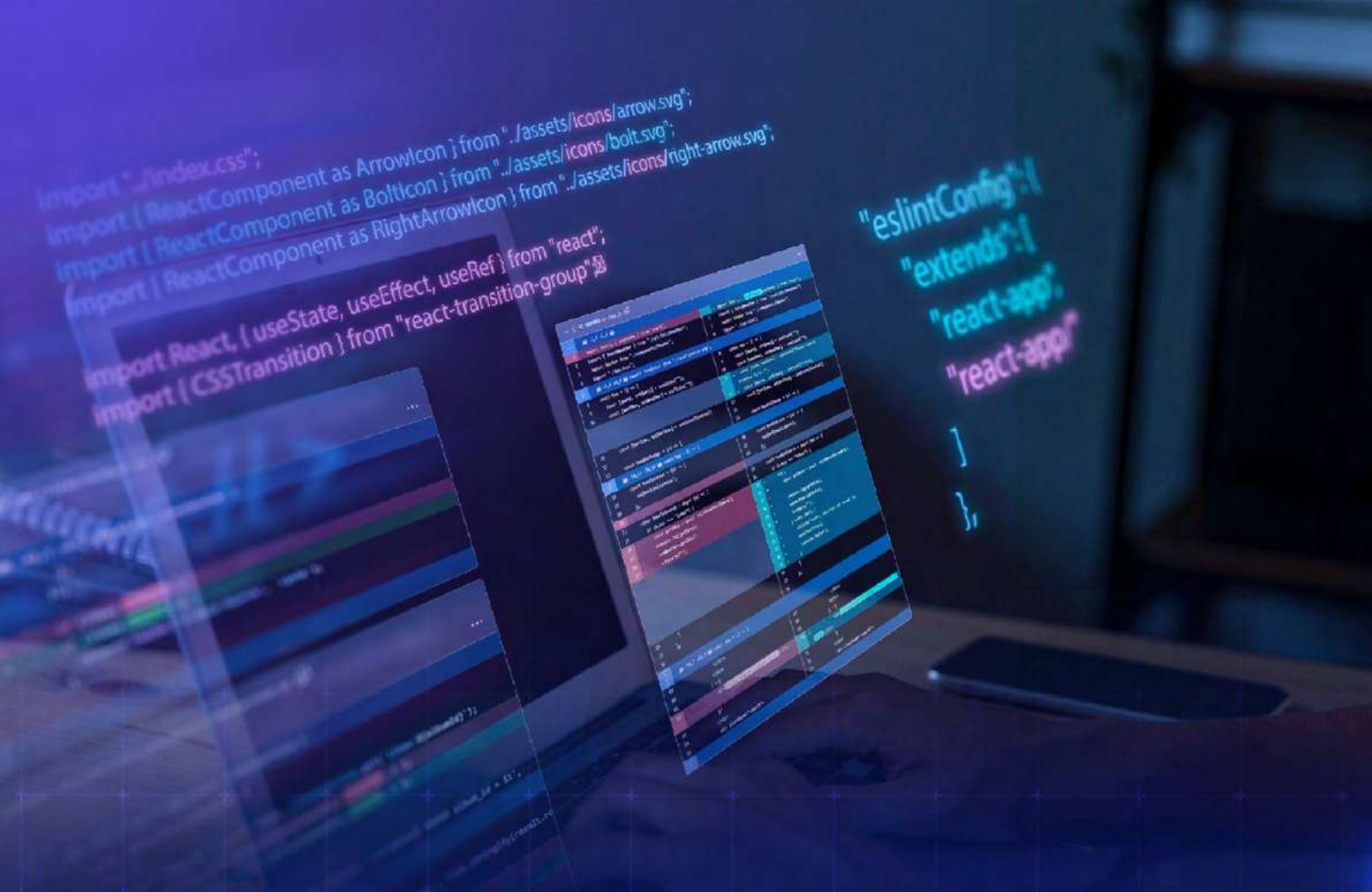




PYTHON

FULL STACK WEB DEVELOPMENT EXPERT





Python **Django** **React JS** **FAST API**
REST API **AI & ML**

Synnefo Solutions is a career-focused tech academy offering industry-aligned training through practical projects and experienced mentors

- **100% JOB GUARANTEED**
- **SYNNEFO SMARTSPACE : KERALA'S FIRST LAAS**
- **INTENSIVE INTERNSHIP PROGRAM**
- **REALTIME PROJECTS**

Class Mode Details

ONLINE | OFFLINE | HYBRID
Course Duration: 6 Months + 1 Months Internship

COURSE OVERVIEW

Python Full Stack Development with AI focuses on building complete, scalable web applications using Python-based backend technologies and modern frontend frameworks, combined with AI and data-driven capabilities.

This program trains you to work like a real Full Stack Python Developer using:

- FRONTEND TECHNOLOGIES (HTML, CSS, JAVASCRIPT, REACT, TAILWIND)
- BACKEND DEVELOPMENT WITH PYTHON (DJANGO)
- DATABASE MANAGEMENT (SQL & NOSQL)
- REST & FAST API DEVELOPMENT
- AI & MACHINE LEARNING FUNDAMENTALS

What You Will Learn

You will gain hands-on experience in developing full stack web applications, designing APIs, managing databases, deploying applications to cloud platforms, and integrating AI & ML features into real-world projects.

Suitable for

Freshers • Students • IT & Software Professionals Web Developers • Data Science & AI Enthusiasts Automation & DevOps Engineers Cybersecurity Professionals

FEATURES

Training Features

- Live projects & real-world case studies
- Hands-on coding lab access (Synnefo SmartSpace)
- One-to-one mentoring support
- Recorded sessions (Online / Hybrid)
- Mock interviews & career guidance
- Industry-experienced trainers

Key Modules

- Python Core & Advanced
- Django Framework
- React.js Frontend
- REST API (Django Rest Framework)
- Database (SQLite3,MySQL,MongoDB)
- HTML5, CSS3 & TailWind
- JavaScript (ES6+)
- Authentication & Authorization
- Git & GitHub
- Web Server Deployment
- (Pythonanywhere,Render,AWS,Vercel)

CAREERS

Career Opportunities

- Python Full Stack Developer
- Backend Developer (Python)
- Frontend Developer (React)
- Web Application Developer
- Software Engineer
- JavaScript Developer
- AI-Integrated Web Developer
- Freelancer / Consultant

Certifications

- Synnefo Course Completion Certificate
- NACTET Certificate
- Internship Certificate



About Synnefo

Synnefo is an ISO 9001:2015 certified, IT company-based academy supported by 50+ recruitment partners and NACTET affiliation. With 5000+ students trained, we deliver industry-driven learning through live projects and internships. Students gain hands-on exposure in real-time lab facilities with integrated NOC, SOC, and Data Center environments, along with an exclusive SDLC Hub. Our programs are further strengthened by soft-skill training, mock interviews, international testing centers, and lifetime placement support, ensuring complete career readiness.

ENQUIRE NOW

Start your Python Full Stack Development journey with AI and assured career support.



+91 7736 013 411



www.synnefo.in



Near Maharajas Metro Station, Kochi



PYTHON SYLLABUS

01 INTRODUCTION

- Understanding Web Development (Frontend, Backend, Full Stack)
- Setting Up a Development Environment (VS Code)
- Git & GitHub

02 HTML

- What is HTML?
- HTML document structure (<!DOCTYPE>, <html>, <head>, <body>)
- Elements, Tags, Attributes
- Headings, Paragraphs, Links
- Images, Lists, Tables
- Form Tags
- Semantic tags
- Media tags
- Block vs inline, id and class attributes
- Meta tags and SEO basics
- Aria attributes

Standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets and scripting languages such as JavaScript.

03 CSS

- What is CSS?
- Internal vs External vs Internal css
- Selectors and specificity
- Box model
- Display types
- Flexbox
- CSS Grid
- Position property
- Z-index
- Colors, Fonts, Backgrounds
- Shadow, Transitions
- Pseudo-classes, Pseudo-elements
- Transform and Animation
- Media Query
- Best Practices - Reusable classes, Consistent naming, Avoiding repetition

04 TAILWIND

- Tailwind and Utility-first classes
- Setup
- Config file
- Responsive
- Spacing, Typography, Colors and Background Utilities
- Borders, radius, shadows
- Flexbox & Grid
- States
- Component Building

05 PYTHON

- Introduction to Python & Setup
- Variables, Data Types, Operators, Control Flow & Loops
- Functions & Modules
- File Handling & Exception Handling
- **PYTHON ADVANCED**
 - Object-Oriented Programming (OOP) in Python
 - Regular Expressions (Regex) in Python
 - Testing: Unit testing with Pytest

06 DATABASE

- Introduction to Databases & SQL Basics
- Working with SQLite3 in Python
- MySQL Database & MongoDB

07 DJANGO FRAMEWORK

- Introduction to Django & Setup
- Django Models & ORM
- Django Built-in Forms & Form Handling
- Authentication & Social Sign-On
- Payment Integration with Razorpay
- Email Configuration & Sending Emails

08 DJANGO REST FRAMEWORK (DRF)

- Introduction to DRF & API Development
- Serializers & Model-based API Development
- Views & API Endpoints
- Authentication & Permissions in DRF
- API Testing & Optimization: Postman

09 FASTAPI

- FastAPI: Setup, async routes, Pydantic
- Basic Caching: Redis integration
- File Uploading

10 JAVASCRIPT

- JavaScript Basics – Introduction, Variables, Data Types, Operators, Comments
- Control Flow – Conditional Statements, Loops, Break & Continue
- Data Structures – Arrays, Objects
- Functions & Asynchronous JS – Callbacks, Callback Hell, Promises,
- Async/Await, Closures

- **Advanced Concepts – ES6+, OOP, Deep & Shallow Copy**
- **Browser APIs – DOM Manipulation, Local Storage, SetTimeout, SetInterval, clearInterval**
- **Debugging & Tools – Developer Tools, Regular Expressions**
- **Hands-on Practice – Mini Project**

11 REACT JS

- **React Basics – Introduction, Installing React, JSX, Components (Class vs Function)**
- **Development Tools – Babel, Webpack**
- **Core Concepts – Virtual DOM, SPA, State & Props, Lifecycle Methods**
- **Rendering & Handling – Conditional Rendering, Event Handling, Forms (Controlled vs Uncontrolled, Formik)**
- **Hooks & State Management – React Hooks, Global State, Redux Toolkit**
- **Advanced Concepts – Pure Components, Higher-Order Components (HOC)**
- **Routing & API Calls – React Router, Axios**

12 HOSTING

- AWS
- PythonAnywhere
- Render
- Vercel

13 ADD-ON

- AI & Machine Learning –
 - NumPy & Pandas for Data Handling
 - Matplotlib for Data Visualization
- Open CV
 - Image Processing Basics
 - Face Detection & Recognition

