Prompt Engineering Fundamentals

AI Model Types

- Text Models: Great for brainstorming, drafting, clarifying.
- Image Models: Generate quick visuals or concept art from text prompts.
- Audio Models: Transcribe or summarize audio recordings.
- Multimodal: Combine text and images in a single output (e.g., an annotated image).

Prompt Engineering Fundamentals

- Zero-Shot: Jump right in—perfect for simple Q&A.
- Few-Shot: Provide short examples for style/format guidance.
- Chain-of-Thought: "Walk me through your reasoning…" to improve transparency.
- System + User Prompts: Set top-level rules (system) then refine details (user).

Prompt Structure Templates

- Problem-Solution: "Given [scenario], propose a solution in bullet points."
- Rewrite/Transform: "Convert this text into formal style…"
- Comparison: "Compare approach A vs. B with pros and cons."
- Table Output: "Present the data in a 3-column table (Factor, Description, Impact)."
- Chain-of-Thought: "Step by step, detail how you arrive at the final answer."
- Conversational Persona: "You are a tech expert advising novices…"
- Validation: "After providing your answer, verify if each step is logically consistent."

Do's and Don'ts

Do:
- Use anchors like "Step 1," "Step 2" for chain-of-thought.
- Clarify style: "Use bullet points," "Keep it under 200 words."

Don't:
- Over-stuff prompts with unrelated tasks.
- Assume the model knows your entire context without providing it.

Use Case Examples

- RFP Drafting: Give structured examples to get well-formatted outputs.
- Policy Summaries: Provide 1–2 examples of desired summary style.
- Technical Explanations: Use chain-of-thought to see how it solves a problem step by step.

Evaluation Methods

- Prompt-Response Testing: Tweak your prompt and see if output quality improves.
- Clarity Check: Check if the AI fully addressed each part of your request.
- Stepwise Verification: Use chain-of-thought to see if reasoning is valid.

Prompt Collection

Content Creation

1. "Rewrite the attached memo in a more formal, government-compliant style. Use bullet points for clarity."
2. "Generate a short LinkedIn post about the benefits of strong prompt engineering."
3. "Compose a 200-word project update for stakeholders, focusing on major wins."
4. "Draft a press release announcing a new AI training initiative."

Data Analysis/Summarization

5. "Summarize these 3 compliance reports in bullet form, highlighting areas of noncompliance."
6. "Condense the main points of this 20-page requirements document into 5 takeaways."
7. "Scan this email thread for key action items and deadlines."
8. "Analyze these vendor responses and create a table comparing cost, timeline, and tech approach."

Code Generation

9. "Write a quick Python snippet to parse a CSV of contract data and print top 5 costliest items."
10. "Generate JavaScript code to validate form inputs for a procurement request page."
11. "Create pseudo-code for an AI-driven chatbot that fields acquisition FAQs."

Creative Ideation

12. "Suggest 5 creative workshop ideas to teach prompt engineering fundamentals to novices."
13. "Brainstorm innovative ways to integrate chain-of-thought into daily contract review processes."
14. "Propose 3 icebreaker activities for a team practicing prompt writing."

Problem-Solving

15. "Outline how to resolve conflicting feedback from two project leads in a single contract."
16. "Identify potential pitfalls in an unclear SOW and propose clarifications."
17. "Walk me through how you'd finalize a negotiation strategy if the budget changes mid-contract."

Educational Purposes

18. "Design a short exercise teaching the difference between zero-shot and few-shot prompting."
19. "Create a brief multiple-choice quiz (5 questions) on best practices in prompt engineering."
20. "Explain the concept of chain-of-thought for a training manual aimed at new AI users."