

## Python Full Stack Internship Curriculum (3 Months + Mini Project)

### Month 1: Python & Web Fundamentals

#### Week 1: Python Basics

- Introduction to Python
- Variables, Data Types
- Operators & Control Statements
- Loops (for, while)
- Functions

#### Week 2: Advanced Python

- Lists, Tuples, Sets, Dictionaries
- String Handling
- File Handling
- Exception Handling
- OOP Concepts (Class, Object, Inheritance, Polymorphism)

#### Week 3: Database Basics

- Introduction to SQL
- MySQL / SQLite
- CRUD Operations
- Joins & Constraints
- Python with Database (CRUD using Python)

#### Week 4: Web Basics

- HTML5 Basics
- CSS3 (Flexbox, Responsive Design)
- JavaScript Basics
- DOM Manipulation

## Month 2: Frontend & Backend Development

### Week 5: Advanced JavaScript

- ES6 Concepts
- Functions & Events
- Form Validation
- Fetch API

### Week 6: Frontend Framework (React – Basics)

- Introduction to React
- Components & Props
- State & Hooks
- Routing

### Week 7: Backend with Django / Flask

- Introduction to Django / Flask
- Project Structure
- URL Routing
- Views & Templates
- Forms & Validation

### Week 8: Backend Advanced

- Models & ORM
- Authentication & Authorization
- REST API Basics
- API Testing (Postman)

## **Month 3: Full Stack Integration & Mini Project**

### **Week 9: Full Stack Integration**

- Frontend + Backend Integration
- REST API Consumption
- Session & JWT Authentication

### **Week 10: Deployment & Tools**

- Git & GitHub
- Hosting Basics (PythonAnywhere / Render)
- Environment Variables
- Debugging & Logging

### **Week 11–12: Mini Project**

- Project Planning & Design
- Implementation
- Testing
- Deployment
- Documentation

### **Mini Project Ideas**

- Student Management System
- Job Portal System
- Online Quiz Application
- E-commerce Website
- Blog Application

### **Internship Outcomes**

- Strong Python Full Stack Skills
- Real-time Project Experience
- GitHub Project Portfolio

