

Python Full Stack Developer Curriculum

Week/Topic	Modules and Objectives
Week 1	Introduction to Programming Python Syntax, Variables, Data Types, Control Flow, Functions.
Project:	Build a simple Command Line Interface (CLI) Calculator.
Week 2	Core Python II: OOP & Advanced Object-Oriented Programming (OOP) principles, Advanced Functions (Lambdas, Decorators), Error Handling, File I/O.
Project:	Build a basic CLI utility.
Week 3	Data Structures & Algorithms (DSA) Standard Python Data Structures (Lists, Dictionaries, Sets), Sorting/Searching Algorithms, Introduction to Time Complexity (\mathcal{O}).
Project:	Implement a recursive search algorithm (e.g., Binary Search).
Week 4	Web Development with Django I Introduction to Web Frameworks, Django Setup, Project Structure, MVT (Model-View-Template) pattern, Models, ORM, Admin Interface, Forms.
Project:	Build a basic To-Do List application.
Week 5	Web Development with Django II User Authentication, Permissions, Session Management, Static Files, Template Inheritance.
Project:	Build a simple Blog application with user registration.
Week 6	Django REST Framework (DRF) REST Principles, Serializers, ViewSets, Routers, API Authentication (Token/Session).
Project:	Build a RESTful API for the Blog application.
Week 7	Local Deployment & Testing Unit Testing (Python 'unittest'), Integration Testing, Environment Variables, Docker/Docker Compose basics.
Project:	Containerize the Blog API and write unit tests.
Week 8	Cloud Deployment Cloud environment setup (Heroku/Render/AWS), Reverse Proxies (Nginx), Database Setup (PostgreSQL), CI/CD basics.
Project:	Deploy the Blog API to a cloud service.