

Day 24: Prompt Engineering

Introduction

What

Prompt Engineering - The process of crafting prompts that maximize the effectiveness of the LLMs output

Carefully designing how we phrase our requests --> manipulate the output that LLM generates

Interacting with an LLM in a way that elicits intelligent and meaningful responses is critical for success

Importance

Average Salary of a Prompt Engineering in India

India's average prompt engineering salary is INR 39.3 lakhs per annum, ranging from INR 15.3 lakhs to INR 154.9 lakhs. This salary range is based on the 8 profiles within the prompt engineering field. You must know that 10% of the top prompt engineers get paid over INR 79.9 lakhs annually.

Control the Output

specify the task clearly --> guide the model

Diversity in Output

adding variability to the generated text --> by changing the prompt slightly leading to different results

Efficient Use of Model

well-engineered prompt --> utilize full potential of the model

Key elements of a prompt

Task definition

Clearly state the task to be performed

Input data

Provide relevant data that the model can use (Eg: "Here is an article....")

Instruction clarity

Precise instructions to improve output relevance

Temperature

Setting that controls the randomness of the output --> to influence creativity

Effective Prompt Design Techniques

Some strategies to create powerful prompts:

1. Clear and Concise Prompts

Clear prompts with explicit instructions to reduce the risk of ambiguous outputs

Eg:

Weak Prompt: "Write something about dogs."

Strong Prompt: "Write a 3-paragraph informative essay about why dogs make great pets."

2. Length and Structure of Prompts

Longer prompts can provide more context, but they must be structured in a way that the model can understand.

Providing an introduction, context, and then the task to improve comprehension

3. Use of Examples (Few-shot Learning)

Including a few examples of how you want model to perform, and guide it to produce similar results

Eg:

"Classify the sentiment of the following text. Text: 'The movie was great!' Sentiment: Positive. Text: 'The meal was terrible!' Sentiment:"

4. Role-Playing Prompts

Asking the model to "act" as a specific character

Eg:

"You are a historian writing about the Roman Empire. Please write a 5-paragraph essay about its fall."

5. Adjusting Parameters for Creativity

Temperature: Controls the randomness of the model's output. A higher temperature (e.g., 0.8) generates more creative and diverse results, while a lower temperature (e.g., 0.3) generates more deterministic and focused results.

Generating Diverse Text Outputs Using Different Prompts with GPT-3