

**Prompt Engineering: Techniques and Best Practices**

**Course Number:** AI-100WA  
**Duration:** 2 days

**Overview**

Prompt Engineering is a highly sought-after skill in which you ask the AI platform carefully crafted questions and then prompt with further questions and commands to refine the results.

In this Prompt Engineering course, attendees gain an in-depth understanding of Generative AI technologies, use cases, and the fundamentals of prompt engineering. Students learn how to extract relevant content from AI language models like OpenAI's GPT series, Google Gemini, and Microsoft’s Bing Chat.

**Prerequisites**

No prior experience is presumed.

**Materials**

All Prompt Engineering training students receive comprehensive courseware.

**Software Needed on Each Student PC**

All attendees must have a modern web browser and an Internet connection.

**Objectives**

* Design and refine prompts to effectively interact with and guide AI language models for desired outcomes across various applications
* Leverage prompting techniques to generate high-quality, relevant content, including synthetic data, images, and translated text
* Optimize prompt design for specific tasks, such as information retrieval, data processing, and creative writing
* Apply prompt engineering to real-world scenarios, solving problems and improving workflows with AI language models
* Implement ethical guidelines and best practices in prompt engineering to ensure responsible and unbiased AI use
* Communicate effectively about prompt engineering concepts and techniques to both technical and non-technical audiences
* Collaborate with others to develop and refine prompts, leveraging diverse perspectives to achieve optimal results

**Outline**

* Introduction to AI Language Models and Prompt Engineering
  + Overview of AI language models
  + Introduction to Prompt Engineering
  + Importance of Prompt Engineering in AI applications
* Understanding the Prompt
  + Types of prompts
  + Components of a prompt
  + Factors affecting prompt effectiveness
* Techniques for Crafting Effective Prompts
  + Designing prompts for clarity
  + Leveraging context and examples
  + Balancing brevity and detail
* Restricting ChatGPT's Answers to Your Own Document Corpus
  + Setting up a custom document corpus
  + Techniques for guiding AI model focus
  + LLM focus and attention, and GPT3 vs GPT4 differences
  + Ensuring relevant and accurate outputs
* Generating Synthetic Data and Images
  + Crafting prompts for CSV data generation
  + Formatting AI outputs for data visualization
  + Prompt engineering for SVG image generation
  + GPT4 SVG images vs DALL-E image generation
* Language Translation and Slide Creation
  + Designing prompts for language translation
  + Ensuring translation accuracy and fluency
  + Generating slides using markdown and Prompt Engineering
* Prompt Engineering for Various Applications
  + Creative writing and content generation
  + Question-answering and information retrieval
  + Data processing and transformation
* Iterative Prompt Refinement
  + Analyzing AI model outputs
  + Techniques for prompt iteration and improvement
  + Incorporating user feedback into prompt design
* Group Project: Applying Prompt Engineering to Real-world Scenarios
  + Identify a problem that can be solved using AI language models
  + Design and refine prompts to achieve desired outcomes
  + Present project outcomes and Prompt Engineering process
* Ethics and Best Practices in Prompt Engineering
  + Ethical considerations for AI language model usage
  + Ensuring data privacy and security
  + Best practices for Prompt Engineering in professional settings