Prompt Engineering and NLP

- 3-Day Class
- Hands-on labs

Course Overview

This three-day course provides a comprehensive introduction to Prompt Engineering. Attendees will leave with a clear understanding of prompting techniques, including advanced prompting techniques, integrating file inputs, generating file outputs, data analysis. Course includes the latest trends in prompt engineering, such as Microsoft's Promptbase utilizing Dynamic Few-Shot, Self-Generated Chain of Thought, and Majority Vote Ensembling techniques.

With over 43 labs and lectures, this course is designed to be a hands-on comprehensive guide for Prompt Engineers, Data Analysts, and anyone who wants to perform complex operations with Generative AI.

Direct access to the AI Platform is not required. All traffic to and from AI Platforms is provided through the training provider. Open AI Plus Subscription not Required, but is STRONGLY recommended.

- Access the classroom from anywhere via browser and internet.
- Obtain hands-on experience with the most widely used, industry-standard software, tools, and frameworks.
- Learn how to maximize value from Generalist, and Fine-Tuned AI Models.
- Deploy the absolute latest techniques in Prompt Engineering with Microsoft Promptbase techniques. Review this course online at https://www.alta3.com/courses/natural-lang-apis

Who Should Attend

- Prompt Engineers
- Sales & Pre-Sales Engineering
- Business Analysts
- Data Analysts
- Application Developers
- Staff Responsible for integrating Gen AI into project Workflows

What You'll Learn

- Introduction to Prompt Engineering
- Understand Large Language Models and how to Prompt them
- Defining Prompts, and Prompt Parameters
- Deploy Advanced Prompting Techniques to maximize results
- Integrate File Inputs
- Perform Image Analysis and Transformation
- Generate File Outputs
- Data Analytics with Prompt Engineering
- Data Cleaning and Preparation
- Data Visualization and Correlation Analysis
- Time Series, Text, and Semantic Analysis
- Promptbase

- Dynamic Few-Shot
- Self-Generated Chain of Thought (COT)
- Majority Vote Ensembling

Outline

Prompt Engineering

- 🗩 Lecture: Large Language Models
- 🗩 Lecture: Writing Prompts for LLMs
- 🖥 Lecture + Lab: Prompting an AI Model
- 🖥 Lecture + Lab: Define Prompt Parameters: Task/Inputs/Outputs/Constraints/Style
- 🖥 Lecture + Lab: Prompt Techniques: Chaining, Set Role, Feedback, Examples

Integrating File Inputs

- 🗩 Lecture: Prompting with Image Inputs
- 🖥 Lecture + Lab: Perform Image Analysis
- 🖥 Lecture + Lab: Image Generation from Input
- 🗩 Lecture: Prompting with File Inputs
- 🖥 Lecture + Lab: Text Input Files
- 🖥 Lecture + Lab: Spreadsheet Input Files
- 🖥 Lecture + Lab: Audio Input Files
- 🖥 Lecture + Lab: Specialized Tasks with File Inputs
- 🏆 Challenge: Integrate File Inputs Challenge

Generating File Outputs

- 🗩 Lecture: Producing File Outputs
- 🖥 Lecture + Lab: Convert Text Output to File
- 🖥 Lecture + Lab: Produce CSV/XLS Files
- 🏆 Challenge: Generate File Outputs Challenge

Data Analytics with Prompts

- 🗩 Lecture: Data Analytics with AI
- 🗩 Lecture: Fundementals of Data Analysis Using AI
- 🖥 Lecture + Lab: Basic Data Analysis with Prompts
- 🗩 Lecture: Using Prompts for Data Cleaning and Preparation
- 🖥 Lecture + Lab: Data Cleaning and Preparation
- 🖥 Lecture + Lab: Data Visualization and Correlation Analysis
- 🗩 Lecture: Time Series Analysis and Forecasting
- 🖥 Lecture + Lab: Practical Applications on Time Series
- 🗩 Lecture: Text and Sentiment Analysis
- 🖥 Lecture + Lab: Perform Text and Sentiment Analysis
- 🏆 Challenge: Data Analytics Challenge

PromptBase

- 🗩 Lecture: Medprompt and the Power of Prompting
- 🗩 Lecture: Dynamic Few Shots
- 🖥 Lecture + Lab: Dynamic Few Shots
- 🗩 Lecture: Self-Generated Chain of Thought (COT)
- 🖥 Lecture + Lab: Self-Generated Chain of Thought (COT)
- 🗩 Lecture: Majority Vote Ensembling
- 🖥 Lecture + Lab: Majority Vote Ensembling

- 🏆 Challenge: PromptBase Challenge: Put it all Together

Extracting Maximum Value from Prompts and AI Models

- 🗨 Lecture: Pre-Trained and Fine Tuned Models
- 🗨 Lecture: Generative AI and Prompt Engineering Trends

Class Project

- 🏆 Challenge: Deploy AI for your Workflows

Prerequisites

- No prior experience required
- Recommended Prerequisite course: Zero-Code AI Solutions