

# Python Web Developer Roadmap (Beginner to Job-Ready)

## Phase 1: Core Python (Foundations)

- Data types (int, float, str, list, tuple, dict, set, frozenset, bool)
- Loops (for, while)
- Conditions (if, elif, else)
- Functions (arguments, return, lambda, \*args, \*\*kwargs)
- File handling (open, read/write)
- Exception handling (try, except)
- OOP (classes, inheritance, polymorphism)
- Modules & Packages (import, custom modules)
- Goal: Be confident writing any small project with logic.

## Phase 2: Advanced Python Concepts

- Generators and Iterators
- Decorators
- Regular Expressions
- Virtual Environment (venv)
- Working with APIs (requests, json)
- Python project structure (folders, modules, virtualenv)
- Goal: Build medium-sized projects (e.g., To-do app CLI, weather app using API).

## Phase 3: Databases

- SQL basics: SELECT, INSERT, UPDATE, DELETE
- Learn one DBMS: MySQL or PostgreSQL
- Python integration: mysql-connector or psycopg2
- ORM: SQLAlchemy
- Goal: Create Python apps that store and read real data.

## Phase 4: Web Development (Backend)

- Learn one backend framework: Flask (lightweight) or Django (full-featured)
- Routing (URLs), Templates (HTML, Jinja), Forms and POST requests
- Database models (ORM), Authentication (Login/Register), REST APIs
- Goal: Build a full CRUD web app (e.g., blog, task manager, portfolio).

## **Phase 5: Frontend Basics**

- HTML, CSS, JavaScript basics
- Bootstrap or TailwindCSS
- How to connect frontend with Python backend (API calls / forms)
- Goal: Make your websites look clean and user-friendly.

## **Phase 6: Version Control + Deployment**

- Git & GitHub (commits, branches, push/pull)
- Deploy using Render / Vercel / Netlify / PythonAnywhere / Railway / AWS / DigitalOcean
- Goal: Put your project live and share link with recruiters.

## **Phase 7: Framework or Specialization**

- Choose one direction: Django, Flask, FastAPI, or Odoo (ERP Development)
- Goal: Create at least 2–3 real projects for your portfolio.

## **Phase 8: Portfolio + Resume + Internships**

- Build and showcase: 3–5 projects (with GitHub links)
- Portfolio website, Resume highlighting Python + web projects
- Apply for internships (especially in Ahmedabad).