

PROMPT ENGINEERING MASTERCLASS SYLLABUS

Module 1: Introduction to Artificial Intelligence & Prompt Engineering

Topics

- What is Artificial Intelligence?
- Machine Learning vs Generative AI
- Large Language Models (LLMs)
- What is Prompt Engineering?
- Evolution of AI Assistants
- AI Terminology
- AI Capabilities & Limitations
- Responsible AI Usage
- Future of AI

Module 2: Understanding Large Language Models (LLMs)

Topics

- ChatGPT
- Google Gemini
- Claude AI
- Microsoft Copilot
- Perplexity AI
- Open-source LLMs
- Token Concept
- Context Window
- AI Memory
- Hallucinations
- Model Comparison

Module 3: Prompt Engineering Fundamentals

Topics

- Prompt Structure
- Clear Instructions
- Context Setting
- Constraints
- Output Formatting
- Tone Selection
- Persona Prompting
- Goal-Oriented Prompts
- Prompt Templates
- Prompt Evaluation

Module 4: Advanced Prompting Techniques

Topics

- Zero-Shot Prompting
- One-Shot Prompting
- Few-Shot Prompting
- Chain of Thought Prompting
- Tree of Thought
- Self-Consistency
- Role-Based Prompting
- Step-by-Step Prompting
- Prompt Chaining
- Reflection Prompts

Module 5: AI for Content Creation

Topics

- Blog Writing
- Article Generation
- SEO Content
- Social Media Posts
- YouTube Scripts
- Email Writing
- Sales Copy
- Product Descriptions
- Ad Copy
- Story Writing

Module 6: AI for Programming

Topics

- Code Generation
- Code Explanation
- Debugging
- Refactoring
- Documentation
- SQL Queries
- Python Assistance
- PHP Assistance
- JavaScript Assistance
- Laravel Support
- API Development

Module 7: AI for Business Productivity

Topics

- Meeting Notes
- Report Writing
- Proposal Creation
- SOP Generation
- Resume Building
- Business Emails
- Office Automation
- Excel Formula Assistance
- Presentation Creation
- Workflow Documentation

Module 8: AI Image Prompting

Topics

- Prompt Structure
- Image Styles
- Lighting
- Camera Angles
- Character Design
- Product Images
- Logo Prompts
- Poster Design
- Banner Design
- Thumbnail Creation

Module 9: AI Research & Data Analysis

Topics

- Research Assistance
- Summarization
- Literature Review
- Data Interpretation
- Trend Analysis
- Report Generation
- Comparative Analysis
- AI Fact Checking
- Data Visualization Ideas

Module 10: AI Workflow Automation

Topics

- Prompt Libraries
- Prompt Templates
- AI Workflow Design
- Multi-step Prompt Chains
- Business Automation
- Customer Support Prompts
- HR Automation
- Educational Automation
- Content Pipelines

Module 11: Ethics, Privacy & Responsible AI

Topics

- AI Ethics
- Data Privacy
- Copyright Issues
- Bias in AI
- Security Considerations
- Prompt Safety
- Responsible AI Usage
- AI Governance
- Legal Considerations

Module 12: Capstone Projects

Projects

- AI Blog Generator
- AI Resume Builder
- AI Email Assistant
- AI Business Proposal Generator
- AI Study Assistant
- AI Coding Assistant