KOENIG
step forward

KOENIG SOLUTIONS · COURSE OUTLINE

AI-Assisted Coding: ChatGPT for JavaScript, SQL & Python

Learn to use ChatGPT to write, debug and optimise
HTML, CSS, JavaScript, JSON, XML, SQL and Python code.

3 Days	4	10	33
24 HOURS	MODULES	TOPICS	HANDS-ON EXERCISES

COURSE OVERVIEW

AI-Assisted Coding: Boosting Developer Productivity and Efficiency is a comprehensive course for trainers and training companies, equipping learners with AI-powered coding skills using large language models like ChatGPT. Covering AI-assisted HTML, CSS, JavaScript, JSON, XML, SQL, and Python, the course provides hands-on experience in coding, debugging, optimizing, and integrating APIs. Learners will explore structured data management, query optimization, and scalable development while leveraging AI for efficiency. This program empowers trainers to deliver impactful, hands-on education, preparing developers to harness AI for modern software development.

WHO THIS COURSE IS FOR

- **JavaScript Developers**
- **Python Developers**
- **SQL Developers**
- **Web Developers**
- **Trainers**
- **Software Engineers**

PREREQUISITES

Required Prerequisites

- Basic familiarity with programming concepts and syntax.
- Understanding of foundational web development (HTML, CSS, and JavaScript).
- Experience with at least one programming language is recommended.
- Useful Prerequisites: Prior exposure to SQL, Python, or XML will be helpful.

LEARNING OBJECTIVES

What You Will Learn

- Explain how large language models assist developers writing code
- Apply ChatGPT to generate and debug HTML pages
- Apply ChatGPT to create and optimise CSS layouts and animations
- Develop JavaScript modules and validate forms with ChatGPT assistance
- Integrate APIs within JavaScript and Python applications
- Generate, validate and transform XML files using ChatGPT
- Convert natural language requirements into SQL queries
- Debug and optimise Python scripts with file input and output

COURSE SYLLABUS

4 Modules, 10 Topics

01

Exercise

Overview of Artificial Intelligence and Large Language Models

TOPICS

- Overview of Artificial Intelligence and Large Language Models
- **Large Language Models:** Challenges and Risks
- ChatGPT Overview and Use Cases
- How ChatGPT Helps Developers Write Code
- Prepping a ChatGPT Thread
- What to Expect in the Course

02

7 Exercises

AI-Assisted HTML

TOPICS

Generating Images with ChatGPT · ChatGPT Can Analyze Images

03

5 Exercises

AI-Assisted CSS

TOPICS

Optimizing CSS with ChatGPT

AI-Assisted JavaScript and JSON

5 Exercises

AI-Assisted XML

5 Exercises

AI-Assisted SQL

5 Exercises

07

5 Exercises

AI-Assisted Python

TOPICS

Setting Up and Using Google Colab

HANDS-ON EXERCISES

Practise What You Learn

#	MODULE	ACTIVITY
01	**Overview of Artificial Intelligence and Large Language Models**	Getting Started with ChatGPT
02	**AI-Assisted HTML**	■ Creating the Shell of an HTML Page ■ Creating a Table ■ Creating a Nested List ■ Creating a Series of Images ■ Creating a Form ■ Debugging a Poorly Structured HTML Page ■ Recommended Practice
03	**AI-Assisted CSS**	■ Creating a Basic CSS File ■ Creating a Responsive Layout ■ Creating CSS Animations ■ Optimizing and Commenting CSS ■ Recommended Practice
04	**AI-Assisted JavaScript and JSON**	■ Creating a JavaScript Module ■ Improving JavaScript Code ■ Validating a Form ■ Making Use of an API ■ Recommended Practice
05	**AI-Assisted XML**	■ Generating a Simple XML File ■ Validating an XML File ■ Transforming XML with XSLT ■ Converting XML to JSON ■ Recommended Practice

#	MODULE	ACTIVITY
06	**AI-Assisted SQL**	■ Analyzing SQL Scripts and Entity Relationship Diagrams ■ Converting Natural Language Requirements into SQL ■ Recreating SQL Reports ■ Explaining Query Execution Plans ■ Recommended Practice
07	**AI-Assisted Python**	■ Writing a Python Module ■ Debugging and Optimizing Python ■ Making Use of an API ■ Creating a Python Script with File I/O ■ Recommended Practice

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training | Live Online Classes (ILO) | Fly-Me-A-Trainer (FMAT) | Flexi (Self-Paced) | 1-on-1 Training

Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

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