

Generative AI for Developers - TTAI2305

Apply Cutting-Edge AI to Accelerate Code, Documentation, and Testing; Improve User Interfaces; and Build Flexible, Dynamic Content

Duration: 3 Days

Skill Level: Intermediate

Available Format: Instructor-Led Online; Instructor-Led, Onsite In Person ; Blended;
On Public Schedule

Designed for experienced programmers, Turbocharge Your Code! Generative AI Boot Camp for Developers is a three-day workshop-style course that teaches you the latest skills and tools required to master generative AI models, transforming the way you approach software development.

What You'll Learn

Overview

Generative AI is an exciting frontier in artificial intelligence, enabling the creation of new data, automated content, and enhanced user experiences across industries. Its capabilities drive efficiency and innovation, allowing developers to produce dynamic content, generate code and documentation, improve user interfaces, and design custom recommendations. By harnessing generative AI, developers can build efficient, tailored solutions for various applications.

Turbocharge Your Code! Generative AI Boot Camp for Developers is a three-day, hands-on course designed for experienced programmers ready to master generative AI techniques and tools. This intensive program will transform your approach to software development, equipping you to generate code, create documentation, automate testing, enhance UI/UX, and develop adaptive content. With companies like NVIDIA, OpenAI, and Google leading the way, generative AI is setting new standards for innovation.

Throughout the course, you'll work with advanced AI models such as GANs, VAEs, and Transformers, enabling you to produce content, documentation, and tests, personalize user interfaces, and deploy AI-driven solutions. The curriculum covers everything from foundational principles to advanced applications, including ethical AI practices, with hands-on labs where you'll develop applications utilizing AI.

In this collaborative, interactive environment, you'll receive personalized guidance and real-time feedback from our expert instructor. By the end, you'll have the skills to design, code, test and deploy applications built entirely with AI.

Objectives

Working in an interactive learning environment, led by our engaging AI expert you'll:

- Build a solid understanding of generative AI techniques and their applications in software.
- Gain hands-on experience with popular models, including GANs, VAEs, and Transformers.
- Learn to utilize AI as your paired programming partner
- Gain hands on experience creating AI assisted requirements, design, code and tests
- Address ethical, legal, and safety considerations of generative AI, including bias mitigation and responsible content generation.

Audience

The ideal audience for this **intermediate and beyond** level course consists of experienced software developers, programmers, and engineers who are eager to learn and adopt cutting-edge generative AI techniques in their projects. The course is tailored for experienced professionals with a background in programming and a basic understanding of artificial intelligence and machine learning concepts.

Attendee roles might include:

- **Software Developers/Programmers:** Those wanting to integrate AI into tasks like code generation, documentation, and testing.
- **UI/UX Designers:** Professionals interested in creating dynamic, adaptive interfaces using AI.
- **Technical Product Managers:** Managers looking to enhance AI-driven products.

- **Technical Team Leads:** Leaders seeking innovative ways to incorporate generative AI into team projects.

Pre-Requisites

This course is highly technical in nature. In order to gain the most from attending you should possess the following incoming skills:

- Experience with software development languages and platforms (C++, Java, C#, or HTML/Javascript)
- Basic understanding of artificial intelligence and machine learning concepts (supervised and unsupervised learning, neural networks, optimization techniques)

Agenda

Please note that this topics, agenda and labs are subject to change, and may adjust during live delivery based on audience skill level, interests and participation.

1. Introduction to Generative AI

- Understand generative AI concepts and applications.
- Trace the evolution of generative AI technologies.
- Identify types of generative models and their uses.
- Learn key concepts: machine learning, neural networks, transformers.
- Review popular generative models like GPT and Codex.

2. Introduction to Prompt Engineering

- Explore prompts' role in guiding AI outputs.
- Craft effective prompts for various tasks.
- See how prompt specificity shapes results.
- Experiment with prompt variations for desired outcomes.

3. Deep Dive into AI Models

- Understand architectures of popular AI models.
- Ask, Edit, or Agent mode
- ChatGPT, Claude sonnet, Grok
- Evaluate free and premium models for AI assisted development
- Utilize AI assisted coding in your IDE
- Assess model performance and limitations.

4. The SDLC and Environment

- Setting up your development environment
- Understanding the SDLC
- Choosing tools and AI models
- Establishing rules for iterative development

5. Developing Application Requirements

- Step 1 – creating a product objectives document
- Step 2 – Create User Stories (use-cases) for critical features
- Step 3 – Review

6. Architecture

- AI assisted design
- Using mermaid to depict architecture
- Generating design documents

7. AI Assisted Design

- AI assisted test-driven design
- Creating an object-model
- AI generated documentation and mermaid diagrams

8. AI Assisted Coding

- Inline code assistance
- Agent mode coding
- Guiding the development process

9. AI Assisted Testing

- Generating Integration and System Tests
- Role of AI in test coverage and reliability
- Automating the test process

10. Security

- Using AI driven code-reviews
- Identifying and mitigating security risks
- Enforcing best practices
- Monitoring applications

11. Integrating AI in to Applications

- Utilizing LLMs in applications
- Avoiding security risks
- Validation
- Prompt engineering

12. Ethics and Responsible AI

- Explore ethical considerations in generative AI.
- Detect and address biases in AI content.
- Apply best practices for privacy and fairness.

- Understand regulatory impacts of generative AI.

All applicable course software, digital courseware files or course notes, labs, data sets and solutions, live coaching support channels, and rich extended learning and post training resources are provided for you in our “easy access, single source, no install required” online Learning Experience Platform (LXP), remote lab and content environment. Access periods vary by course. We’ll collaborate with you to ensure your team is set up and ready to go well in advance of the class. Please inquire about set up details and options for your specific course of interest.

For More Information

Please [contact us](#) or call 844-475-4559 toll free for more information about our training services (instructor-led, self-paced or blended), coaching and mentoring services, public course enrollment or questions, partner programs, courseware licensing options and more.