

# Generative AI and Large Language Models (LLMs)

## COURSE OVERVIEW

This course introduces participants to the rapidly evolving field of Generative AI and the use of Large Language Models (LLMs) such as GPT, BERT, and T5. It explores how these models are built, trained, and applied across various domains including content generation, summarization, chatbots, coding assistants, and more. Participants will have the opportunity to experiment with model fine-tuning, prompt engineering, and deployment using tools like Hugging Face Transformers, OpenAI, and other LLM platforms. The course emphasizes practical implementation while addressing ethical considerations, bias, and safety in generative AI applications.

## WHO SHOULD ATTEND?

This course is designed for data scientists, machine learning engineers, AI researchers, NLP practitioners, developers, content technologists, and professionals interested in building applications powered by large language models. It is also suitable for innovation leads and business strategists exploring generative AI use cases in their industries. A foundational understanding of Python and machine learning is recommended.

## COURSE OUTCOMES

Delegates will gain the knowledge and skills to:

- Learn the architecture and functioning of large language models.
- Explore applications of generative AI in text, code, and media.
- Fine-tune and customize pre-trained LLMs for specific tasks.
- Apply prompt engineering to guide model outputs.
- Use Hugging Face, OpenAI, and similar platforms for experimentation.
- Address ethical issues such as bias, misuse, and content filtering.
- Evaluate LLM performance, safety, and alignment with user needs.
- Deploy LLMs in real-world applications and workflows.

## KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- Introduction to LLMs: GPT, BERT, T5, PaLM, and others.
- Foundations of generative AI and transformer models.
- Prompt engineering and few-shot learning techniques.
- Fine-tuning LLMs for domain-specific tasks.
- Using Hugging Face, OpenAI API, and Google's Vertex AI.
- Text generation, summarization, translation, and chatbot building.
- Ethical challenges: bias, misinformation, and safety measures.
- Model evaluation metrics and tuning strategies.
- Deploying generative AI in enterprise settings.

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.

1. A GTC end-of-course certificate
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded