

# Guru Nanak Dev Engineering College

## Training Diary - TR-102 Report

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Day 1

### Training Summary

#### What is Prompt Engineering?

Prompt engineering is the art of crafting inputs (prompts) to guide AI models like ChatGPT to give the most accurate and helpful results. It's essential for interacting effectively with AI tools.

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#### Why Does It Matter?

- **Better Results:** A well-written prompt gives more accurate and useful responses.
  - **Saves Time & Cost:** Reduces repeated trial-and-error interactions.
  - **More Control:** You can shape tone, format, and depth of responses.
  - **Career Skill:** It's in demand for AI-related roles.
  - **Real-world Use:** Used in customer support, education, content creation, coding, and more.
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#### Anatomy of a Great Prompt

A great prompt is:

- **Clear:** No confusion or vague language
  - **Specific:** Direct about what is expected
  - **Contextual:** Contains relevant background info
  - **Goal-Oriented:** Focused on a desired output
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#### Prompt Writing Formula

**Instruction + Context + Format + Constraints + Role**

This formula helps in structuring prompts professionally and effectively.

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## Types of Prompts

1. **Instructional** - Tells the model what to do.
  2. **Role-based** - Asks the model to pretend to be someone (e.g., teacher, doctor).
  3. **Zero-shot** - No examples are given.
  4. **Few-shot** - A few examples are provided before the main task.
  5. **Chain-of-Thought** - Encourages step-by-step reasoning.
  6. **Constraint-based** - Adds limitations like word count, tone, or structure.
  7. **Reframed Prompts** - Rewriting a prompt for clarity or better results.
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## Common Prompt Mistakes

- Vague instructions
  - Too broad or too short
  - Lack of context
  - Unclear goals
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## Pro Prompting Tips

- Be clear and to the point
  - Add background/context
  - Define format (e.g., bullet points, summary)
  - Ask for specific output (e.g., word limit, examples)
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## Tools for Prompt Engineering

- ChatGPT
  - DeepSeek
  - PromptLayer
  - FlowGPT
  - AIPRM for Chrome
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## Prompting as a Career Skill

Prompt engineering is now a valuable skill in AI roles, useful for:

- AI model training
- Content generation
- Automation and product development

## 🔥 Activity: Prompt Master Challenge

**Task:** I chose the topic:  
**“Explain AI to a 6th Grader”**

**My Prompt:**

*“Act as a computer teacher. Your task is to introduce the concept of AI, its origin, importance, and uses to students in Standard c. Keep it fun, simple, and easy to understand. Use real-life examples and avoid technical language.”*

## 📊 Prompt Evaluation Table

Prompt Type	Bad Prompt	Good Prompt	ChatGPT	DeepSeek
Zero-shot	Tell me something about computers	Consider yourself as a teacher and I’m a student of 6th grade. You need to explain me about computers in brief about history, its components, how it works not giving too much explanation and it should be in about 50 words	9	9
Chain-of-Thought	Why?	Consider yourself a student and I am a teacher. i just explained how heapsort works you faced an issue in understanding heapify method ask me why do we need to heapify and also why we use it based on complexity	8.2	9.5
Role-based	Act like a person	Act like a nutritionist and I’m a patient with blood pressure problems. Explain me proper diet plan I should follow to keep myself fit and away from illness and what adverse I can face if I don’t take care of my	8.0	9.5

		diet — also not threatening me, in a friendly way.		
<b>Zero-shot</b>	Write a story	You are a kindergarten teacher during storytelling time. Create a funny and interesting story for little kids that lasts about 5–7 minutes when read aloud. The story should not teach a moral or life lesson — just be silly and entertaining.	8.3	9.5
<b>Instructional</b>	Compare dogs and cats	Summarize the difference between cats and dogs in about 30 words focusing on their features, way of living and ancestors.	8.8	9.5
<b>Instructional</b>	Summarize it	I have given you this paragraph. Summarize it in about 60 words highlighting the main topics and points.	8.7	9.5
<b>Prompt Type</b>	<b>Bad Prompt</b>	<b>Good Prompt</b>	<b>ChatGPT</b>	<b>DeepSeek</b>
<b>Zero-shot</b>	Give me ideas	Consider yourself as an employee, I'm the boss and it's a meeting going on. Give me ideas how can we increase the revenue for the company focusing on a product, its improvements and betterment in service.	8.5	9.5
<b>Instructional</b>	How to make a website?	Consider yourself a teacher to a 12th grader. You have to explain the student how website is created, the tools used, the languages that are required, specifically focusing on requirements and don't overwhelm the students with information.	8.2	9.5

<b>Few-shot / Instr.</b>	Fix this code	Here's my Python code for a rock-paper-scissors game. Please fix any syntax or logic errors and improve the structure. Also, add clear comments explaining each step.	10	9.5
<b>Constraint-based</b>	Draw something	Draw a picture of a bush that is light yellow to green in color. Background color should be light blue. Make the bushes smooth at the edges and give little oval shape to it. Make the leaves triangular in shape.	9.0	9.0