# TURBOCHARGE YOUR CODE! GENERATIVE AI BOOT CAMP FOR DEVELOPERS

Course Code: 840007

**Use Cutting-Edge Tech to Generate Code, Documentation, and Tests, Enhance User Interfaces, and Create Flexible, Dynamic Content.**

Generative AI represents an exhilarating frontier in artificial intelligence, specializing in the creation of new data instances, imitation of real data, and content generation. Its remarkable capabilities facilitate automated content creation, enriched user experiences, and groundbreaking solutions across diverse industries, ultimately fueling efficiency and transcending technological limits. By harnessing the power of generative AI, developers can craft dynamic content, produce code and documentation, refine user interfaces, and devise customized recommendations, empowering them to construct highly efficient and custom solutions for a wide range of applications.

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. In today's fast-paced technological landscape, generative AI has emerged as a game-changer, with leading companies like NVIDIA, OpenAI, and Google leveraging its capabilities to push the boundaries of innovation.

By learning how to harness the power of generative models such as GANs, VAEs, and Transformer models, you will be able to generate code, documentation, and tests, enhance user interfaces, and create dynamic content that adapts to user needs. Our comprehensive curriculum covers everything from the fundamentals of generative AI to advanced techniques and ethical considerations, including hands-on labs where you will develop and deploy custom models using state-of-the-art AI tools and libraries like TensorFlow and Hugging Face Transformers.

Throughout the course you'll focus on practical application and collaboration, building confidence with personalized guidance and real-time feedback from our expert live instructor. Upon completion, you will be equipped with the knowledge

and experience necessary to develop and implement innovative generative AI models across various industries, improving existing products, creating new applications, and gaining highly-valuable skills in the rapidly advancing field of AI.

## What You'll Learn

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

- Develop a strong foundational understanding of generative AI techniques and their applications in software development.
- Gain hands-on experience working with popular generative AI models, including Generative Adversarial Networks (GANs), Variational Autoencoders (VAEs), and Transformer models.
- Master the use of leading AI libraries and frameworks, such as TensorFlow, Keras, and Hugging Face Transformers, for implementing generative AI models.
- Acquire the skills to design, train, optimize, and evaluate custom generative AI models tailored to specific software development tasks.
- Learn to fine-tune pre-trained generative AI models for targeted applications and deploy them effectively in various environments, including cloud-based services and on-premises servers.
- Understand and address the ethical, legal, and safety considerations of using generative AI, including mitigating biases and ensuring responsible AI-generated content.

## Who Needs to Attend

The ideal audience for this intermediate and beyond level course consists of 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. The hands-on nature of the course ensures that attendees gain practical skills that they can immediately apply in their work.

Attendee roles might include:

- Software Developers/Programmers: Professionals who want to integrate generative AI into their projects for tasks like code generation, documentation, and testing.
- Data Scientists: Those looking to expand their skillset by incorporating generative AI models into their data analysis and prediction tasks.
- Machine Learning Engineers: Individuals who want to specialize in developing and deploying generative AI models for various applications.
- AI Researchers: Academics and researchers interested in exploring the latest advancements in generative AI and their potential applications in software development.
- User Interface (UI) and User Experience (UX) Designers: Professionals who

want to leverage generative AI for creating dynamic and adaptive interfaces.
- Technical Product Managers: Managers who oversee the development of AI-driven products and want to understand how generative AI can enhance their offerings.
- Technical Team Leads: Supervisors responsible for guiding development teams and looking for innovative ways to incorporate generative AI into their projects.

## Prerequisites

This course is highly technical in nature. In order to gain the most from attending you should possess the following incoming skills:
- Python programming experience (Python syntax and constructs, experience with NumPy and Pandas)
- Basic understanding of artificial intelligence and machine learning concepts (supervised and unsupervised learning, neural networks, optimization techniques)
- Some experience with data manipulation and preprocessing (working with various data formats, such as text, images, and structured data, preprocessing and cleaning data for use in machine learning models.

- [Building intelligentg Application with AI and ML – Level 1](#)
- [Python Foundations](#)

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| VIRTUAL CLASSROOM LIVE | $2,495 USD | 3 Day |
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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 EST

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

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| PRIVATE GROUP TRAINING | 3 Day |
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Visit us at www.globalknowledge.com or call us at 1-866-716-6688.