

LEARNING

BLACKBOX



FULL STACK WITH PYTHON

**NEXT-GEN AI-POWERED
FULLSTACK**

- 6 months
- 11 Module



Blackbox Learning is a next generation tech academy in Kerala, building future ready professionals in AI, Development, and Digital Growth.

CONNECT WITH US

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Check out the website.
www.blackboxlearning.in



> COURSE INTRODUCTION

Master FullStack development with Python and AI integration.
Build real-world applications faster, smarter, and industry-ready.

MODULE - 1

HTML5 & SEO

- Introduction to Web & HTML
- HTML Fundamentals
- Semantic Structure
- Images & Media
- Forms
- Tables & Data Representation
- Accessibility (A11Y)
- ARIA Basics
- SEO Fundamentals
- Advanced HTML
- Structured Data & Modern Practice

MODULE - 2

CSS3 & Tailwind

- Introduction to Css
- Css Fundamentals
- CSS Selectors
- Layout Systems
- Positioning
- Responsive Design
- Tailwind Introduction
- Core Concepts
- Layout & Spacing
- Dark Mode
- Animations & UI Effects
- Advanced UI Design

MODULE - 3

JavaScript

- Introduction to Javascript
- Javascript Fundamentals
- Control Flow
- Functions
- Arrays & Objects
- Advanced JavaScript Concepts
- DOM Manipulation
- Browser APIs
- Asynchronous JavaScript
- ES6+ Modern JavaScript

MODULE - 4

React 19

- React Introduction
- React Fundamentals
- State Management
- Event Handling
- React Hooks
- Forms in React
- Component Lifecycle
- Performance Optimization
- API Integration
- React Architecture

MODULE - 6

Backend Development

- Django
- Project setup
- Models
- Views
- Templates
- Authentication
- File uploads
- REST APIs
- FastAPI
- API development
- Async endpoints
- Request/response
- models
- API documentation

MODULE - 5

Foundations with Python

- Python basics
- Variables and data types
- Control structures
- Functions
- File handling
- Error handling
- Object Oriented Programming
- Virtual environments
- Package management with pip
- Working with JSON and APIs
- API data fetcher
- Data processing scripts
- CLI automation tool

MODULE - 7

Databases & Version Control

- MongoDB Atlas
- NoSQL fundamentals
- CRUD operations
- Schema design
- Indexing
- AI data storage
- Git & GitHub
- Version control
- Branching
- Pull requests
- Collaboration workflows

MODULE - 8

AI APIs & Multimodal AI

- OpenAI
- Google Gemini
- ElevenLabs
- Anthropic (optional)
- Text to Speech
- Speech to Text
- Image Generation
- Video Generation

MODULE - 9

Local AI with Ollama

- Running models locally
- Model management
- Local inference
- Privacy-focused AI apps

MODULE - 10

AI Frameworks

- LangChain
- Chains
- Tools
- Memory
- RAG pipelines
- LangGraph
- Agent workflows
- Stateful agents
- Multi-agent orchestration
- Concepts
- Agents
- Agentic AI
- systems Tool calling


MODULE - 11


Cloud & Deployment

- EC2
- S3
- Deployment workflow



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