



Mastering Prompt Engineering and NLP – 2-Day Version (Financial Focus)

- 2 Days
- Lecture and Hands-on Labs

Course Overview

This course focuses on imparting the essential and advanced skills required for mastering prompt engineering and natural language processing, specifically tailored for financial services applications. Spread over two days, it covers core techniques, multimodal prompting, evaluation methods, and addresses ethical considerations in AI, empowering professionals to revolutionize their financial workflows.

Review this course online at <https://www.alta3.com/courses/fin-prompt>

Who Should Attend

- Financial analysts seeking to optimize language model applications.
- AI professionals in the financial sector looking to enhance NLP skills.
- IT specialists in banking aiming to integrate AI solutions.
- Compliance officers interested in ethical AI deployment.

What You'll Learn

- Master core prompting techniques for financial services.
- Implement advanced prompting patterns in financial workflows.
- Evaluate and test prompt effectiveness and ethical use.
- Apply multimodal prompting including text and image integration.

Outline

Day 1: Core Prompting Techniques

1. Introduction to Large Language Models
2. Writing Effective Prompts for LLMs
3. Define Prompt Parameters: Task/Inputs/Outputs/Constraints/Style
4. Precision Prompting for Financial Use Cases – Build prompts for transaction review and financial client education
5. The Iterative Nature of Prompting
6. Prompt Techniques – Chaining, Role Setting, Feedback
7. Zero-shot and Few-shot Prompting – When to use which
8. Implementing Zero-shot and Few-shot Techniques in Finance
9. Chain-of-Thought (CoT) Prompting
10. CoT Prompting – Financial logic scenarios
11. Tree-of-Thought (ToT) Prompting
12. ToT Prompting for Investment Risk Assessment
13. ReAct Prompting – Reasoning and Action for Financial Tools
14. ReAct Prompting – Interactive decision-making tasks
15. CoVe Prompting – Using Embeddings in Financial Contexts
16. Embedding-Driven Prompting – Leverage client context vectors

17. Common Prompting Patterns – Instructional, Conditional, Storytelling
18. Applying Prompting Patterns for Client Communication ##### Day 2: Multimodal Prompting, Evaluation, and Ethical AI
19. Introduction to Multimodal Prompting
20. Text + Image Prompting – Use financial graphs and charts in prompts
21. Producing File Outputs (PDF/CSV Summaries)
22. Prompt Evaluation Tools and Metrics – Accuracy, Consistency, Relevance
23. A/B Testing Prompts for Financial Workflows
24. Ethical Prompting – Avoiding Bias and Ensuring Fairness
25. Navigating AI Ethics in Financial Applications
26. Final Prompting Review and Best Practices

Labs

- Define Prompt Parameters: Task/Inputs/Outputs/Constraints/Style
- Precision Prompting for Financial Use Cases – Build prompts for transaction review and financial client education
- Prompt Techniques – Chaining, Role Setting, Feedback
- Implementing Zero-shot and Few-shot Techniques in Finance
- CoT Prompting – Financial logic scenarios
- ToT Prompting for Investment Risk Assessment
- ReAct Prompting – Interactive decision-making tasks
- Embedding-Driven Prompting – Leverage client context vectors
- Applying Prompting Patterns for Client Communication
- Text + Image Prompting – Use financial graphs and charts in prompts
- Producing File Outputs (PDF/CSV Summaries)
- A/B Testing Prompts for Financial Workflows
- Capstone Lab – Apply ToT, CoT, ReAct in a Financial Workflow Scenario

Prerequisites

- Familiarity with large language models and their applications.
- Understanding of basic financial services operations.

Next Courses

Course 1 Course 2