Prompt Engineering Basic

Duration – 16 Hours

Program Description

This training program provides a comprehensive refresher on prompt engineering in Gen AI, covering key concepts, security measures, and techniques like zero-shot, few-shot, and adversarial prompting. It includes hands-on exercises for designing prompts for specific tasks and complex systems, along with methods for evaluating and refining them. The course also explores real-world applications, advanced strategies, and industry-specific use cases with practical projects.

Learning Goals

- Understand key concepts, prompt structures, and techniques like zero-shot, few-shot, and chain-of-thought prompting
- Learn to prevent prompt injections, mitigate adversarial threats, and enforce constraints for secure AI interactions.
- Gain hands-on experience in designing prompts for tasks like summarization, translation, and question answering.
- Explore hybrid strategies, iterative refinement, and feedback loops to enhance prompt efficiency.
- Implement prompt engineering through case studies and hands-on projects.

Course Topics

- Foundational Session in Gen A
- Adversarial Prompting
- Task-Specific Prompt Design
- Designing Prompts for Complex Systems
- Evaluating and Refining Prompts
- Real-world Applications of Prompt Engineering
- Advanced Techniques for Effective Prompting

Prompt Engineering Intermediate

Duration – 24 Hours

Program Description

This training program provides an in-depth understanding of generative AI, prompt engineering, and language models, focusing on their applications, best practices, and ethical considerations. It covers techniques for designing, generating, and evaluating effective prompts, analysing GPT-3 output, and customizing models for various tasks. Advanced topics such as meta-learning, transfer learning, fine-tuning, and handling biases are included, along with real-world applications in NLP and industry-specific use cases. The program also explores RAG architecture, vector databases, and hands-on labs for implementing AI-driven search systems.

Learning Goals

- Understand generative AI, language models, and best practices for designing, refining, and evaluating prompts.
- Learn meta-learning, transfer learning, fine-tuning, and bias mitigation to optimize AI performance across domains.
- Gain hands-on experience with RAG architecture, vector databases, and industry-specific case studies for effective AI applications.

Course Topics

- Overview of Generative AI and Prompt Engineering- Refresher
- Effective Prompt Design
- Generating Effective Prompts
- Analysing GPT-3 Output
- Using Prompt Engineering in Real-World Applications
- Evaluating Prompt Engineering Models
- Customizing GPT-3 with Prompt Engineering
- Leveraging Prompt Engineering for NLP Tasks
- Advanced Prompt Engineering Techniques
- RAG Architecture & Types of RAG
- Vector Database

Prompt Engineering Advanced

Duration – 40 Hours

Program Description

This training covers the fundamentals of prompt engineering, including types, elements, and optimization techniques for efficiency and accuracy. It explores advanced topics such as instruction tuning, multi-model prompt design, specific use cases, and fine-tuning strategies, alongside hands-on experience with tools like GitHub Copilot and Azure. Additionally, it delves into agentic AI, jailbreak techniques, and guardrails to ensure secure and effective AI deployment.

Learning Goals

- Learn the fundamentals, types, and best practices for designing efficient, high-quality prompts while optimizing token usage.
- Gain hands-on experience with instruction tuning, multi-model prompt design, and specific applications, including risk modeling and automation.
- Understand jailbreak techniques, agentic AI, and guardrail implementation to develop safe, scalable, and reliable AI-powered solutions

Course Topics

- Introduction to Prompt Engineering
- Types & Structure of Prompts
- Prompt Optimization
- Token Efficiency
- Instruction Tuning
- Debugging & Troubleshooting Prompts
- Multi-Model Prompt Design
- LLM Architectures & Fine-Tuning
- Cloud & Agentic AI
- Security & Compliance in AI