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GENERATIVE AI FOR DEVELOPERS (TTAI2305)

Course Code: 840007

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

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.

Generative AI 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.

What You'll Learn

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.

Who Needs to Attend

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.

Prerequisites

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)

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VIRTUAL CLASSROOM LIVE	$2,495 USD	3 Day

Virtual Classroom Live Outline

Day 1

1. **Introduction to Generative AI**
   - Unveil the world of generative AI and its applications.
   - Brief history of generative AI
   - Overview of generative models
   - Types of generative AI techniques
   - Applications of generative AI
   - Lab: Setting up the development environment
2. **Deep Learning and GANs**
   - Dive into the fundamentals of GANs and their applications.
   - Introduction to deep learning
   - Basic components of GANs
   - GAN architecture and training process
   - Common GAN variants and applications
   - Lab: Simple GAN implementation: Generate synthetic images with GAN; using TensorFlow, Keras
3. **Variational Autoencoders (VAEs)**
   - Explore VAEs and learn their applications in generative AI.
   - Introduction to VAEs
   - VAE architecture and training process
   - Applications of VAEs
   - Comparing VAEs and GANs
   - Lab: VAE for image generation: Create images with a VAE model; using TensorFlow and Keras

Day 2

1. **Natural Language Generation (NLG)**

- Uncover the power of NLG and its applications in generative AI.
- Introduction to NLG
- Overview of language models
- Transformer architecture and variants
- Applications of NLG in generative AI
- Lab: Text generation using GPT: Generate text with GPT-based models; using Hugging Face Transformers

2. **Ethics and Responsible AI**
    - Understand the ethical implications of generative AI applications.
    - AI ethics and its importance
    - Bias in generative models
    - Responsible AI and best practices
    - Future research and open problems
    - Lab: Bias detection and mitigation: Identify and mitigate biases in generative models; using TensorFlow, AI Fairness 360

Day 3

1. **Multimodal Generative AI**
    - Discover the potential of combining different data modalities in generative AI.
    - Introduction to multimodal AI
    - Text-to-image synthesis
    - Audio-to-video synthesis
    - Applications of multimodal generative AI
2. **Style Transfer and Neural Art**
    - Explore the creative side of generative AI with style transfer techniques.
    - Introduction to style transfer
    - Neural style transfer algorithms
    - Applications of style transfer in generative AI
    - Limitations and future directions
    - Lab: Implement neural style transfer: Create artistic images using neural style transfer; using TensorFlow, Keras, VGG-19
3. **Generative AI in the Real World**
    - Gain insights on practical applications of generative AI across various domains.
    - Generative AI in marketing and advertising
    - Generative AI in entertainment and gaming
    - Generative AI in healthcare and life sciences
    - Generative AI in finance and economics
    - Lab: Develop a simple AI-powered application: Build a practical generative AI application; using Pinecone and LangChain
4. **Capstone: Building and Deploying Generative AI Models**
    - Learn best practices for building, fine-tuning, and deploying generative AI models.
    - Model selection and fine-tuning
    - Deployment strategies

- Monitoring and maintenance
- Ensuring user privacy and security
- Lab: Deploy a generative AI model

Mar 16 - 18, 2026 | 10:00 AM - 6:00 PM EDT

Jun 1 - 3, 2026 | 10:00 AM - 6:00 PM EDT

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PRIVATE GROUP TRAINING	3 Day

Visit us at www.globalknowledge.com or call us at 1-866-716-6688.

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