for AI Applications

Practical Learning

- Hands-on coding exercises, lab sessions, and real-world development scenarios included throughout the course.
- End-to-End Real-Time Full Stack Web Application Development covering front-end design, back-end development, database integration, REST API development, authentication, deployment, testing, and application maintenance.
- Build multiple mini projects to strengthen programming and problem-solving skills.
- Develop a real-time industry project using Python, Django, HTML5, CSS3, JavaScript, Bootstrap, MySQL, Git.

THANK YOU

Thank you for your interest in our Python Full Stack Developer Training Program.

We are dedicated to empowering aspiring software professionals with the knowledge, skills, and practical experience required to excel in today's technology-driven software development industry.

For course inquiries, admissions, and support, please contact us:

 **+91 9148531106**

 **admin@saitechacademy.com**

 **info@saitechacademy.com**

www.saitechacademy.com

We look forward to helping you achieve your career goals.

Sai Tech Academy

Building Future Python Full Stack Developers

******* BEST OF LUCK *******