



Interaction with Large Scale Models

Practical Sheet 1

1. Prompt Structure Exploration

The objective in this exercise is to understand the impact of different prompt structures. Consider two basic tasks:

- 1) summarizing a news article,
- 2) generating a short story.

You should write three different prompts for each task, and analyze the differences in the results obtained.

- A vague prompt
- A moderately specific prompt
- A well-structured, detailed prompt

2. Role-based Prompting

In this exercise, the goal is to perceive how specifying a role in a prompt influences responses. Let's consider the "blockchain" concept.

You should prompt an AI LLM to explain this concept and applications, while assigning different personas (e.g., "You are a historian," "You are a marketing expert," "You are a software engineer").

3. Iterative Refinement

In this exercise, the idea is to learn how to refine prompts to improve outputs.

You should start with a very weak (vague) prompt about the "Bolonha process", and, upon the information received, iteratively refine the prompts to make it more specific (e.g., "Explain the major changes in students curricula that yield from this process").

Restart the process, each time using different prompting strategies. Write your conclusions about the relationship between each prompting strategy and the quality of the results obtained.

4. Real-World Task Simulation

The idea here is to apply prompt engineering to a practical task, such as generating one "Helpdesk service for C language programmers".

The goal is to design different prompt strategies to generate the maximum (and minimum) quality responses for this task.



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5. Reverse Engineering Prompts

In this problem, the task is to understand how different prompts lead to different outputs.

You should consider the outputs produced by ChatGPT 4.0 below, and guess the original prompt for each one.

Output 1: Creative Writing Analyzis

"The old lighthouse stood defiantly against the raging storm, its light flickering like a heartbeat in the darkness. Waves crashed against the cliffs, sending salty sprays into the wind. Inside, a lone keeper watched the horizon, waiting for a ship that may never return."

Output 2: Technical Explanations

"Blockchain is a decentralized digital ledger that records transactions across multiple computers. Each block contains a cryptographic hash of the previous block, ensuring security and transparency. This technology underpins cryptocurrencies like Bitcoin but also has applications in supply chain management and secure voting systems."

Output 3: Summarization Challenge

"Shakespeare's Romeo and Juliet is a tragic love story about two young lovers from feuding families. Despite their efforts to be together, misunderstandings and external conflicts lead to their untimely deaths, ultimately reconciling their families."

PS: Solutions can be found at: http://www.di.ubi.pt/~hugomcp/pe/p_01_pe_24_25_solutions.pdf