

GenAI Developer Certification for Professionals

Master Generative AI and Redefine Your Career Path

In collaboration with



100% Live Online Session With Experts

 **Work on 10+ GenAI Projects**



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Message from CEO, Learnbay

As Learnbay's CEO, I'm excited to welcome you to an amazing journey in learning. Here at Learnbay, we're all about helping you grow in Data Science and more. We think learning can open up endless chances for everyone.

We're not just about the usual school stuff; we're here to support your career in every way possible. What makes Learnbay special is how much we care about your success. I'm inviting you to start a great learning journey with us. Come be a part of Learnbay and see how dedication and passion can really change your path to being the best.

Message from Principal Investigator, E&ICT Academy IIT Guwahati (Prof. Gaurav Trivedi)

As the principal investigator at E&ICT Academy IIT Guwahati, I'm happy to support and work with Learnbay on their Data Science and AI course.

We at E&ICT Academy IIT Guwahati, aim to lead the way in learning and research in Data Science and Artificial Intelligence.



I wish you all good luck with your studies at Learnbay and am excited to see how you all do and grow in the interesting areas of Data Science and Artificial Intelligence

About Course

This certification is for **software developers or programmers** who want to deepen their knowledge of **Generative AI**. It uses a **project-based approach**, with guidance from industry experts and a dedicated mentor.

The course also covers **Large Language Models, OpenAI APIs, LangChain, RAG for developers**. By the end, you'll be ready to integrate AI & ML in software development and prepare for AI engineering interviews.

Our Commitment

"Equip tech professionals and developers to understand and **lead Generative AI projects**, covering essential concepts, practical applications, and tools for strategic decision-making."

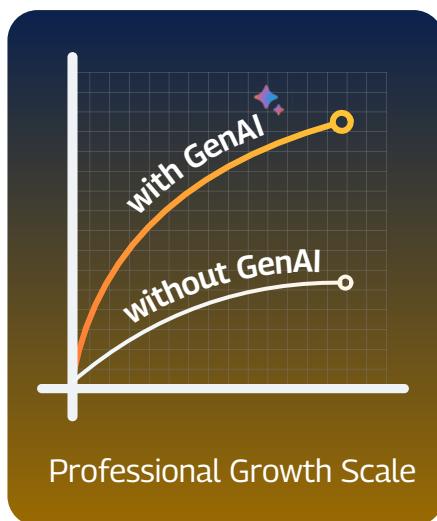
Furthermore, our comprehensive career support services include **interview preparation, resume building, and job placement assistance**, all designed to help you smoothly transition into leadership roles in AI and Machine Learning.

 **100%**
Assured Interview

 **350+**
Hiring Partners

 **7+**
Centers Across India

 **40k+**
Professionals Upskilled



70%

of companies are likely to adopt GenAI in next 5 years, to

- enhance efficiency,
- automating tasks,
- improving decision-making for better project outcomes.

***By integrating GenAI into our program**, we ensure that our learners are well-prepared to lead and innovate in their respective fields.

Program **Summary**



Program Eligibility

Tech professionals having **2+ years** of experience.



Training Mode

100% Live Online
Interactive Program



Program Faculty

Industry Experts and
E&ICT Academy, IIT Guwahati Professors



Program Duration

3 Months Program with Live Projects



Payment Options

No cost EMI,
Interest free loan



Certification

Certification from
E&ICT Academy, IIT Guwahati

Exclusive

GenAI-Applied Learning Experience

Hands-On Development

Execute a GenAI project end-to-end.

Collaborative Experience

Team up to build and deploy solutions.

Industry Impact

Tackle real-world GenAI applications.

Advanced Skills

Practical knowledge in GenAI integration

Important Note: Join a team of 4-5 developers to build and deploy a GenAI solution, gaining leadership and teamwork skills in a project environment.

Program Eligibility

2+ years of
work exp.
in Tech



Course Prerequisites

You should have knowledge of **Python, Machine Learning, & basic Deep Learning.**

If you don't have these skills, you can first complete our foundation program before joining this course.

Program Outcome: What's in it for you?



Master GenAI Tools + Frameworks

Learn OpenAI APIs, LangChain, Hugging Face, and more to build intelligent applications effortlessly.



Real-World GenAI Project Portfolio

Work on live projects like chatbot creation, workflow automation, and **RAG-powered** assistants to showcase your expertise.



Accelerate Your Career Growth

Leverage advance GenAI knowledge to drive business success, enhancing career prospects and **salary growth.**

Why choose Learnbay?

For **GenAI Developer Certification for Professionals**



E&ICT Academy, IIT Guwahati Certification

Stand out with a prestigious certification from **E&ICT Academy, IIT Guwahati.**

Get Certified
from



Project-Based Learning

Gain hands-on experience with **real-world GenAI projects**, preparing you to tackle industry challenges confidently.

Real Projects | Real Experience



Learn from GenAI Industry Mentors

Gain insights from top industry experts in Generative AI. Our mentors bring **real-world experience** to help you master advanced skills.



Personalized Support

Get tailored guidance with 1:1 doubt-clearing sessions for a deeper understanding.

Alumni Spotlight



Shravanthi A
Data Scientist

Learnbay has helped me a lot to learn data science applications in the e-commerce industry. The live class concept was really helpful in receiving proper DS training. Thanks to all my mentors and the placement team.

**Mechanical
Domain**



Data Scientist @



230%
Salary Hike



Preksha Mishra
Lead Data Scientist

The course structure is excellent with emphasis on concept building and tools & software at the same time. The support team is excellent and supportive and quite agile to respond to doubts.

**Telecom
Domain**



Data Scientist @



140%
Salary Hike



Karan Chawala



Jaya Sinha



Shubham Dev

→ **EXL**

Data Scientist

→ **Infosys**

Senior Analyst

→ **brillio**

Lead Data Analyst

Alumni Spotlight



Mohd. Israr
Data Scientist

Thanks to the Learnbay data science course & excellent guidance, I was able to ace the TCS interview and secure a job with a 210% pay raise. The real-world time projects helped me develop my concepts as a data scientist.

Mechanical Domain



Data Scientist @



230%
Salary Hike



Saurabh Kumar
Data Scientist

When I joined Learnbay I did not have any knowledge apart from the very basics. I gradually build my concept via various trainers and get trained in data science with strong knowledge/concepts.

Mathematics Professor

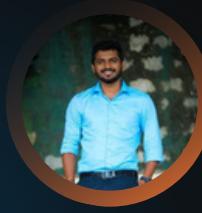


Data Scientist @ Teleperformance

135%
Salary Hike



Aravind



Ritesh Kumar



Ramki

TheMathCompany

CATERPILLAR

unacademy

Capgemini

cognizant

ANB SYSTEMS
a DNY company

Data Scientist

Senior Analyst

Data Analyst

Get Certified

and accelerate your career growth

E&ICT Academy, IIT Guwahati



Certification from E&ICT Academy, IIT Guwahati

- ✓ Executive Certification: Earned in DS & AI from E&ICTAcademy, IIT Guwahati.
- ✓ Hands-On Experience: Practical learning at E&ICT Academy, IIT Guwahati.
- ✓ Top Faculty: Learn directly from E&ICT Academy, IIT Guwahati experts.

Program Fees

Live online classes Benefits:

- ✓ All classes are covered in live interactive mode
- ✓ Schedule doubt clearing session with industry expert
- ✓ Online capstone project session
- ✓ 1 on 1 Job assistance with online resume build up and mock interview sessions

Program Fee

₹ 95,000 + 18% GST

Pay in easy EMIs starting as low as

₹ 6,227/ month



Certification Curriculum

GenAI Developer Certification
For Professionals

 www.learnbay.co

 77956 87988

GenAI Foundation Prep Module (Optional)

Duration: 36 Hours

This preparatory module is designed for **learners new to Python programming and Machine Learning (ML)**. It provides foundational knowledge essential for **mastering advanced Generative AI topics**.

Who should attend?

- Non-programmers transitioning into Generative AI.
- Professionals aiming to refresh Python and ML basics.

Note: This **fast-track module** is recommended primarily for professionals with a **tech or programming background**. Non-tech professionals are advised to join detailed foundational sessions from our data science programs.

Python Programming

We will learn basic Python programming and essential tools like **NumPy, Pandas, and Matplotlib**.

This Python module will be **fast-tracked**. If you are a non-programmer, you can attend our detailed Python for Data Science modules.

Duration - 15-18 hrs

Chapter 1: Core Python

- Installation, Jupyter notebook basics, variables, data types
- Conditionals, loops, functions, basic data structures

Chapter 2: Python Libraries

- NumPy fundamentals: arrays, operations
- Pandas basics: DataFrames, Series, data manipulation
- Matplotlib: basic data visualization

Machine Learning Fundamentals

We will cover the **fundamentals** of **Machine Learning**, exploring various **ML techniques** including **supervised** and **unsupervised** learning methods.

Duration - 10-12 hrs

Chapter 1: ML Basics

- Introduction, types of machine learning
- ML workflow: Data exploration, preparation, model building

Chapter 2: Supervised Learning

- Linear regression, logistic regression, decision trees
- Model evaluation: accuracy, confusion matrix, cross-validation

Chapter 3: Unsupervised Learning

- K-means clustering, hierarchical clustering
- PCA for dimensionality reduction

Deep Learning Basics

This module introduces fundamental concepts of Deep Learning, essential neural network architectures, and frameworks.

Duration - 10 hrs

Chapter 1: Deep Learning Foundations

- Neural Networks and Activation Functions
- Training Neural Networks: Backpropagation, Gradient Descent

Chapter 2: Practical Deep Learning

- Introduction to frameworks (TensorFlow, PyTorch)
- Hands-on: Image classification project

GenAI Developer Certification for professionals

Duration: 96 Hours - 3 Months

Outcome: Master advance GenAI tools like TensorFlow, PyTorch, OpenAI APIs, and LangChain, frameworks, and real-world applications to **lead AI-driven projects** confidently.

Topic 1 5 hours

Fundamentals of Generative AI

Overview of **generative models** and their real-world applications, highlighting differences from traditional AI.

Topic 2 5 hours

Use Cases of GenAI in Various Industries and Domains

- **Finance:** Fraud detection, automated report generation, and investment insights.
- **Healthcare:** Drug discovery, medical image analysis, and personalized treatment,
- **Retail and E-commerce:** Personalized recommendations, inventory management, and customer service automation.
- **Manufacturing:** Quality control, predictive maintenance, and process optimization.

Topic 3 5 hours

Deep Learning Foundations for GenAI

- **Neural networks** and deep learning basics, Backpropagation and optimization techniques
- Overview of popular deep learning frameworks (TensorFlow, **PyTorch**).
- **Hands-on Project:** Build a basic image classifier using CNNs with TensorFlow or PyTorch, applying optimization techniques learned.

Topic 4 5 hours

Prompt Engineering and optimisation

- Strategies for crafting effective **prompts to optimize AI** responses and improve user interaction
- Techniques for prompt optimization and **prompt chaining**.

Topic 5 5 hours

Transformers and Attention Mechanisms

- Introduction to transformers and self-attention, **BERT, GPT**, and other transformer-based architectures, Hands-on exercise: Fine-tuning a transformer model for text generation.
- **Hands-on Project:** Fine-tune a transformer model on a custom text dataset for a text classification or summarization task.

Topic 6 5 hours

Large Language Models (LLMs)

Overview of LLMs like GPT-3, ChatGPT, and **LLaMA**

Fine-tuning LLMs for specific use cases, Applications in chatbots, summarization, and **sentiment analysis**.

Hands-on exercise: Design and deploy a conversational AI model that simulates a customer service assistant for a chosen domain (e.g., retail or tech support).

Topic 7 5 hours

Integration of OpenAI APIs

- Techniques for effectively integrating **OpenAI APIs**, including authentication and best practices for data handling, Rate limits and error handling.
- **Hands-on Project:** Develop a web app that uses OpenAI's API for content generation based on user inputs, including authentication and error handling.

Topic 8 5 hours

Building Applications with LangChain

- Overview of **LangChain's** functionality for large language models.
- **Chain concepts:** sequential, memory, and conditional chains, Creating custom prompts and workflows.
- **Hands-on Project:** Personalized Financial Advice - Based on customer profiles (age, income, risk appetite), offer tailored financial advice or investment recommendations.

Topic 9 5 hours

Utilizing Hugging Face

- Accessing and deploying **Hugging Face** pre-trained models, **Fine-tuning models** on custom datasets, Using Hugging Face's pipelines for rapid deployment, Introduction to Hugging Face's Model Hub and Transformers library.
- **Hands-on Project:** Fine-tune a Hugging Face model for a sentiment analysis task and deploy it using the Hugging Face API.

Topic 10 5 hours

GANs (Generative Adversarial Networks)

- Fundamentals of GANs and their components (Generator and Discriminator).
- **Variants of GANs** (DCGAN, StyleGAN, CycleGAN).
- Applications of GANs in image synthesis, art creation, and more.
- **Hands-on exercise:** Building a simple GAN for image generation.
- **Hands-on Project:** Build and train a DCGAN to generate new images from a specific dataset, such as handwritten digits or facial images.

Topic 11 6 hours

Variational Autoencoders (VAEs)

Introduction to VAEs and their architecture

Comparison of VAEs with GANs, Applications in **anomaly detection** and data compression.

Hands-on exercise: Building a VAE for image reconstruction.

Topic 12 6 hours

Retrieval-Augmented Generation (RAG)

- Introduction to **RAG**.
- How RAG combines generative and retrieval-based techniques, Implementing a basic RAG model for a knowledge-based task.
- **Hands-on Project:** Build a RAG-based FAQ Assistant to answer customer questions by retrieving information from a domain-specific FAQ dataset, merging retrieval and generation for clear, concise responses

Topic 13 **18 hours**

Introduction to Agentic AI

- Understanding **Agentic AI** and Autonomous Agents
- Core principles of agentic systems (Autonomy, Goal-oriented behavior, Decision-making)
- **Use cases** in business and technology

Key Components of Agentic AI

- Task Management and **Automation**
- Planning, Execution, and Optimization
- **Decision-making** frameworks
- Practical demonstration using **LangChain**

Essential Tools for Agentic AI

- **LangChain:** Introduction and hands-on exercises
- **AutoGPT:** Setup and practical application
- **BabyAGI:** Basic usage and task automation
- **CrewAI:** Introduction and practical demonstrations

Agentic AI Integration

- Integrating agents with **OpenAI APIs**
- Building custom agents for specific tasks
- **Hands-on session with OpenAI's GPT models**

Real-world Projects

- **Project 1:** Build an autonomous assistant to automate content generation and social media posting using **AutoGPT** and **LangChain**.
- **Project 2:** Develop an intelligent customer support agent that autonomously handles FAQs and escalates complex queries using **BabyAGI** and GPT API.
- **Project 3:** Create collaborative workflows and team-based tasks automation using **CrewAI**.

Topic 14 6 hours

Model Deployment for Generative AI

- Overview of model deployment techniques.
- Best practices for **deploying generative models in production**.
- Setting up APIs and scaling model infrastructure.

Topic 15 6 hours

GenAI Copilot Tools for Coding

- Overview of GenAI Copilot tools and their applications in coding.
- **Hands-on with GitHub Copilot, Tebnine, Amazon CodeWhisperer, Replit Ghostwriter, Codex (OpenAI)**

Topic 16 6 hours

Ethical Considerations in AI

Discussion of ethical issues in AI, including bias, privacy, and responsible usage in development.

Executive-level real-time **Industrial Projects (Electives)**

#1



Financial Report Generator

Automatically create clear financial reports from raw data like balance sheets. **LangChain** summarizes key insights, while **Hugging Face** helps with data analysis and clarity.

Duration: 8 hours

#2



Project Performance Dashboard

Track and analyze the progress of projects in real time. This tool provides insights into timelines, **budgets, and risks**, enabling better decision-making and project management

Duration: 8 hours

#3



Smart Hiring Tool

A Generative AI-powered tool that screens resumes, matches candidates to **job profiles**, and drafts customized job descriptions. This tool will automate the **recruitment process** by understanding candidate profiles

Duration: 8 hours

#4



Employee Feedback Insights

This GenAI based tool will process customer **reviews and feedback**, identifying emotions, trends, and key themes. These insights will help to improve products, enhance customer satisfaction, and refine strategies.

Duration: 8 hours

Note: Pick any two

Thank you!

For more queries and information
please reach out to us at:

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Visit us at

www.learnbay.co

