1-Month Prompt Engineering Course

Instructor: Marvellous

Student: Ezenwoko Joy

Goal: To make Joy a highly skilled prompt engineer capable of designing effective prompts for LLMs (like ChatGPT, Claude, Gemini, etc.) for multiple real-world use cases.

- ◆ Course Outline

Week 1: Foundations of Prompt Engineering

Week 2: Advanced Prompt Structures and Use Cases

Week 3: Industry Applications of Prompt Engineering

Week 4: Custom Projects, Optimization, and Deployment

Each day includes:

Lesson Topic

Objective

Key Concepts

Example Prompts

Assignment/Practice Task

✅ Week 1: Foundations of Prompt Engineering

Day 1: Introduction to Prompt Engineering

Objective: Introduce what prompt engineering is and why it's crucial today.

Key Concepts: LLMs, natural language prompts, input/output patterns.

Example: "Write a poem about joy in the style of Shakespeare."

Assignment: Research and explain what a prompt engineer does. Write your first 5 prompts.

Day 2: Understanding How LLMs Work

Objective: Understand the basics of LLMs like GPT, Claude, Gemini.

Key Concepts: Tokens, context length, temperature, top_p, system prompts.

Assignment: Write a short blog-style explanation of how ChatGPT works.

Day 3: Types of Prompts

Objective: Explore basic prompt types (instructional, conversational, zero-shot, one-shot, few-shot).

Example:

Zero-shot: "Translate this to Spanish: Hello, how are you?"

Few-shot: Provide 3 Q&A examples, then ask a new question.

Assignment: Create 2 examples of each prompt type.

Day 4: Prompt Structure and Formatting

Objective: Learn how to structure prompts for clarity and specificity.

Key Concepts: Role specification, tone setting, delimiters, constraints.

Assignment: Rewrite poor prompts into high-quality ones (I'll give Joy bad prompts to improve).

Day 5: Prompt Engineering Tools and Platforms

Objective: Introduce Joy to tools like ChatGPT Playground, Poe, PromptLayer, FlowGPT, and HuggingFace Spaces.

Assignment: Explore 3 tools and describe what makes a good prompt platform.

Day 6–7 (Weekend Project)

Project: Design a ChatGPT-based virtual friend using prompts.

Deliverable: A prompt that creates a named, friendly, helpful AI assistant with personality traits.

Bonus: Try using the Playground to test temperature/top_p.

✅ Week 2: Advanced Prompt Structures & Use Cases

Day 8: Chain-of-Thought (CoT) Prompting

Objective: Teach Joy how to make the AI "think" step-by-step.

Example: "Let's solve this problem step by step…"

Assignment: Write 3 prompts that require reasoning steps.

Day 9: Role-Based Prompting

Objective: Learn how to assign roles to improve contextual performance.

Example: "You are a lawyer. Explain Nigerian tenancy laws to a 12-year-old."

Assignment: Create 5 role-based prompts across different industries.

Day 10: Multi-Turn Prompts and Memory Simulation

Objective: Craft conversations that simulate memory or state tracking.

Assignment: Create a multi-turn conversation flow for a customer support chatbot.

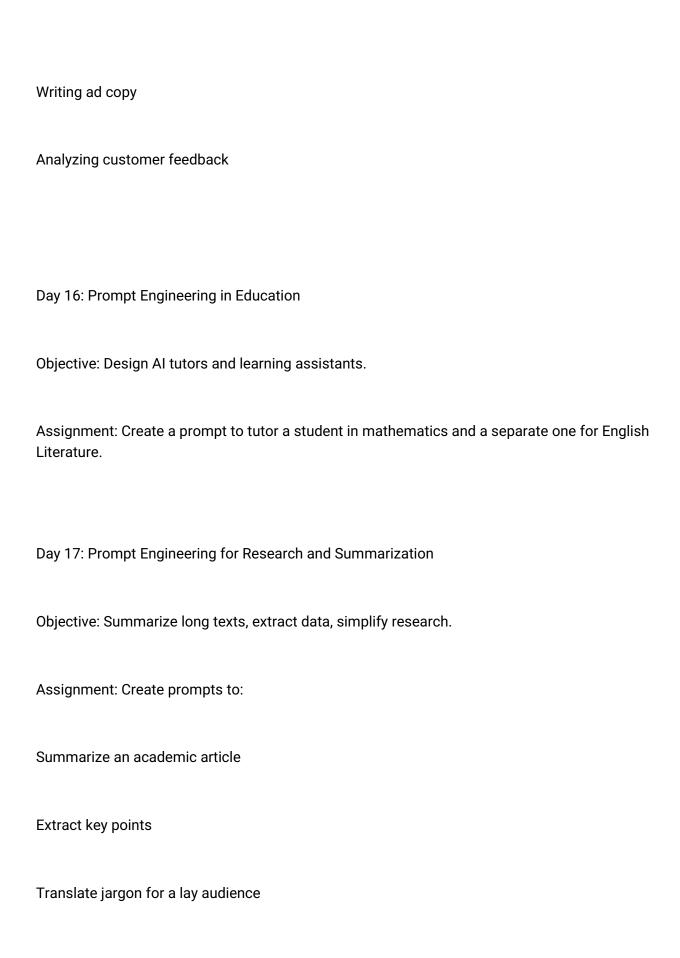Day 11: Prompt Engineering for Creative Writing

Objective: Use prompting to generate stories, poems, dialogue.

Assignment: Create a prompt to write a short story, then modify it to create three different styles (sci-fi, drama, romance).

Day 12: Prompt Engineering for Coding

Objective: Guide the AI to generate, debug, and explain code.

Assignment: Write 3 prompts:

1. Generate a simple Python function.

2. Debug a given code snippet.

3. Explain a piece of code in layman's terms.

Day 13–14 (Weekend Assignment)

Project: Build a prompt pack:

2 prompts for creatives

2 for business use

2 for educators

2 for software development

Deliverable: Submit an 8-prompt portfolio titled "Joy's Prompt Engineering Pack v1.0"

✅ Week 3: Industry Applications

Day 15: Prompt Engineering for Business

Objective: Craft prompts for marketing, analysis, content creation.

Assignment: Write a prompt for:

Generating product descriptions

Writing ad copy

Analyzing customer feedback

Day 16: Prompt Engineering in Education

Objective: Design AI tutors and learning assistants.

Assignment: Create a prompt to tutor a student in mathematics and a separate one for English Literature.

Day 17: Prompt Engineering for Research and Summarization

Objective: Summarize long texts, extract data, simplify research.

Assignment: Create prompts to:

Summarize an academic article

Extract key points

Translate jargon for a lay audience

Day 18: Prompt Engineering in Healthcare, Law, and Finance

Objective: Study sensitive/regulated use cases.

Assignment: Create 1 safe, informative prompt each for:

Healthcare (without giving diagnosis)

Legal advice (general knowledge)

Financial planning

Day 19: Prompt Tuning & Output Control

Objective: Learn how to control tone, format, and specificity.

Assignment: Take one prompt and rewrite it to be:

Formal

Humorous

Bullet-point formatted

Day 20–21 (Weekend Group Project Simulation)

Project: Create a prompt-based system for a real-world use case (e.g., a resume builder, travel advisor, restaurant recommender).

Deliverable: Documented system with sample outputs and the prompt logic.

✅ Week 4: Mastery, Optimization, and Deployment

Day 22: Testing and Optimizing Prompts

Objective: Analyze output consistency and refine prompts.

Assignment: Test 3 prompts with varying temperature and explain differences.

Day 23: Prompt Engineering + APIs

Objective: Connect prompts to ChatGPT/Gemini APIs using Python.

Assignment: Build a basic app that sends a prompt to an LLM and receives the response.

Day 24: Prompt Debugging & Anti-Hallucination Tactics

Objective: Handle hallucinations, factual errors, and prompt failures.

Assignment: Design a prompt with a system check ("If unsure, say 'I don't know'").

Day 25: Safety, Bias, and Ethical Prompting

Objective: Understand ethical use of prompts, avoid bias and abuse.

Assignment: Write a guide titled "My Prompt Ethics Manifesto".

Day 26: Prompt Libraries & Tools (FlowGPT, LangChain, PromptLayer)

Objective: Explore and build reusable prompt templates.

Assignment: Create and share 2 prompt templates on FlowGPT or similar.

Day 27–28 (Final Weekend Project)

Capstone Project: "Build Your Prompt Product"

Joy must choose an area (e.g., education, ecommerce, writing) and build a prompt system around it.

Deliverable: Final documentation with goals, prompt examples, expected outcomes, user guide.

🏁 Final Week Summary

Day 29: Portfolio Day

Review and compile all your best prompts.

Organize them by category.

Prepare a Google Doc/PDF titled: "Prompt Portfolio – Ezenwoko Joy v1.0"

Day 30: Presentation + Certification

Joy presents her capstone project + portfolio.

You give feedback.

Optional: Issue a certificate signed by you as a Prompt Engineering Instructor.