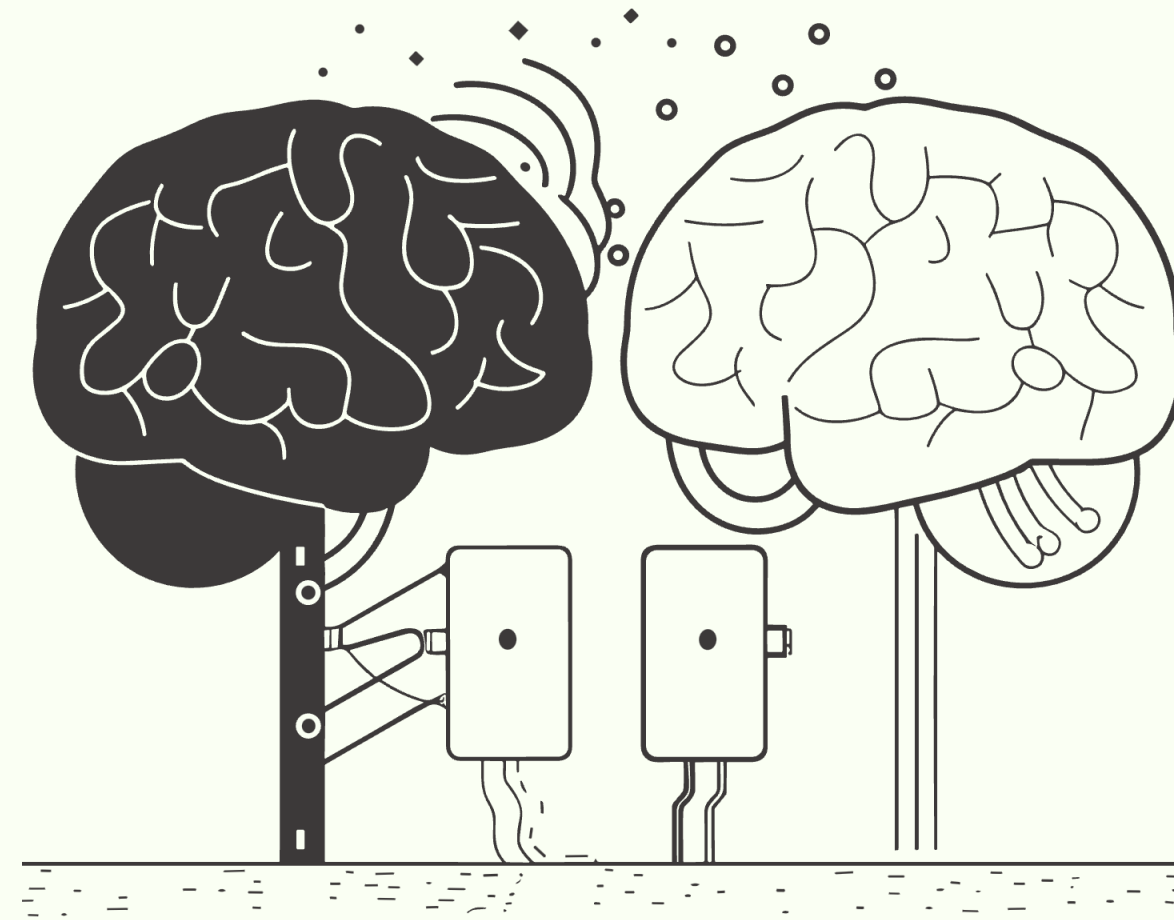


Talking to AI (Prompt Engineering)



What is Prompt Engineering?

- Prompt engineering is the process of designing and refining inputs (prompts) to guide AI systems like GenAI to produce desired outputs.
- It's a critical skill for project managers who want to leverage AI effectively.



1- Designing Prompts

Designing effective prompts involves clarity, specificity, and structure. Here are two frameworks to help you design prompts:

1

RTF Framework (Role-Task-Format)

- Role: Define the AI's role or perspective.
- Task: Specify what you want the AI to do.
- Format: Define how you want the output structured.

Example:

Prompt: Role: You are a project manager. Task: Create a project timeline for a software development project. Format: Provide a table with columns for Task, Start Date, End Date, and Responsible Team.

Output:

Task	Start Date	End Date	Responsible Team
Requirements Gathering	2023-10-01	2023-10-07	Business Analysts
Design Phase	2023-10-08	2023-10-14	Design Team
Development	2023-10-15	2023-11-15	Development Team
Testing	2023-11-16	2023-11-30	QA Team

2

CREATE Framework (Character-Request-Example-Adjustment-Type-Evaluation)

- Character: Define the AI's character or expertise.
- Request: State your request clearly.
- Example: Provide examples to guide the AI.
- Adjustment: Refine the request for better results.
- Type: Specify the output type (e.g., list, table, paragraph).
- Evaluation: Evaluate the output and adjust as needed.

Example:

Prompt: Character: You are a risk management expert. Request: Identify potential risks for a construction project. Example: Here are some past risks: delays due to weather, budget overruns, and safety incidents. Adjustment: Focus on risks related to budget and timeline. Type: Provide a bullet-point list. Evaluation: Ensure the risks are specific and actionable.

Output:

- Delays due to supply chain disruptions.
- Budget overruns caused by unexpected material costs.
- Timeline slippage due to permit approval delays.

2- Refining Prompts

Refining prompts is an iterative process. If the AI's output isn't what you expected, tweak the prompt for better results.



Initial Prompt

"Tell me about project risks."

Result: A generic list of risks.



Refined Prompt

"Identify the top 3 risks for a software development project, focusing on delays and budget issues. Provide mitigation strategies for each."



Refined Output

1. Delays in Code Delivery: Mitigation – Implement agile sprints and daily stand-ups.
2. Budget Overruns: Mitigation – Regular budget reviews and contingency planning.
3. Team Burnout: Mitigation – Flexible work hours and mental health support.



3- Chaining Prompts

Chaining prompts involves using **multiple prompts in sequence to achieve complex tasks**. This is useful for breaking down large problems into smaller, manageable steps.

Step 1

"Generate a list of tasks for a software development project."

Step 2

"For each task, estimate the time required and assign a responsible team."

Step 3

"Create a Gantt chart based on the tasks and timelines."

4- Prompt Acumen

Prompt acumen is **the ability to craft prompts that yield high-quality, actionable outputs**. It involves understanding how AI models interpret language and refining your prompts accordingly.

Tips for Developing Prompt Acumen:



Be Specific

Vague prompts lead to vague outputs. Clearly define what you want.



Use Examples

Provide examples to guide the AI.



Iterate

Continuously refine your prompts based on the outputs.



Experiment

Try different phrasings and structures to see what works best.

Example of Prompt Improvement:



Poor Prompt:

"Tell me everything about project management."

Issue: Too broad and vague.



Improved Prompt:

"Explain the key differences between agile and waterfall project management methodologies, focusing on their advantages and disadvantages for software development projects."

5- Practical Applications of Prompt Engineering in Project Management

Here are some ways project managers can use prompt engineering:

1. Task Automation

Prompt: "Generate a weekly status report template for a software development project."

Output: A template with sections for tasks completed, tasks in progress, risks, and next steps.

2. Risk Management

Prompt: "Identify the top 5 risks for a construction project and suggest mitigation strategies."

Output: A detailed list of risks and actionable mitigation plans.

3. Stakeholder Communication

Prompt: "Draft an email to stakeholders updating them on project progress and highlighting key risks."

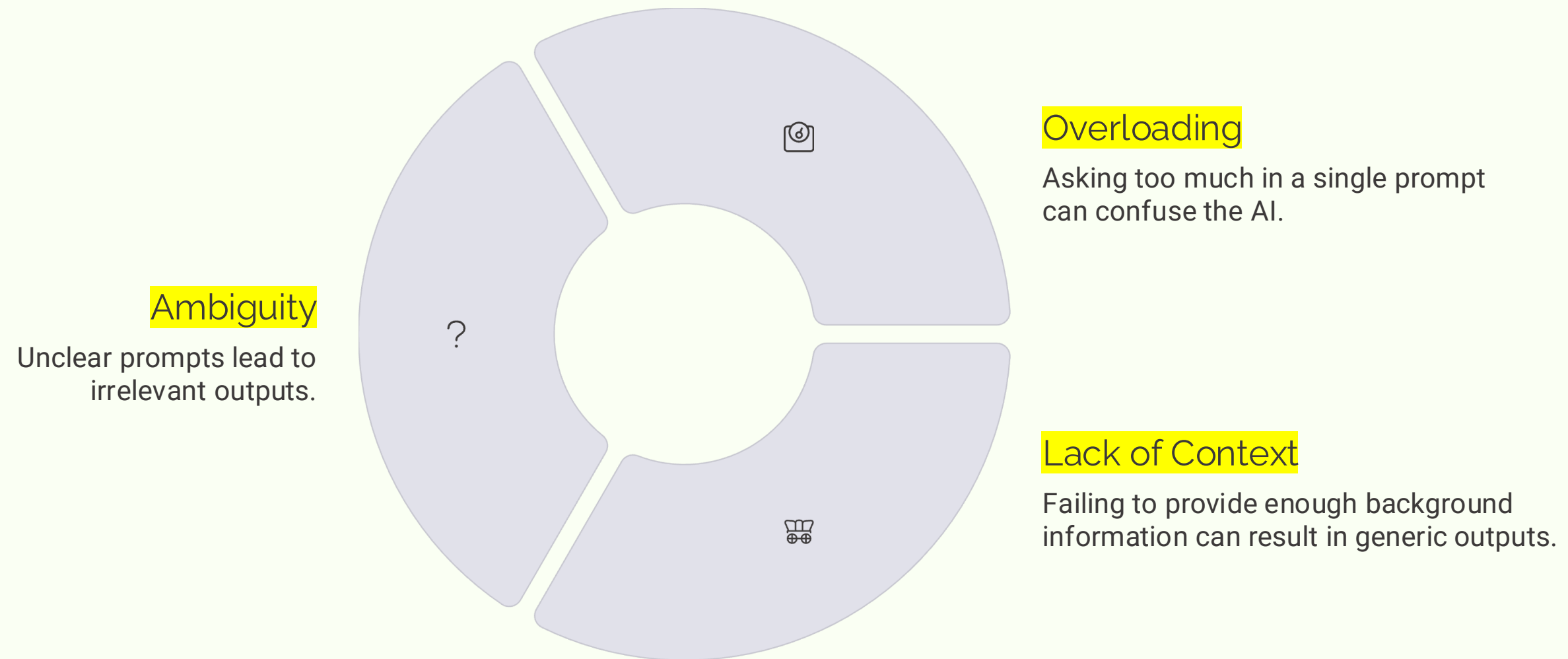
Output: A professional email template tailored to stakeholder communication.

4. Decision-Making Support

Prompt: "Analyze the pros and cons of using agile vs. waterfall methodologies for a software project."

Output: A comparison table with clear insights.

6- Common Pitfalls in Prompt Engineering

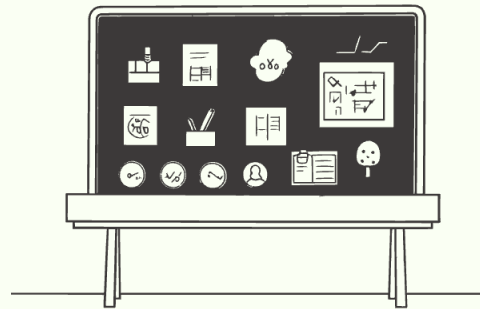


7- Tools for Prompt Engineering



AI Platforms

ChatGPT, Gemini, DeepSeek
Perplexity, Napkin, NotebookLM,
Gamma, Heygen, N8N, Zapier,
Manus, Sora



Templates

Use frameworks like RTF and CREATE to
structure your prompts.



Experimentation

Test different prompts to see what works
best for your needs.