GenAI TRAININGS

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Course Title
AI / Machine Learning / Generative AI Professional 6 Months Program

Course Description
This comprehensive six-month program provides an in-depth learning pathway into Artificial Intelligence, Machine Learning, and Generative AI technologies. The program combines theoretical foundations with hands-on practical projects to help learners develop real-world skills used in modern AI industries.Students will explore cloud platforms, prompt engineering, Python programming for AI development, and the latest Generative AI technologies including large language models (LLMs), AI agents, and automation tools.
The program also includes career support such as resume development, portfolio building, and mock interview preparation to help participants transition into AI-related careers.

Course Level
Intermediate to Advanced
(Basic knowledge of computing and programming is recommended)
Duration
6 Months
Approx. 180–220 Hours (Lectures, Labs, Projects, and Mentorship)

Courses Included
Cloud Engineering
Prompt Engineering for AI
GenAI Essentials
Python for Generative AI

Services Included
 • Support in Resume Preparation
 • Support in Mock Interviews
 • Career Guidance and Portfolio Development
 • Real-World Capstone Projects

Course Objectives
By the end of this program, learners will:

 • Understand the foundations of Artificial Intelligence and Machine Learning.
 • Gain hands-on experience with cloud platforms used in AI development.
 • Learn prompt engineering techniques for working with large language models.
 • Develop AI applications using Python and modern AI frameworks.
 • Understand how Generative AI models work and how to deploy them.
 • Build AI-powered applications such as chatbots, automation tools, and data pipelines.
 • Prepare for AI industry roles through resume building and mock interviews.

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Program Modules

Module 1: Foundations of Artificial Intelligence & Generative AI
• Introduction to Artificial Intelligence
• History and evolution of AI technologies
• Understanding Machine Learning, Deep Learning, and Generative AI
• Overview of Large Language Models (LLMs)
• AI applications across industries such as healthcare, business, education, and finance
• AI tools used in modern organizations
• Ethical considerations and responsible AI development
• Future trends in AI and emerging technologies

Module 2: Python for Generative AI Development
• Introduction to Python programming
• Python fundamentals: variables, data types, loops, and functions
• Working with data structures (lists, dictionaries, tuples)
• Data processing and automation using Python
• Introduction to key Python libraries: NumPy, Pandas, and Matplotlib
• Data visualization techniques for AI applications
• Introduction to machine learning libraries such as Scikit-learn
• Connecting Python with AI APIs and services
• Developing basic AI scripts and automation tools

Module 3: Prompt Engineering for AI
• Introduction to prompt engineering
• Understanding how Large Language Models interpret prompts
• Prompt design techniques (zero-shot, few-shot, and chain-of-thought prompting)
• Context building and instruction-based prompting
• Prompt optimization for better AI responses
• Structured prompts for business applications
• Prompt engineering for content creation, coding, and data analysis
• Building reusable prompt templates and prompt libraries
• AI workflow automation using prompt engineering

Module 4: Generative AI Tools and Applications
• Overview of Generative AI technologies
• Text generation using modern AI models
• Image generation technologies and creative AI tools
• AI-powered assistants and chatbot systems
• AI tools for content generation and marketing
• Automation of business workflows using AI
• AI-powered research and data analysis tools

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• Integrating generative AI tools into real-world applications
• Understanding the impact of Generative AI on different industries

Module 5: Cloud Engineering for AI Systems
• Introduction to cloud computing concepts
• Understanding service models: IaaS, PaaS, and SaaS
• Overview of major cloud platforms (AWS, Microsoft Azure, Google Cloud)
• Cloud infrastructure for AI development
• Data storage and database solutions in the cloud
• Deploying AI applications on cloud environments
• Cloud networking and security fundamentals
• Monitoring and scaling cloud-based AI systems
• Cost optimization strategies in cloud environments

Module 6: AI Application Development
• Designing AI-powered applications
• Building intelligent chatbots and assistants
• Integrating AI APIs with software applications
• Developing automation tools using AI
• AI integration with web and business systems
• Application testing, debugging, and optimization
• Deployment of AI-powered applications
• Maintaining and improving AI systems in production

Module 7: Capstone Project & Industry Applications
• Designing and developing real-world AI solutions
• Building AI-powered chatbots and assistants
• AI automation tools for business processes
• AI-powered content generation platforms
• AI data analysis and decision-support systems
• Case studies of AI implementation in real companies
• Project presentation and evaluation

Practical Training & Industry Projects
Throughout the program, students will participate in hands-on practical exercises, guided labs, and real-world project development. Learners will work on industry-relevant AI projects, apply their technical knowledge to solve practical problems, and gain experience in building and deploying AI-powered applications.

By the end of the program, participants will complete a capstone project demonstrating their ability to design, develop, and present an AI solution based on real-world use cases.

Career Development Support

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Resume Preparation
• Creating an AI-focused resume
• Highlighting projects and technical skills
• Portfolio building
Mock Interviews
• Technical interview preparation
• AI and machine learning interview questions
• Soft skills and communication training

Recommended Resources
Books
• Artificial Intelligence: A Modern Approach – Stuart Russell & Peter Norvig
• Hands-On Machine Learning with Scikit-Learn, Keras & TensorFlow – Aurélien Géron
• Generative AI with Python and PyTorch