Faysal Aziz

Mastering Prompt Engineering & Intelligent Automation

Effective Prompts, No-Code Power, and Python Scripting for All Roles - 2 days

FA-0316 · 2 days

Agentic & Generative AI · Software Development · Automation, RPA & Power Platform

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Introduction

The rules have changed. In a world where AI handles everything from customer service to code generation, knowing how to communicate with these systems isn't just useful—it's survival.

Forget academic theories and toy examples. This course comes from three decades in the trenches, solving real problems for real companies. You'll learn to speak fluent AI across the entire ecosystem: ChatGPT, Claude, Gemini, and specialized agents like Manus. We'll tackle RAG implementations that actually work, explore MCP integrations, and build automation with low-code solutions and Python—whether you're a seasoned developer or someone who's never touched a line of code.

This isn't about keeping up with trends. It's about mastering the tools that are quietly revolutionizing how work gets done.

Learning outcomes

By the end of this course, participants will be able to:

- Design optimized prompts using advanced techniques (zero-/few-shot, CoT, meta-prompts)
- Understand and compare capabilities of major LLMs and agents including Manus
- Implement RAG pipelines and MCP-driven automation
- Use low-code/no-code platforms to orchestrate AI workflows

- Automate daily tasks with basic Python scripts
- Evaluate tool selection and align automation with business needs

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Prerequisites

- Good Computer proficiency
- No prior coding required—Python basics introduced during the course
- Deep understanding of workflows
- System and design thinking ability with algorithmic understanding
- Access to browse Open AI, Google workspace ans Colab, Manus and Anthropic’s MCP servers

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Training outline

1. 1. Foundations of Prompt Engineering

Why it matters in 2025

- AI today and use cases
- From basic chat to task orchestration

Core techniques

- Zero-shot & few-shot prompting
- Chain-of-Thought & self-consistency
- Meta-prompts and mega-prompts

- Responsible prompting: ethics, bias, and prompt-injection risks

2. 2. Prompt Trends & Tool Comparison

- 2025 trends: adaptive context, prompt creation AI

  LLM landscape

  - ChatGPT Free vs. Pro vs Ultimate, OpenAI Deep Research, Gemini Pro & MCIP, Deepseek, Reasoning models, on-premise LLMs
  - Core features and agentic performance comparison
  - Comparative summary

3. 3. Agents & Autonomous AI

- Agent basics and architectures

Deep dive: Manus

  - Autonomy, multi-agent design, sandboxed execution
  - Creating presentations and reports
  - Scheduled tasks
- Comparing agents: ChatGPT Operator, Claude, Deep Research, browser agents

4. 4. Retrieving & Acting: RAG and MCP

- Understanding RAG: vectors, grounding, knowledge graphs
- MCP vs RAG: complementarity and case studies
- Practical walkthroughs: building RAG pipelines

5. 5. No-Code & Low-Code Workflow Automation

- Platform survey
- Orchestrating LLM prompts and agents without code
- Implementation examples using MCP for dynamic data updates

6. 6. Python Scripting for AI Tasks (technical and light coding)

- Brief intro to Python environment
- Wrapping API calls, file manipulation, basic data handling
- Automating LLM calls for RAG or data updates
- Integrating prompts into Python scripts

7. 7. Designing End-to-End Projects

- Choosing tools: LLMs vs agents vs MCP vs code
- Project 1 (no-code): Use LLM + RAG to automate tasks
- Project 2 (Python): Build a script that reads data and triggers MCP actions

8. 8. Real-World Use Cases

- Finance: GPT prompts + RAG to generate reports
- Marketing: automated content pipelines with no-code LLM tools
- Operations: Manus agents for task delegation
- Security: prompt-injection risk mitigation

9. 9. Perspectives

- Human factors
- Balance factor
- Energy efficiency considerations
- Responsible AI: embedding ethics through prompt design
- Continued learning: staying updated on agent frameworks, emerging LLMs

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This hands-on, industry-grounded course balances conceptual depth with actionable skills—empowering both techies and non-techies to become confident AI collaborators in 2025.

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