

Creating Custom APIs Using ChatGPT API

Duration: 5 Days

Language: en

Course Code: PI2 - 127

Objective

By the end of this course, participants will be able to:

- Understand the architecture and core functionalities of the ChatGPT API.
- Build and configure custom endpoints using ChatGPT for specific use cases.
- Apply prompt engineering techniques within API workflows.
- Integrate ChatGPT API with front-end and back-end systems.
- Handle data inputs, context control, and API response formatting.
- Implement security, rate limiting, and best practices for API deployment.
- Design scalable, user-friendly AI-powered API services.

Audience

This course is ideal for:

- Developers and software engineers interested in conversational AI.
- AI and machine learning practitioners.
- Backend engineers building automation services.
- Product managers and technical founders developing AI tools.
- IT professionals integrating AI into web or mobile platforms.
- Educators and researchers working on API-based AI projects.

Training Methodology

The course features interactive coding labs, real-time demos, collaborative design sessions, and expert-led walkthroughs. Participants will use Python and RESTful API tools to build, test, and deploy real custom APIs powered by ChatGPT. Emphasis is placed on practical implementation, scalability, and safe deployment.

Summary

As businesses increasingly integrate AI into their workflows, the need for flexible and intelligent APIs has never been greater. OpenAI's ChatGPT API allows developers to create smart, conversational interfaces and automated systems that respond dynamically to user inputs across a wide range of use cases—from customer service bots to content generation engines.

This hands-on course is designed to help participants understand how to plan, build, and deploy

custom APIs powered by ChatGPT. It covers everything from API authentication and request structure to prompt engineering, scalability, and integration with web applications. Through guided labs and real-world examples, participants will gain the confidence and technical skills needed to launch AI-powered services tailored to their unique business needs.

Course Content & Outline

Section 1: Introduction to ChatGPT API and API Fundamentals

- Overview of OpenAI's API platform and use cases.
- Understanding endpoints, tokens, and API limits.
- RESTful architecture and basic API request/response flow.
- Key parameters in ChatGPT API: model, messages, temperature, max_tokens.
- Case study: Common API use cases with ChatGPT (customer support, summarization, generation).

Section 2: Building Custom Endpoints with ChatGPT

- Crafting API requests using Python and Postman.
- Structuring role-based prompts (system, user, assistant).
- Embedding user input dynamically into prompts.
- Creating reusable request templates and prompt modules.
- Lab: Create a basic custom API that generates smart replies based on user input.

Section 3: Integrating ChatGPT API with Applications

- Connecting ChatGPT API to web frontends using Flask/Node.js.
- Handling form inputs, data processing, and chatbot interface setup.
- Logging, tracking, and debugging API interactions.
- Deploying applications using cloud services (Heroku, Vercel, or AWS).
- Demo: Build and deploy a simple feedback analysis API.

Section 4: Advanced Prompt Engineering and Workflow Automation

- Techniques for multi-step instructions and controlled output.
- Chaining prompts for complex task handling (multi-turn conversations).
- Handling edge cases and improving prompt reliability.
- Combining ChatGPT API with automation tools (e.g., Zapier, Make.com).

- Workshop: Build a content-generation API for blog writing and summarization.

Section 5: API Deployment, Security, and Scaling

- Securing your API: keys, tokens, and access control.
- Managing rate limits and avoiding abuse.
- Monitoring API usage, latency, and reliability.
- Preparing for scale: caching, batching, and background jobs.
- Final project: Design and present a full custom API project powered by ChatGPT.

Certificate Description

Upon successful completion of this training course, delegates will be awarded a Holistique Training Certificate of Completion. For those who attend and complete the online training course, a Holistique Training e-Certificate will be provided.

Holistique Training Certificates are accredited by The CPD Certification Service (CPD), and are certified under ISO 9001 and ISO 29993 standards.

CPD credits for this course are granted by our Certificates and will be reflected on the Holistique Training Certificate of Completion. In accordance with the standards of The CPD Certification Service, one CPD credit is awarded per hour of course attendance. A maximum of 50 CPD credits can be claimed for any single course we currently offer.

Categories

AI, Data and Visualisation, IT & Computer Application, Technology

Tags

Chat GPT, Prompt Engineering, API

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