# AI+ Prompt Engineer Level 2™

**Duration:** 40 hours

## Course Overview

The AI+ Prompt Engineer Level 2 certification is designed for developers aiming to master advanced prompt engineering techniques. This program equips learners with skills in crafting and optimizing prompts, integrating them with cutting-edge development tools, and applying them across diverse domains. Through project-based learning, participants gain practical experience by working on real-world AI projects. The curriculum explores advanced strategies, experimentation, and optimization, ensuring proficiency in creating impactful AI-driven solutions. Ideal for professionals looking to enhance their expertise, this certification bridges the gap between AI innovation and application, empowering developers to lead in the evolving field of prompt engineering.

## Course Prerequisites

- Familiarity with at least one programming language (Python recommended).
- Basic knowledge of RESTful services and API interactions.
- Basic understanding of AI concepts and language models.

## Course Agenda

**Module 1: Introduction to Prompt Engineering for Developers**

- Overview of Prompt Engineering
- Basics of API Interaction
- Understanding Prompt Structures
- Case Studies and Best Practices
- Hands-on Exercise

**Module 2: Advanced Prompt Design and Engineering**

- Designing Advanced Prompt Techniques
- Designing Multi-Turn Interactions
- Contextual and Conditional Prompting
- Crafting Domain-Specific Prompts
- Contextual and Stateful Prompt Engineering
- Meta-Prompting and Autonomous Refinement
- Hands-on Exercise

**Module 3: Experimentation and Optimization**

- Automated Prompt Optimization Tools
- A/B Testing and Evaluation
- Reinforcement Learning for Prompt Engineering

**Module 4: Designing Advanced Strategies for Prompt Engineering**

- Contextual and Role-Based Prompting

- Adaptive and Multimodal Prompting

**Module 5: Integration with Development Tools**

- Integrating with Popular Development Tools for Prompt Engineering
- Code Repositories and Templates for Prompt Engineering
- Developer Communities and Forums for Prompt Engineering
- Version Control in Prompt Engineering Projects

**Module 6: Applications of Prompt Engineering in Various Domains**

- Natural Language Processing (NLP) Applications using Prompt Engineering
- Business Applications using Prompt Engineering
- Creative Applications using Prompt Engineering

**Module 7: Project-Based Learning: Real-World AI Projects using prompt Engineering**

- Project 1: AI-Driven Customer Support
- Project 2: Personalized Content Generation
- Project 3: AI in Data Analysis