

# The Prompt Engineering Handbook (Practical)

This guide is a practical collection of prompt engineering patterns designed to help you interact more effectively with large language models (LLMs) like ChatGPT/Perplexity/Grok etc. Each pattern provides a structured way to think, ask, and instruct – enabling you to get more accurate, relevant, and creative outputs.

Whether you're crafting personal assistants, automating workflows, learning complex topics, or experimenting with multi-step reasoning, this handbook offers reusable templates and frameworks to guide your prompts.

Use these patterns as building blocks – combine them, adapt them, or evolve them to fit your unique goals. The better your prompt, the better the result. Let's get started....

## 1. Prompt Size Limitation

**Use:** Stay within token or length limits when generating or inputting prompts

**Structure:** When generating long outputs, keep the size within [limit] tokens or characters

**Examples:**

- Summarize this article in under 800 tokens
- Write an email reply within 5 sentences

## 2. Feeding Latest Data

**Use:** Instruct the model to consider or incorporate recent/real-time data

**Structure:** Use the following fresh data before responding

**Examples:**

- Use this link or uploaded file to analyze the latest survey results.
- Here's a real-time sales report—base your recommendations on this

## 3. N-Shot Prompting

**Use:** Provide examples before asking the LLM to perform a task

**Types:**

### 1. Zero-Shot (No Examples)

- No examples or specific instructions are given

## 2. One-Shot (One Examples)

- Question: What is the capital of India?
- Answer: The capital of India is New Delhi
  
- Question: What is the capital of United States?
- Answer:

## 3. Few-Shot (Several Examples)

- We can provide examples in many ways. Two options below:
  - Input: How many alphabets are there in India?
  - Output: There are 5 alphabets in India
  
  - Input: Count the number of words for the mentioned sentence “India is a democratic country”
  - Output: There are 5 words in the above sentence
  
  - Input: What is 5+5
  - Output:
  
- We can also provide a structure in the format below:
  - Situation:
  - Think:
  - Action:

## 4. Many-Shot (Numerous Examples)

- You can give as many examples as you wish

## 5. Root Prompt Pattern

**Use:** Establish baseline behavior and rules for the assistant

**Structure:** You are my personal assistant. Whenever you provide output, please think through what the most time efficient recommendations would be that will really save me time, do not suggest things that do not save me time.

### Examples:

- I need to go grocery shopping. What would you suggest I do to make it more efficient?
- I need to buy a car. What do you suggest how should I go about it?

## 6. Alternative Approach Pattern

**Use:** Offer different ways to solve a problem or phrase a prompt

**Structure:** If there are alternate approaches to task X, list them. Optionally compare them.  
(Optional) prompt me for which approach I would like to use

### Examples:

- For every prompt I give you, if there are alternative ways to word a prompt that I give you, list the best alternate wordings. Compare the pros and cons of each wording.
- For anything that I ask you to write, determine the underlying problem that I am trying to solve and how I am trying to solve it. List at least one alternative approach to solve the problem and compare / contrast the approach with the original approach implied by my request to you. Ask me which approach I would like to use

## 7. Persona Pattern

**Use:** Assign a specific expert persona to the LLM

**Structure:** Act as persona X. Perform task Y

### Examples:

- Act as a Power BI expert. Help me understand DAX.
- Act as an Excel expert. Help me understand Pivot tables
- Act as an HR consultant. Help me write business strategy

## 8. Multi-Persona Debate Pattern

**Use:** Simulate a discussion between two or more expert personas to explore perspectives

**Structure:** Have [Persona A] and [Persona B] debate X topic

**Example:**

- Have an economist and a climate scientist debate carbon tax.

## 9. Audience Persona Pattern

**Use:** Adapt explanations for a particular audience type

**Structure:** Explain X to me. Assume I am [audience Y].

**Examples:**

- Explain Power BI to me. Assume that I have no prior experience
- Explain LLMs to me. Assume that I have no technical knowledge
- Explain the plot of the “Big Bang Theory” series to me. Assume that I have never watched a single episode in my life.

## 10. Flipped Interaction Pattern

**Use:** Let the LLM drive the learning by asking questions

**Structure:** I want to achieve X. Ask me questions until Y condition is met. Ask N questions at a time

**Examples:**

- I want to master Excel. Keep asking me questions until I have become the master in excel. Ask me the first question
- I would like to improve my knowledge around history. Keep asking the questions until I have correctly answered 100 questions. Ask me the first question

## 11. Question Refinement Pattern

**Use:** Improve the quality of user questions

**Structure:** Whenever I ask a question, suggest a better version. (Optionally) Ask me if I want to use it

**Examples:**

- Whenever I ask a question about who is the greatest of all time (GOAT), suggest a better version of the question that puts multiple players unique accomplishments into perspective. Ask me the first question to refine.
- Whenever I ask about problems in Power BI, suggest a better-phrased question.

## 12. Meta Language Creation Pattern

**Use:** Define shorthand phrases for complex actions

**Structure:** When I say X. I mean Y (or would like you to do Y)

**Examples:**

- When I say “2P15NS”. I mean generate a random password of 15 characters in length including numbers and symbols
- When I say “ST”. I mean shorten the answer
- When I say “->[0]”. I mean include the destination. Further example – I am planning to travel from Delhi to Manali

## 13. Semantic Filter Pattern

**Use:** Extract or remove specific types of information

**Structure:** Filter this information to remove/include X

**Examples:**

- Filter “this text” to remove any personally identifying information
- Filter “this text” to include only financial information
- Filter “this text” to include only Excel, Power BI, and Azure related content

## 14. Cognitive verifier pattern

**Use:** Enhance reasoning and decision-making

**Structure:** When asked a question, generate sub-questions to improve accuracy. Combine the answers

**Examples:**

- When planning a trip, ask about budget, interests, transport, etc., and then generate a final plan

- When solving a problem, ask what's been done, what's needed, and dependencies.

## 15. Recipe Pattern

**Use:** Expand partial plans into full step-by-step guides

**Structure:** I want to achieve X. I know steps A and B. Fill in the rest

**Examples:**

- I want to buy a house. I know I need to make an offer and close. Fill in missing steps.
- I want to drive from Delhi to Spiti Valley. Don't drive over 300 miles/day. Create the plan

## 16. ReAct (Reasoning & Acting) Prompting

**Use:** Combine reasoning with action steps that may involve tool use or external references

**Structure:** Task > Think > Action > Result

**Examples:**

- Task: Find the latest news on inflation
- Think: Check reliable sources for economic data
- Action: Refer to Bloomberg, Reuters
- Result: According to Bloomberg, inflation rose by x% in Month & Year

## 17. Template Pattern

**Use:** Constrain output to follow a user-defined template

**Structure:** I will provide a template. Please fill in placeholders with appropriate content

**Example:**

- Template: "PATTERN: [Placeholder X], DETAILS: [Placeholder Y]"
- Fit your output to this format

## 18. Game Play Pattern

**Use:** Turn a task into a game format

**Structure:** Let's play a game around X. Here are the rules...

**Examples:**

- Let's play a memory game with Excel shortcuts.
- Create a trivia game about world history with 3 lives and score tracking

## 19. Chain-of-thought prompting

**Use:** Break down reasoning into clear, logical steps before reaching a final answer

**Structure:** Let's think step by step...

**Example:**

- Q: If John has 5 apples and gives away 2, how many does he have left?  
A: Let's think step by step. John had 5, gave away 2... → Final Answer: 3

## 20. Critique & Improve Pattern

**Use:** Ask the LLM to critique and improve its own or the user's outputs

**Structure:** Review and improve X. Justify your changes

**Examples:**

- Critique this email for tone and clarity. Suggest improvements.
- Review this business proposal and improve the structure. Justify changes

## 21. Role Delegation Pattern

**Use:** Ask the LLM to split a task into roles and perform each step accordingly

**Structure:** You are a team of experts: A strategist, a designer, and a copywriter. Solve this problem

**Example:**

- Act as a cross-functional product team. Build a campaign idea for product X

## 22. Context Evaluation Pattern

**Use:** Carry forward previous interactions dynamically

**Structure:** Given everything, we have discussed so far, what should I do next?

**Example:**

- Based on all my past queries, suggest a roadmap for learning power BI

### **23. Reflection Pattern**

**Use:** Ask the LLM to reflect on its thinking process to improve decision quality

**Structure:** Before giving your final answer, reflect on whether your logic has any flaws.

**Examples:**

- Think through the reasoning again before you answer: what assumptions are you making?

### **24. Injection Defense Pattern**

**Use:** Test or defend against malicious prompt injections

**Structure:** Simulate a prompt injection attempt. How would you mitigate it?

**Examples:**

- If someone tried to override system instructions, how would you respond safely?