🎓 Generative AI Integrated Training Program

📘 Overview

The Generative AI Training Program is designed to equip participants with the knowledge and hands-on skills to build intelligent systems capable of generating text, images, code, and automation solutions. This program focuses on modern AI technologies such as Large Language Models (LLMs), prompt engineering, and AI-powered application development.
Generative AI is transforming industries like education, software development, marketing, healthcare, and automation.

🎯 Objectives

Participants learn how Generative AI models work and how to use them to build real-world applications. The program is ideal for students, developers, and professionals aiming to build AI-driven solutions.

📚 Key Modules

- Introduction to Generative AI and LLMs
- Deep Learning and Transformer Architecture
- Prompt Engineering Techniques
- API Integration with AI Models
- AI Application Development
- Retrieval-Augmented Generation (RAG)
- AI Ethics and Responsible AI

🛠️ Tools & Technologies Used

- Programming: Python
- AI Platforms: ChatGPT, Google Gemini
- Frameworks: TensorFlow, PyTorch
- APIs: OpenAI API,
- Libraries: NumPy, Pandas, Matplotlib
- Vector Databases: FAISS
- Development Tools: Jupyter Notebook, VS Code
- Deployment: Streamlit / Flask

🏆 Outcomes

1. Understand and apply Generative AI concepts
2. Build AI-powered applications using APIs
3. Design effective prompts for optimized outputs
4. Develop real-world AI solutions
5. Prepare for careers in AI development

🕮 Curriculum:

1. Introduction to AI & Generative AI

Learn fundamentals of AI, ML, and Deep Learning along with Generative AI applications.

Tools Used:

- ChatGPT
- Google Gemini

2. Python Programming for AI

Learn Python basics and libraries for data handling and preprocessing.

Tools Used:

- Python
- NumPy
- Pandas

3. Deep Learning Fundamentals

Understand neural networks and model training concepts.

Tools Used:

- TensorFlow
- PyTorch

4. Natural Language Processing & Transformers

Learn tokenization, embeddings, and attention mechanism.

Tools Used:

- Hugging Face Transformers
- Python

5. Large Language Models (LLMs)

Understand how LLMs work and how they are trained.

Tools Used:

- ChatGPT
- LLaMA

6. Prompt Engineering

Learn advanced prompting techniques.

Tools Used:

- ChatGPT
- Prompt design frameworks

7. API Integration & AI Tools

Build applications using APIs.

Tools Used:

- OpenAI API
- Python

8. AI Application Development

Develop real-world applications.

Tools Used:

- Streamlit
- Flask
- VS Code

9. Retrieval-Augmented Generation (RAG)

Learn how to integrate external data with AI.

Tools Used:

- FAISS
- LangChain

10. AI Ethics & Advanced Topics

Understand responsible AI usage.

Tools Used:

- Case studies
- AI evaluation tools

💼 Career Opportunities

- Generative AI Developer
- Prompt Engineer
- AI Application Developer
- Automation Specialist