

M-2.

a prompt is simply the i/p instruction you given to an AI model. It can be a question, command or example that guides the model to produce the desired response.

Why prompt Required:-

Guides AI: a prompt helps the AI understand the context & generate a relevant response.

Directs the o/p: the quality of AI's response depends on how well the prompt is crafted. a good prompt leads to better, more accurate results.

Contextual clarity: It ensures the model responds to a specific task, reducing ambiguity & what is expected.

Instructions Prompt Technique:

the Instructions prompt Technique involves specific guidelines to guide the AI model's o/p. this help ensures that the generated text aligns with desired objectives & meets the task's requirements.

ex:

Customer Service:

Instruction: Responses should be professional & provide accurate information.

Result: the AI will generate responses that are formal & factually correct.

ex: How can I reset my password.

Legal Document:

- The document should comply with relevant laws & regulations.
- Please treat a non-disclosure agreement.

Evolution of prompt engineering:

1966 Eliza - Developed by Joseph Weizenbaum. Eliza was a chatbot that used simple pattern-matching to simulate a conversation, making the beginning of prompt-based interaction.

late 80s - STEADU: Created by Terry Winograd, STEADU was an AI system capable of interpreting commands & reasoning about a virtual environment.

1990s Mad Libster Dialogue System:

System like Tabber vocabulary & Alice used funnier & open ended conversations, pushing the boundaries of AI interaction.

2000s Templated-based Approaches:

Models like Madalyn & Galata used user input to fill predefined templates, setting the foundation for structured prompt engineering.

2017. Transformer Revolution:

The introduction of the Transformer architecture sparked a revolution in NLP, leading to models like GPT-3 & Jurassic-1 Jumbo, which brought prominence to prompt engineering.

2020s Advancing Refining LLMs: Refinement & fine-tuning of large language models for specific tasks using techniques like few-shot learning & conditional generation for precise control.

Types of prompts:

1. Natural language Prompts:

These prompts are written in plain, human-like language. They are intuitive & make it easy for users or developers to communicate naturally with AI model.

Purpose: To make interaction feel like a natural conversation.

ex: 1. Can you explain how photosynthesis works?
2. Quick!

2. System prompts:

are pre-written instructions or templates that guide the AI model on how to respond.

Purpose: They control the model's style, tone, or format. Ensure responses stay within a specific framework.

ex: answering in bullet points.

3. Conditional prompts:

These prompts set conditions or rules that determine the model's behavior depending on the user's input.

Purpose: To make the AI respond differently based on logic conditions ("If X, then Y") or user ask about weather, provide a weather update. If the user asks about sports, provide the latest sports news.

How does Prompt Engineering work?

Step 1: Understand the Task.
 - know exactly what you want the AI to do.
 ask yourself: what kind of answer do I want.
 creative, factual or formal?

ex: - if you want a poem, decide a selection of
 - if you want an email, say it clearly in the
 prompt.
 - should be funny, educational or serious etc.

Step 2: Use Simple & Clear language.
 write your prompt in easy, direct words
 so the AI understands it well.
 ex: X Vague: "create a response to the users"
 inquiry.
 ✓ clear: write a formal email apologizing for a
 delayed response.

Step 3: add Details:
 be specific - give background & context to help
 the AI know what you expect.
 X General: write a poem.
 ✓ specific: write a poem about the joy of
 summer with beach & sunrise rays.

Step 4: provide ex.
 show the AI what kind of output you want.
 ex: prompt: "write a summary of this article
 in bullet point."
 ex: - Discuss the impact of climate change.
 - explores renewable energy soln.

Step 5: Test & Improve:

you might not get a perfect answer the
 first time - that's normal.
 try repeating a adding more context with
 the result looks right.
 ex: if the answer is too short, tell them:
 "explain in more detail with ex."

Understanding Prompt Engineering fun. in context.
 + understand the task.

1. Improving specificity & clarity.
2. Increasing creativity & engagement.
3. ethical issues
4. Enhance fluency - AI interaction.
5. Guide of structure.

advn:
 1. Question Answering
 2. Creative Writing
 3. Machine Translation
 4. Coding

Future of large language model (LLM) Comm.
 - the future of talking to AI - more simple.
 as AI gets smarter, the way we talk to it
 will become smoother, more natural & more helpful.
 - AI powered education tools:
 AI helps people find their way during discussions &
 ex: business meeting. AI suggests compromises &
 alternative ways.

- Real-time language translation. - and active prompt
 - that - true language translation.
 - as prompted about updates.
 - automated prompt generation

Prompt Eng "Techniques for ChatGPT":

Introduction to prompt Eng "Techniques":
 Prompt Eng is the art of crafting 1/p (prompt) that guide the AI to produce the o/p (output) that you want. Think of it like giving clear instructions to a very educated assistant.

Goal: Improve clarity, creativity and control over AI responses.
 better results.
 why it matters: A well-written prompt =

Instructions, prompt technique:
 this technique involves giving explicit instructions to the AI about how it should respond.

Purpose: To control tone, format or content.
 ex: "Be professional & concise"
 prompt: "Write an email apology for a delayed delivery."
 Result: A formal, polite email.

Human combine this with other techniques like role prompting (eg "Act as a lawyer") or seed words (eg: "Include words like secure, confidentiality").

Zero one and few shot prompting:

this is about teaching the AI by showing it examples. "shots" refer to the no of examples you provide.

1. Zero-shot
2. One-shot
3. Few-shot

1. Zero-shot:
 you ask the AI to do something without giving any examples. It uses its general knowledge.
 ex: "Write a poem about nature." prompt
 Use case: Good for creative, open-ended tasks.

2. One-shot:
 you give the AI one example to show it exactly what you want.
 prompt: "Summarize this text: 'The sun rises in the east' and summarize this: 'It is raining heavily.'"
 Use case: When you have one clear example of the task.

3. Few shot: you give the AI a few examples to make sure it understands the pattern perfectly.
 prompt: "Battery life: 10hr → the battery last along time."

This technique involves asking the AI to generate multiple answers & then choosing the most consistent or logical one.

Think of it as: Giving a brief to a lawyer. You give questions before they write a story. You give that the essential, unnecessary part they must stick to.

Self-Consistency Prompt: This technique is used to keep the AI's responses logically consistent throughout a conversation or a long piece of text. You "lock" certain key facts of rules at the beginning.

Think of it as: Teaching by example.

Camera: 12 MP > the camera takes high-quality photos.
Screen: 6.5 inches → how, write about:
Weight: 150 grams.
Use case: for gaming or very specific tasks.
Release context: it's big.

- Zero-shot: asking a smart student to solve a new type of problem cold.
- One-shot: showing them one solved problem.
- Few-shot: walking them through several solved problems so they grasp the pattern.

Creative thinking prompts are designed to help AI generate imaginative, original & inspiring content. These prompts push the boundaries of what AI can create - from stories & poems to ideas & inventions.

Goal: Encourage the AI to go beyond logic & facts into the world of ideas, emotions, & imagination.
Creative thinking prompts are designed to make AI think like an artist, storyteller, or inventor.

Prompts for creative thinking:

Marathon fact & logic, provide key facts that must not change.

1. Ask the same question multiple times.
2. Compare the answers.
3. Pick the one that makes the most sense.

Why? AI can sometimes give different answers to the same prompt. This method helps find the most reliable one.

Ex: For a math problem, you might ask the AI to solve it 3 times and choose the answer that appears most often.

Characteristics of creative prompt:

- open ended
- emotionally expressive
- imaginative or fantastical
- often include characters, settings or unusual situations.

Ex: "Describe a city floating in the clouds where people ride giant birds".
 "Write a poem from the perspective of a lonely robot on Mars".

Unlocking Imagination & Innovation:-

These prompts help unlock the AI's creative potential by encouraging it to think outside the box.

How it works: You give the AI a playful or imaginative prompt, and it responds with something unexpected or creative.
 Ex: "I live in a gadget that keeps people flying without wings."
 "Write a story about a robot who learns to 'create' emotions".

"Describe a city where everyone communicates through music".

- Benefits:
- Encourage original thinking.
 - Helps with creative writing & story telling.
 - Inspires new ideas for art, design & innovation.

Characteristics:

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How prompts unlock creativity:

- By giving freedom: no strict rules, just inspiration.
- By adding constraints: Sometimes, creativity thrives when you set boundaries (eg: "Write a story using only three characters & one location").
- By using analogies & metaphors: These help AI think in abstract or symbolic ways.

- Innovation-oriented prompts:
- "Design a wearable device that helps people detect emotions".
 - "Imagine a future where plants can talk - how would society change?"
 - "Create a startup idea that users to help endangered animals".

Prompt for effective writing:

What is a writing prompt?
A writing prompt is a specific instruction you give to an AI to help it generate written content. It tells the AI:

- what to write
- how to write it
- what tone or style to use

Why are writing prompts useful?

- they start the writing process when you're stuck or unsure.
- they help AI understand the context & goal of writing.
- they improve the quality of the output - making it more relevant, readable & professional.

ex:

- formal email: write a formal email requesting a meeting with project manager.
- storytelling: "write a short story about a scientist who discovers a new planet."

Types of writing prompts:

1. Creative.
2. Descriptive.
3. Reflective.
4. Problem solving.

Igniting the writing process with prompts:

1. Encourage Creativity:
Prompts provide the initial spark. They push you out of your usual thinking patterns & into new imaginative territory.
ex: "Write about a character who discovers a hidden door in their house."
or fiction: does a character know?
the prompt help: immediately, your brain starts asking questions: where does the door lead? who put it there? what happens if they open it? the story begins to write itself.

2. Overcome writer's block:
this is the main supervisor of prompts, like a GPS, giving you a clear direction. ex: Descriptive: a place where you feel lost at the moment.
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3. Prompts are like targeted exercises for a writer. They make you practice specific skills, like writing dialogue or building characters.
ex: "Write a dialogue between two people who have just met for the first time."

4. Enhances Expression:-

Prompt encourage you to find new ways to express feelings and ideas, whether you're writing poetry, essays, or stories.

ex: Write a poem about a rainy day.

5. Provides Clear Pathways:-

A good prompt gives your writing structure & a sense of purpose, making it easier to organize your thoughts.

ex: Write while an essay arguing why online education is the future.

6. Builds Confidence:

the more you write, the more confident you become, prompts make writing feel less intimidating & more like a manageable, regular practice.

ex: "Write a letter to your future self"