

Summer Training TR-103

Prompt Engineering

Day-1 Report

The first day of training, we got to know about “Prompt Engineering” its uses and importance. Different prompts are explored including its types and its types. Prompts are generated for learning about good prompts and bad prompts with tasks including its clarity, specificity, and effectiveness.

Introduction to Prompt Engineering:

Prompt Engineering refers to write prompts that can result in better output. If the prompt is written appropriately and efficiently then the result will be better and efficient. It is very easy to get results from AI models, but to get good results from AI models prompts should be good and clear.

- **Significance of Prompt Engineering:**
 - Get better results from AI
 - Save time and cost
 - Gain more control
 - Essential for AI-powered tools
- **Core Principles of Prompt Engineering:**
 1. **Clarity:** Ensuring prompts are straightforward and unambiguous to elicit precise responses.
 2. **Specificity:** Designing prompts with sufficient detail to guide AI models toward relevant and accurate outputs.

3. **Effectiveness:** Crafting prompts that achieve desired results efficiently, balancing response quality and processing time.
- **Real-World Use Cases:**
 1. **Education:** Summarize topics, generate quizzes.
 2. **Resume Writing:** Tailor resumes to jobs
 3. **E-Commerce:** Write product descriptions
 4. **Chabot:** Create smart interactions
 5. **Research:** Brainstorm, analyse, write

Prompts:

Prompts are input that are given by the user. According to the prompts, the output will be given according to the:

Types of prompts:

1. **Instructional Prompts:** Instructional Prompts are the prompts that directly tell that AI what to do. Example:

“Summarize this article in 3 bullet points.”

“Write a thank-you email to a new customer.”

2. **Role-based Prompts:** Role-based Prompts are that prompts that assign a role to the AI for better experience. Example:

“You are a career coach. Rewrite my resume summary.”

“Act like a historian. Explain the French Revolution in simple terms.”

3. **Few-shot Prompts:** Show 1-2 examples of the task and ask to continue. Example:

“Q: Capital of France? A: Paris

Q: Capital of Japan? A: Tokyo

Q: Capital of Germany? A: ??”

- 4. Zero-shot Prompts:** Zero-shot Prompts are the prompts that give AI a task without examples. Example:

“Write a haiku about the ocean.”

“Translate this to French.”

- 5. Chain-of-Thoughts Prompts:** Chain-of-Thoughts prompts are the prompts that ask the AI to reason step-by-step for better accuracy. Example”

“If a car travels 90 km in 3 hours, what is the speed? Think step by step.”

- 6. Constraint-based Prompts:** Constraint-based Prompts are the prompts that add rules or limits to control the output. Example:

“Write a tweet about our summer sale. Use a fun tone and keep it under 15 words.”

- 7. Reframing Prompts:** Reframing Prompts are the prompts that rewrite prompts for better results. Example:

“Tell me about climate change.”

“Explain 3 major causes of climate change in under 100 words.”

Prompt Writing Formula:

[Instruction]+[Context]+[Format]+[Constraints]+[Role]

Example: “You are a marketing expert. Write 3 Instagram captions for a vegan skincare product. Make them fun and under 20 words.”

Common Prompts Mistakes:

- Too broad – “Write something about AI.”
- Too vague – “Make this better.”
- No context – “Summarize this” (but what is “this”)
- Too long or confusing

Therefore, it is suggested to be specific, give structured and add purpose.

Pro Prompting Tips:

- Use bullet points or numbered steps.
- Assign roles (Example: “You are a Web Developer...”)
- Use format examples for consistency.
- Add constraints (length, tone, style)

Prompting as a Career Skill:

- AI Product Designers
- Chatbot Developers
- Technical Writers
- Data Analysts
- UX Researchers