

Prompt-Me-In! AI User Enablement

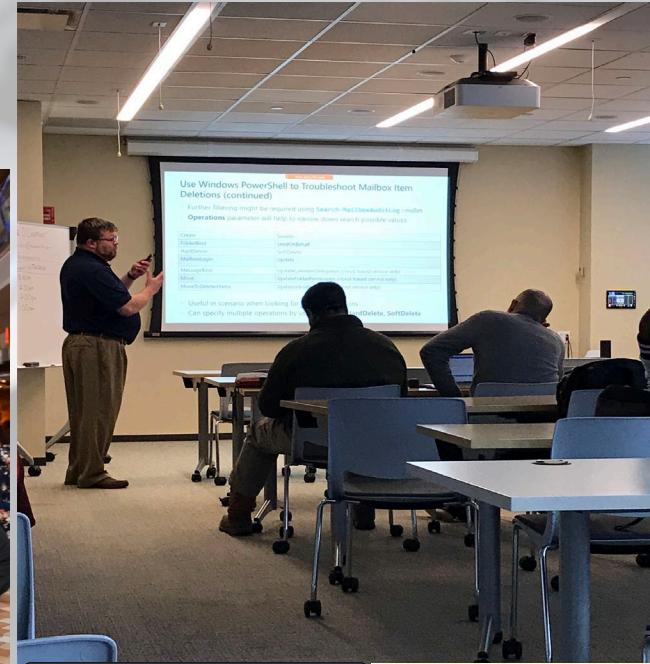


A SPECIALIST GUIDE TO PROMPT
ENGINEERING STYLES FOR AI ADOPTION

PRESENTED BY:
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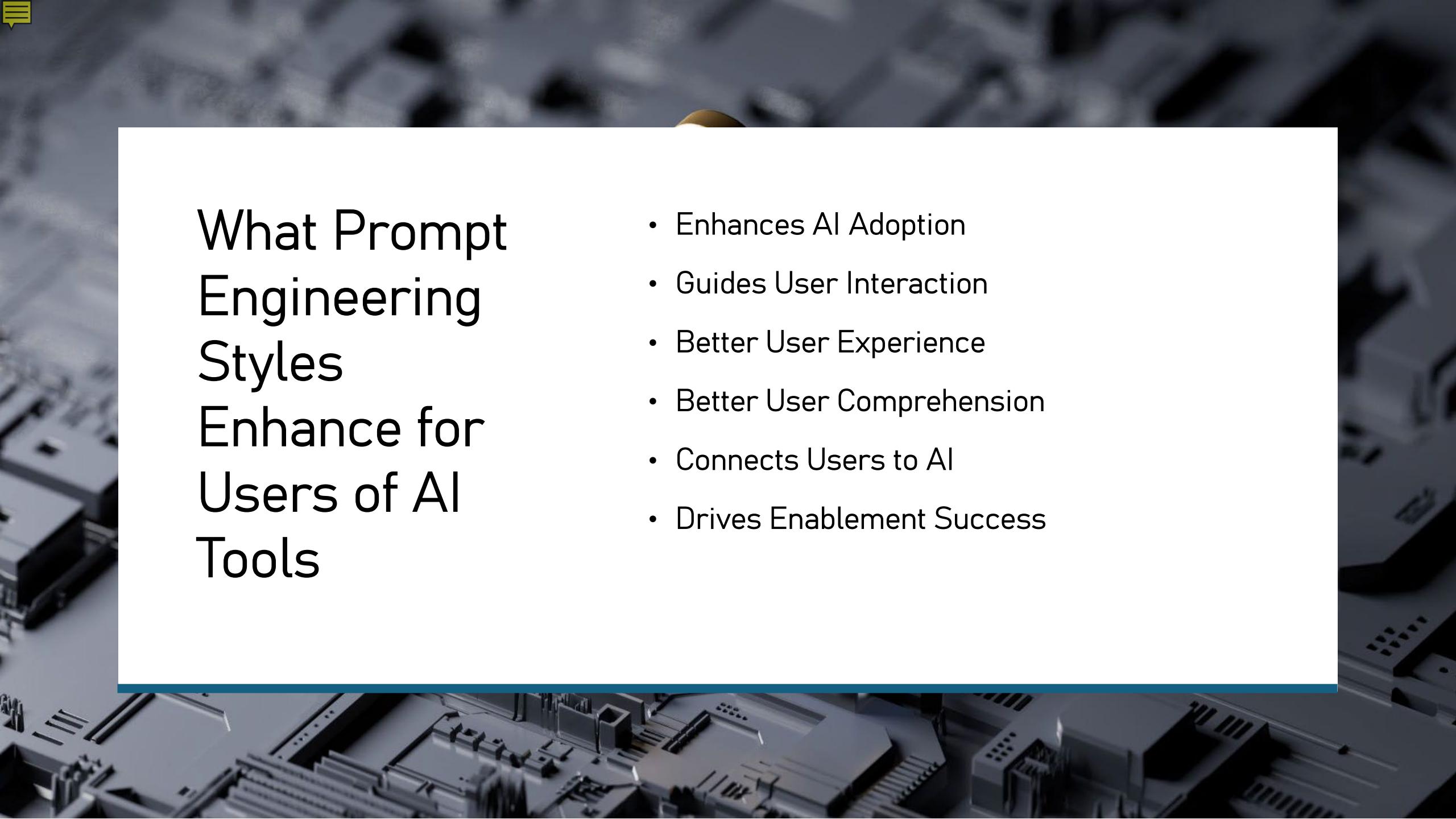


Agenda

- Overview
- Review Each Prompting Style
 - Definition and Principals
 - Examples
 - Use Cases
- Q/A Session (if time permits)

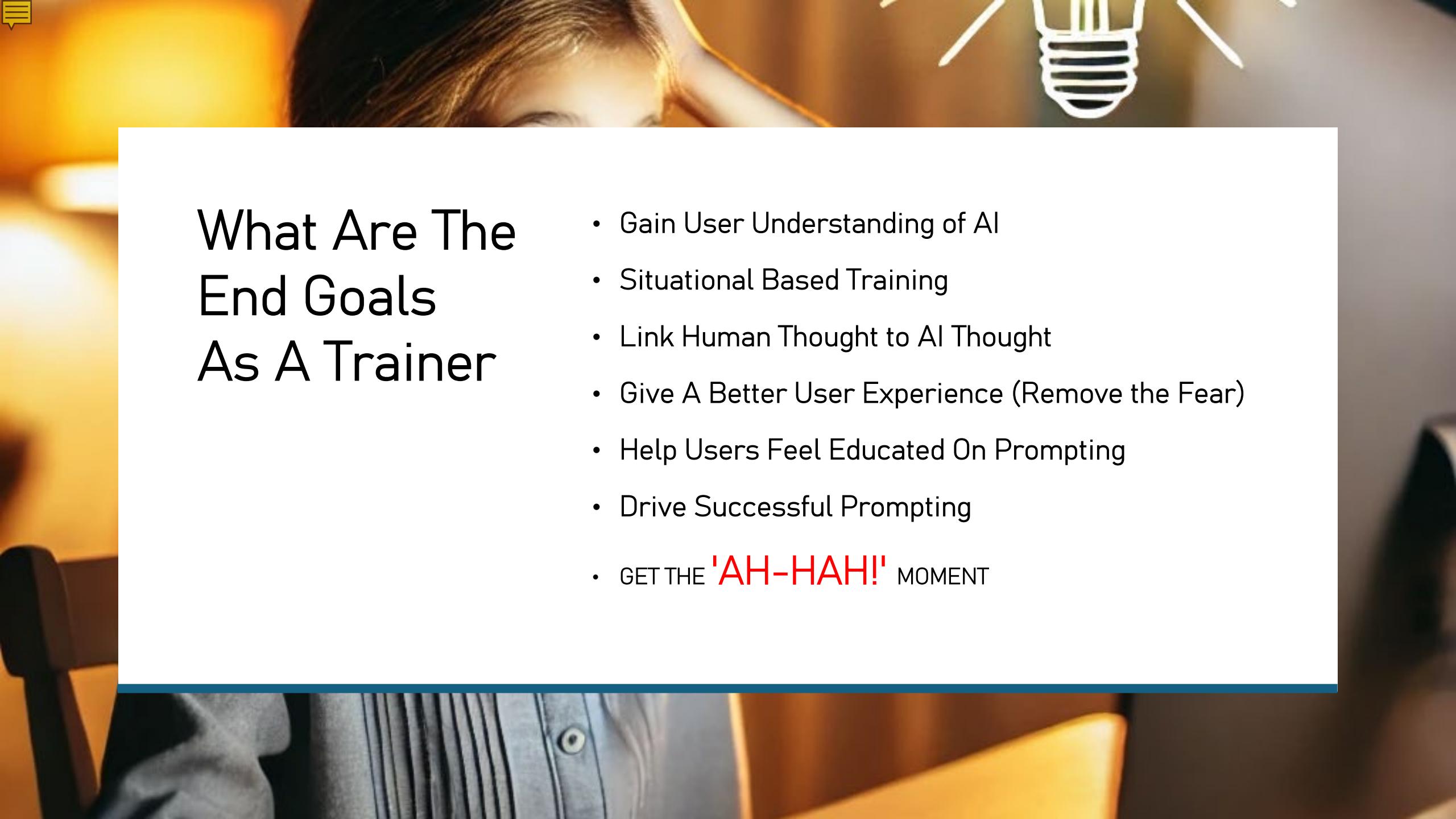
Overview





What Prompt Engineering Styles Enhance for Users of AI Tools

- Enhances AI Adoption
- Guides User Interaction
- Better User Experience
- Better User Comprehension
- Connects Users to AI
- Drives Enablement Success



What Are The End Goals As A Trainer

- Gain User Understanding of AI
- Situational Based Training
- Link Human Thought to AI Thought
- Give A Better User Experience (Remove the Fear)
- Help Users Feel Educated On Prompting
- Drive Successful Prompting
- GET THE '**AH-HAH!**' MOMENT



AI (LLM) Prompt Engineering Styles

- Chain-of-Thought Prompting
- Tree-of-Thought Prompting
- Maieutic Prompting
- Complexity-Based Prompting
- Generated Knowledge Prompting
- Least-to-Most Prompting
- Self-Refine Prompting
- Directional-Stimulus Prompting

More Examples Available

<https://itblog.ldlnet.net/index.php/aiprompt/>

Examples of these styles here:

<https://itblog.ldlnet.net/index.php/aiprompt/>

Expanded Learning: Additional AI Prompting Styles

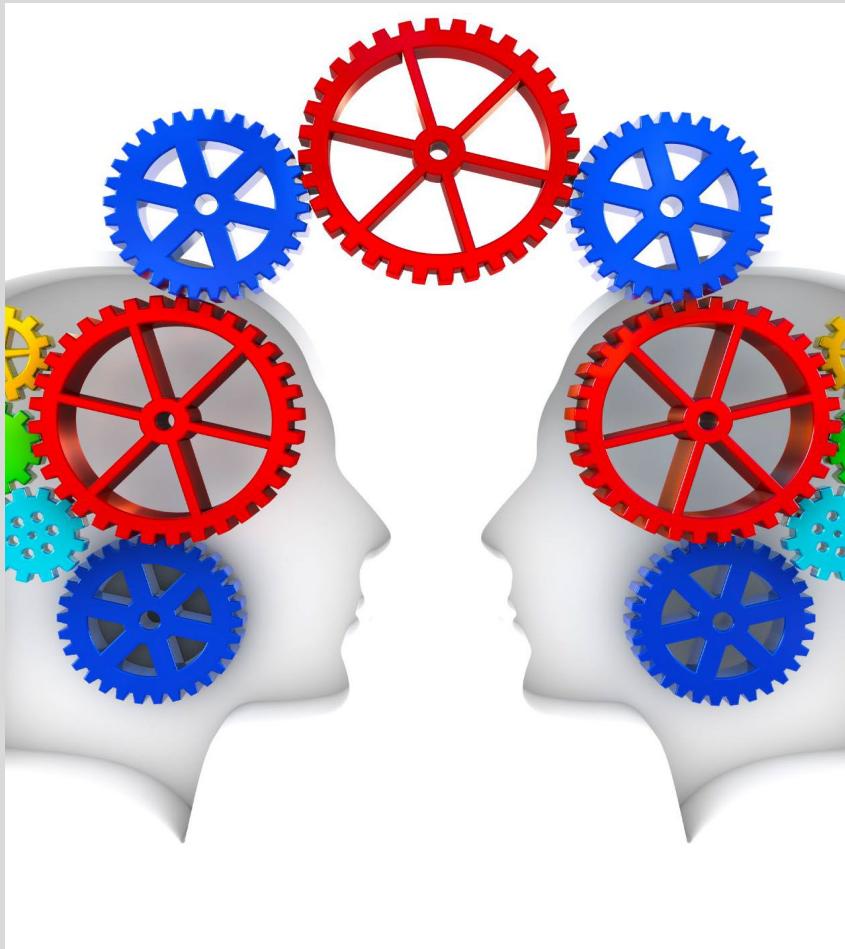
- Re-Act Prompting (Reasoning + Acting)
- Zero-Shot : Few-Shot Prompting
- Instruction-Based Prompting
- Role-Play Prompting
- Contrastive Prompting
- Debate Prompting
- Program-Aided Prompting
- Multi-Modal Prompting
- Persona-Based Prompting



A close-up, low-angle shot of a highly detailed, glowing brain. The brain is composed of numerous glowing, interconnected nodes and pathways, primarily in shades of blue, green, and yellow. It is connected to a thick, metallic gold chain that extends across the frame. The chain is anchored to a dark, glowing digital circuit board with a grid pattern, which is visible at the bottom of the image. The background is a dark, futuristic space with bright, glowing energy particles and light rays.

Chain-of-Thought Prompting

Definition and Principles



Step-by-Step Reasoning Process

Chain-of-Thought Prompting is based on the idea that reasoning is a step-by-step process that guides users towards a clear goal.

Building on Each Other

The prompts in Chain-of-Thought Prompting are designed to build on each other, leading the user towards a solution.

Guiding the User

Chain-of-Thought Prompting is designed to guide users towards a solution by leading them step-by-step towards a clear goal.

Step-by-step Reasoning Process

Chain-of-Thought Prompting is a step-by-step process that guides users through a reasoning process towards a solution, with each prompt building upon the previous one to lead the user towards a clear goal.



Example: How to Guide Beginners with CoT Prompting

Let's consider a simple math problem:

"What is the sum of the first five positive integers?"

Step-by-Step Process

- Understand the Problem
 - Identify the Integers
 - Sum the Integers
 - Calculate the Result

Enhancing AI Adoption for Beginners

- Chain-of-Thought prompting helps by
 - Providing Transparency
 - Interactive Learning
 - Builds Confidence
 - Encourages Engagement

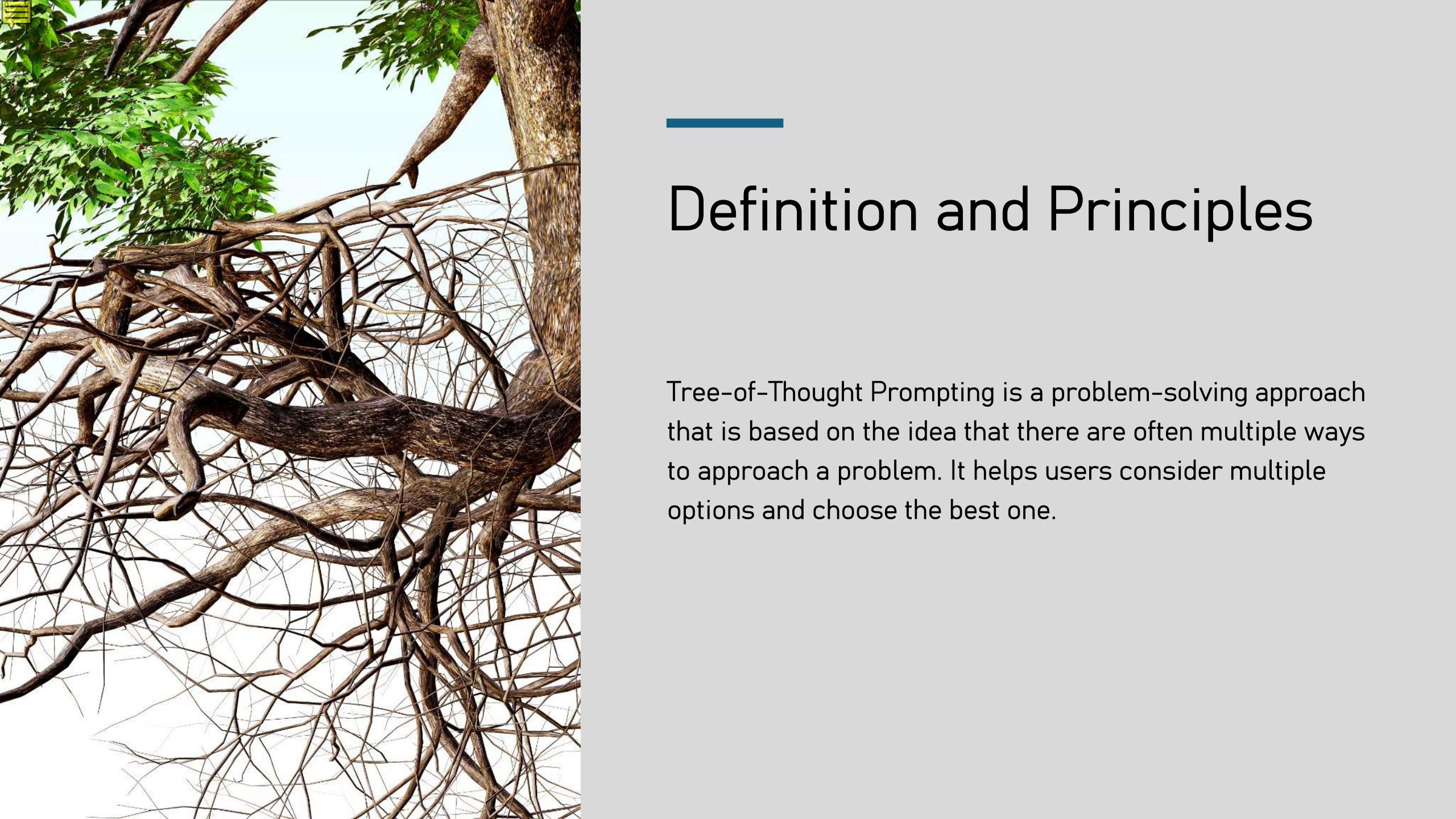
Practical Application

- Define the Task
- Break Down the Steps
- Guide the AI
- Get the "Ah HAH!" Moment



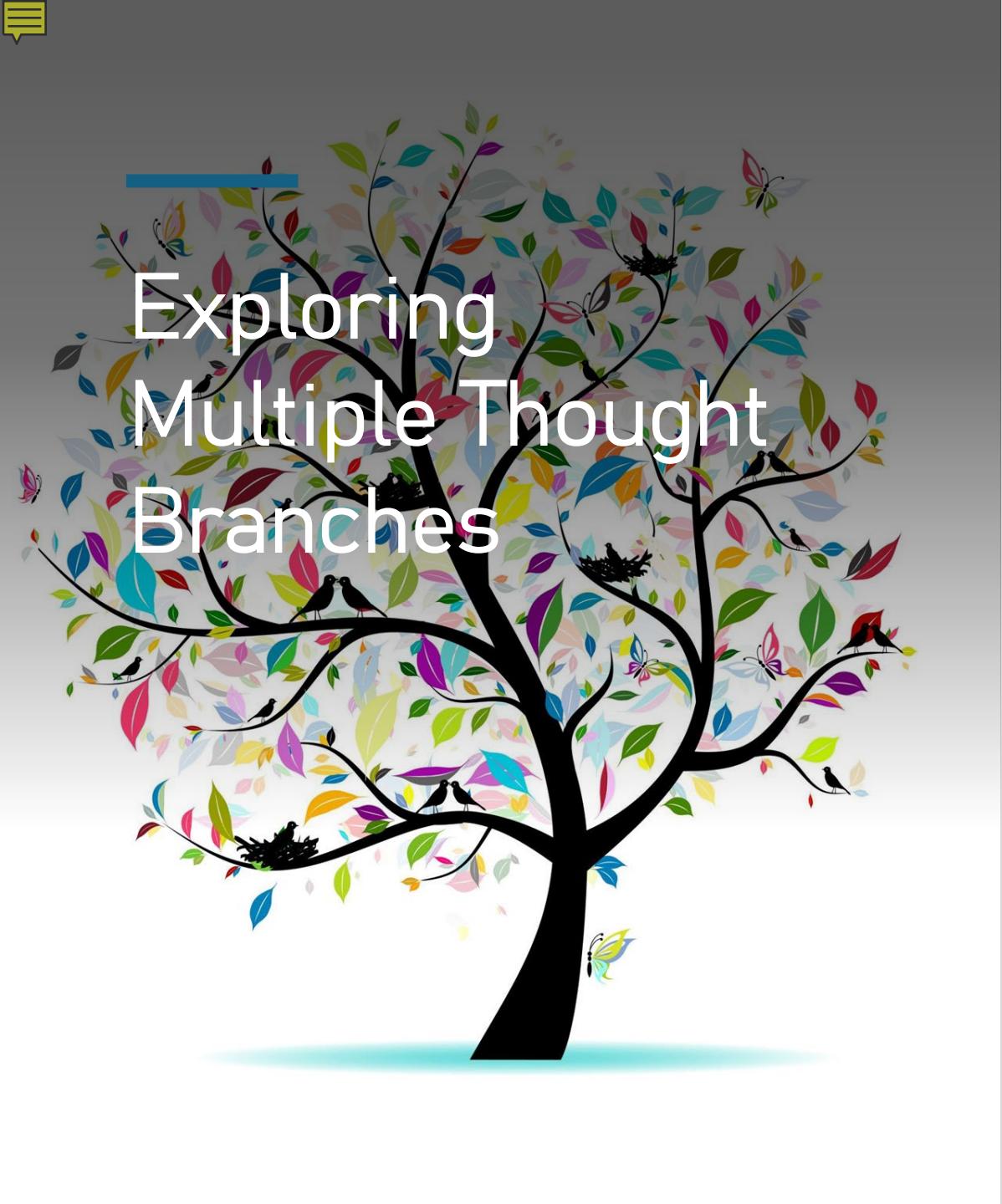


Tree-of-Thought Prompting



Definition and Principles

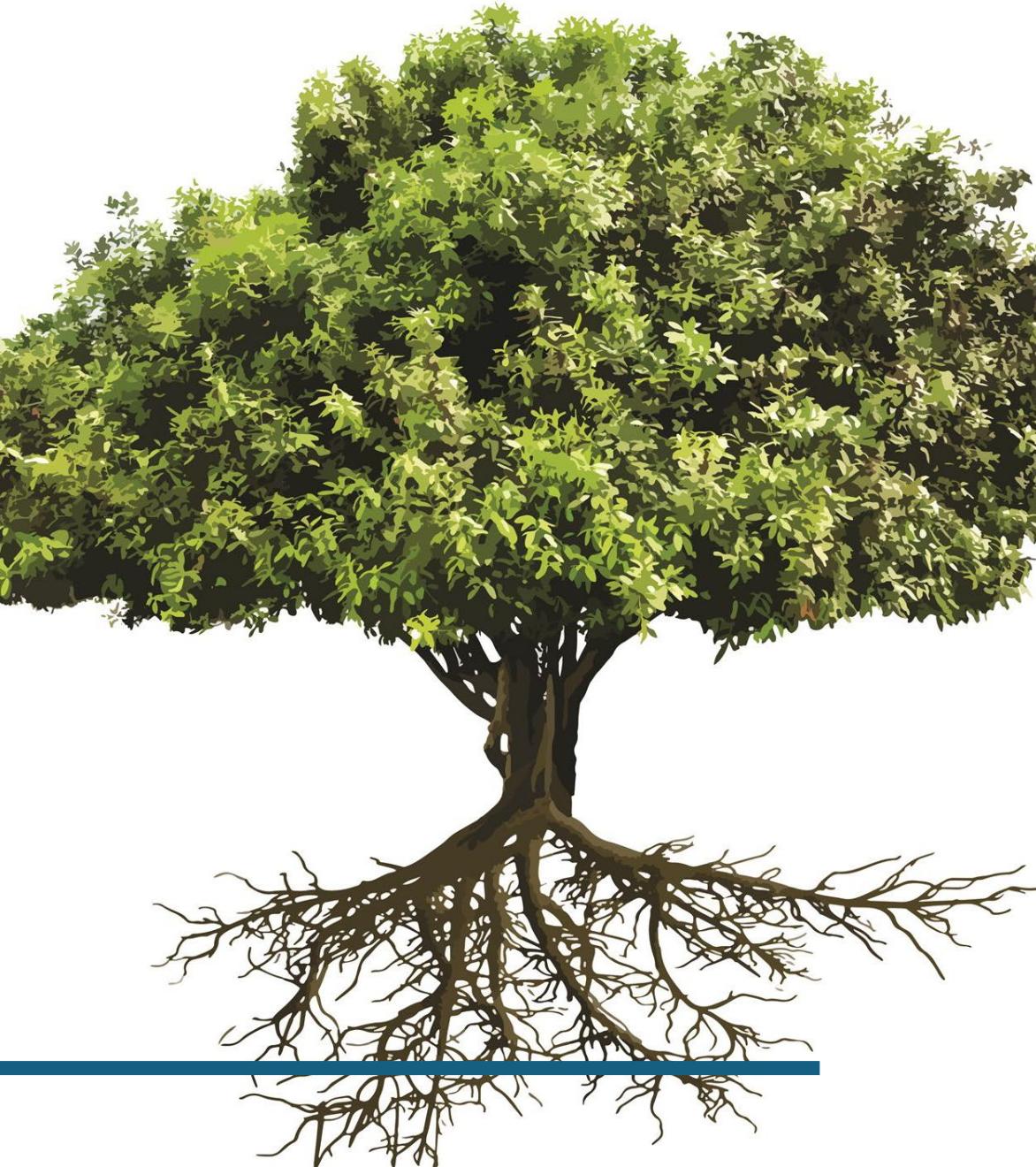
Tree-of-Thought Prompting is a problem-solving approach that is based on the idea that there are often multiple ways to approach a problem. It helps users consider multiple options and choose the best one.



Exploring Multiple Thought Branches

Tree-of-Thought Prompting guides users towards exploring multiple thought branches to creatively solve problems. This approach provides the user with multiple options to solve a problem and choose the best one.

This method can be particularly useful for beginners as it allows them to see various approaches to a problem and understand the reasoning behind each one.



Example: How to Guide Beginners with ToT Prompting

Let's consider a simple scenario:

"We want to decide the best marketing strategy for a new product launch."

Step-by-Step Process

- Define The Goal
- Generate Initial Ideas
- Branch Out on Each Idea
- Evaluate Each Branch
- Select The Best Branch

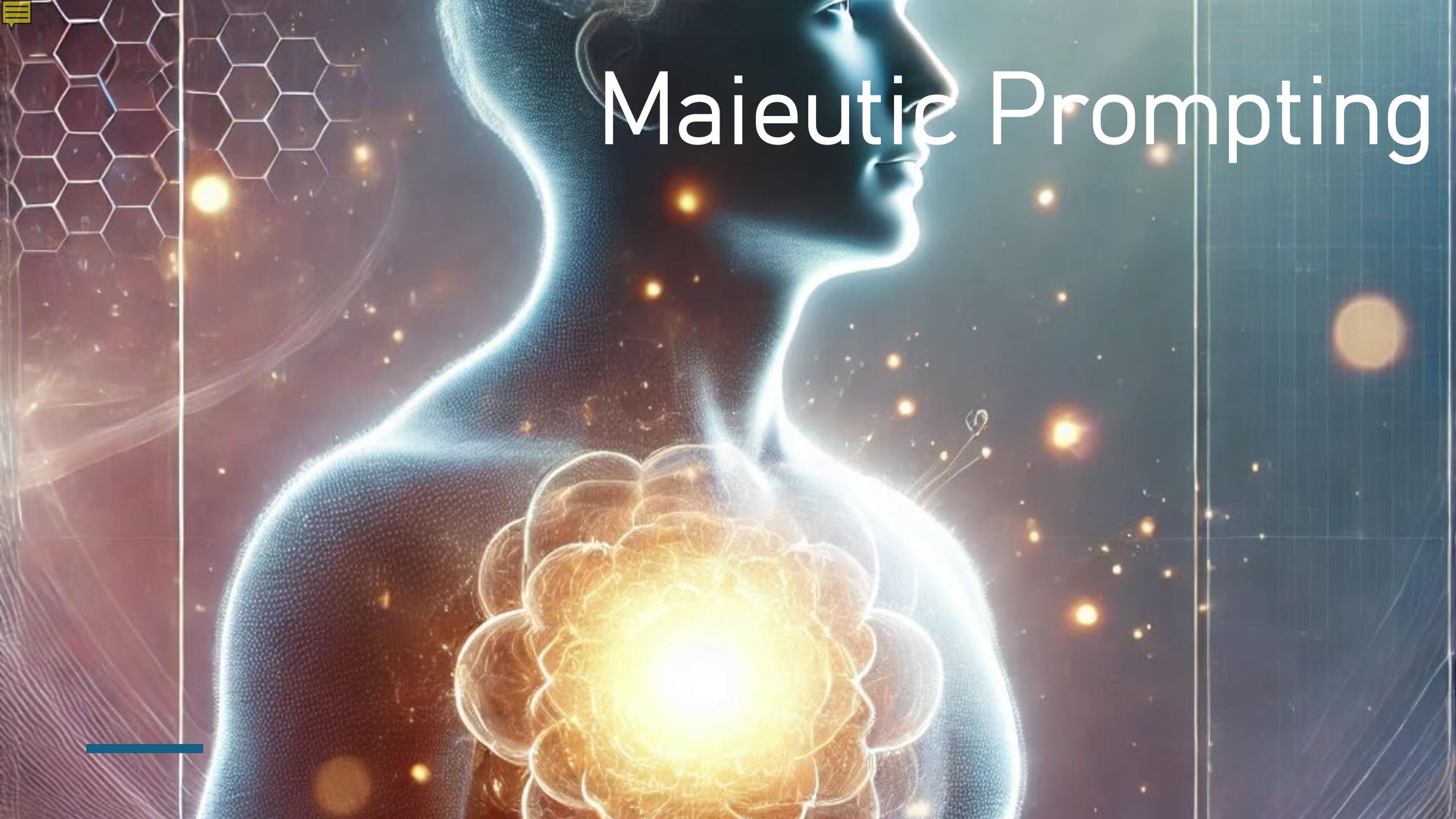
Enhancing AI Adoption for Beginners

- Tree-of-Thought prompting helps by
 - Fostering Exploration
 - Comparison Training
 - Interactive Learning
 - Confidence Building
 - User Engagement

Practical Application

- Define the Task
 - "I want to plan a marketing strategy for a new product launch."
- Generate the Ideas
 - "Suggest different marketing strategies for the product launch."
- Branch Out
 - "For each strategy, explore different approaches and evaluate their potential impact."
- Get the "Ah HAH!" Moment

Maieutic Prompting



Definition and Principles

Definition of Maieutic Prompting

Maieutic Prompting is a method of questioning that helps individuals clarify their thinking and arrive at their own conclusions by using their own inner resources and knowledge.

Principles of Maieutic Prompting

Maieutic Prompting is based on the principle that individuals have the answers to their own problems within themselves and that they need to be guided to uncover them. The prompts should be open-ended and non-judgmental, allowing the individual to arrive at their own conclusions.





The Socratic questioning technique is a method of inquiry that uses open-ended questions to help individuals clarify their thinking and arrive at their own conclusions. Maieutic Prompting uses this technique to guide users towards a solution.



Example: How to Guide Beginners with Maieutic Prompting

Let's consider a simple scenario:
"We want to understand how to improve customer satisfaction in our business."

Step-by-Step Process:

- Identify The Goal
- Ask the Guiding Questions
- Encourage Reflection
- Guide Towards a Conclusion

GOAL: *By breaking down the scenario into these steps, the AI can follow a clear path to the solution, making it easier for beginners to understand how the AI arrives at its answer.*

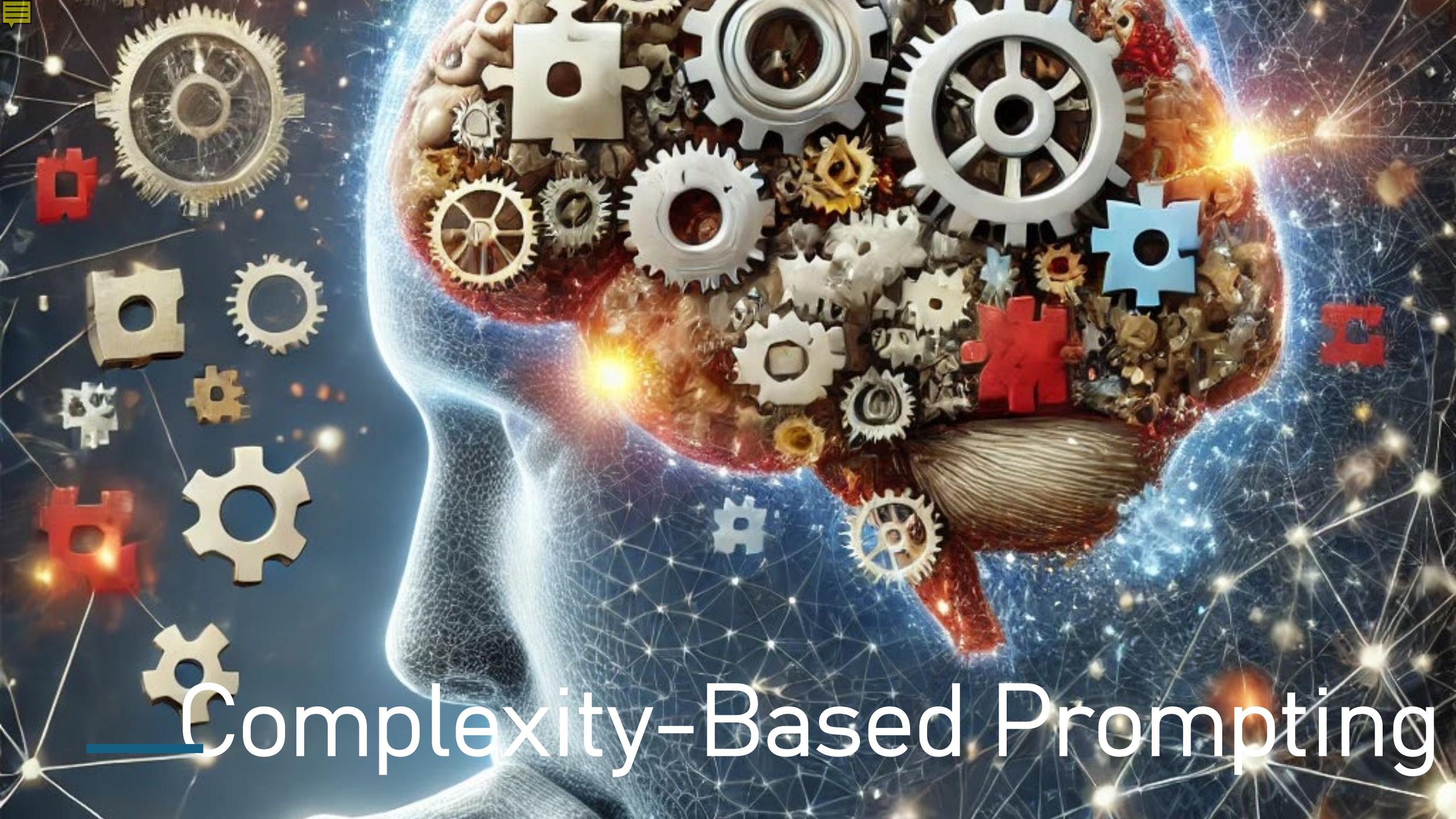
Enhancing AI Adoption for Beginners:

- Maieutic prompting helps by
 - Encouraging Critical Thinking
 - Performing Self Discovery
 - Building Confidence
 - Providing an Interactive Learning Platform

Practical Application:

TASK: *Prompt the AI based on the above scenario.*

- **Define the Task**
 - "We want to improve customer satisfaction in our business."
- **Ask The Guiding Questions**
 - "What are the main factors that influence customer satisfaction in your business?"
 - "How do you currently measure customer satisfaction?"
 - "What feedback have you received from customers recently?"
 - "What changes have you implemented in the past to improve customer satisfaction, and what were the results?"
 - "What new strategies could you try to enhance customer satisfaction?"
- **Reflect on the Answers**
 - Take the AI Responses and guide yourself to your conclusion
- **Get the "Ah HAH!" Moment**



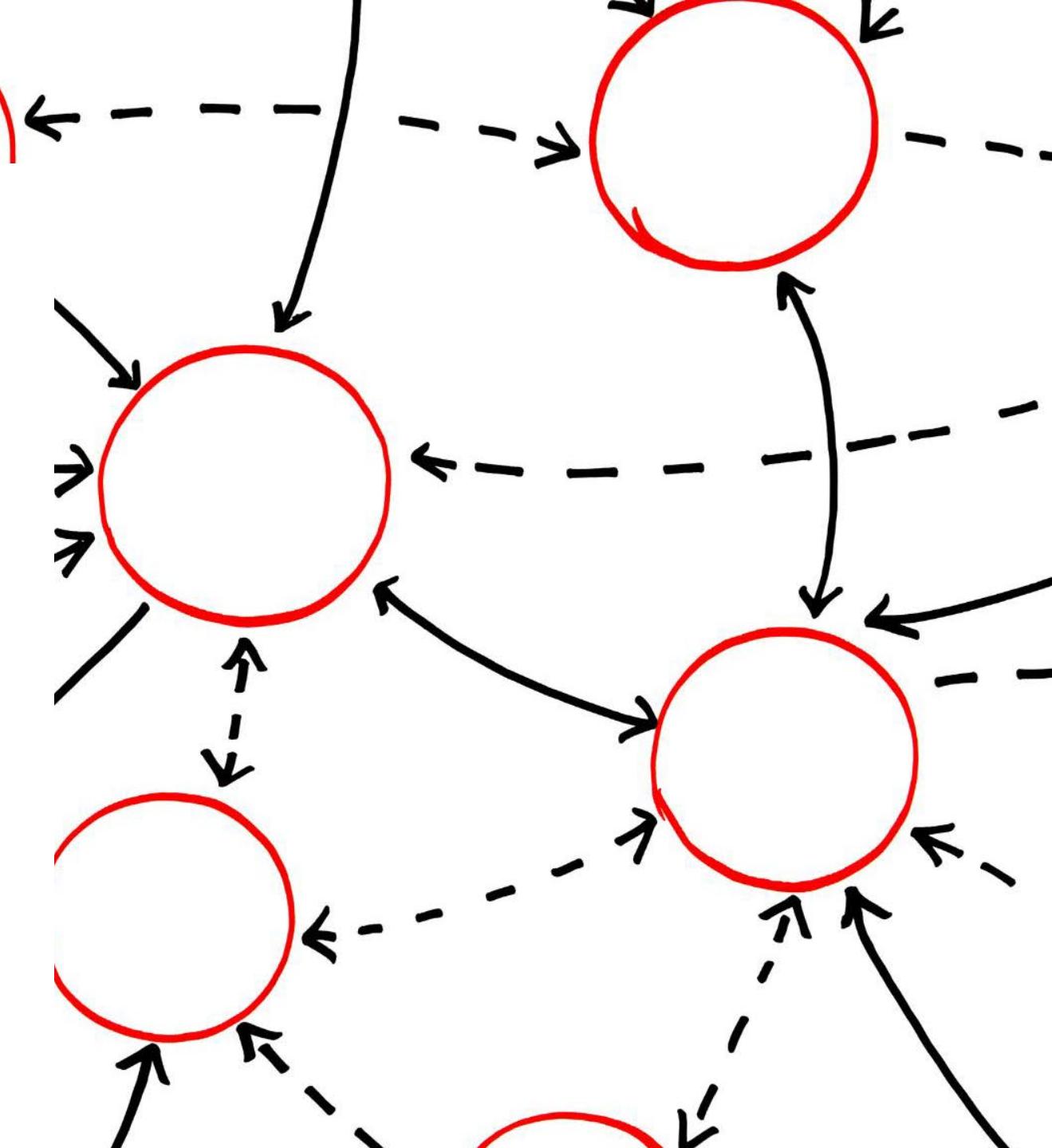
Complexity-Based Prompting

Definition and Principles

Complexity-Based Prompting is a design principle based on the idea that the level of guidance needed varies depending on the user's skill level and the complexity of the task. The prompts are designed to provide the right level of guidance for the user, making it easier for them to complete the task.

Adjusting Prompts to Complexity Levels

Complexity-Based Prompting is a technique that adjusts the level of guidance provided to the user based on their skill level and the complexity of the task. This helps to provide the right level of guidance for the user and ensures that they are not overwhelmed or underwhelmed by the prompts provided.





Example: How to Guide Beginners with Complexity-Based Prompting



Let's consider a simple scenario:

"We want to develop a comprehensive marketing strategy for a new product launch."

Step-by-Step Process:

- **Define The Goal**
 - The goal is to create a marketing strategy for the new product launch.
- **Identify Key Components**
 - Break down the marketing strategy into key components such as market research, target audience, marketing channels, budget, and timeline.
- **Detail Each Component**
 - For each component, ask specific questions to gather detailed information. For example:
 - **Market Research:** What are the current market trends? Who are the main competitors?
 - **Target Audience:** Who is the target audience? What are their preferences and behaviors?
 - **Marketing Channels:** Which marketing channels will be most effective? How will we use social media, email marketing, and traditional advertising?
 - **Budget:** What is the budget for the marketing campaign? How will the budget be allocated across different channels?
 - **Timeline:** What is the timeline for the marketing campaign? What are the key milestones?
- **Synthesize The Information**
 - Combine the information gathered for each component to create a comprehensive marketing strategy.



Example: How to Guide Beginners with Complexity-Based Prompting

Let's consider a simple scenario:

"We want to develop a comprehensive marketing strategy for a new product launch."

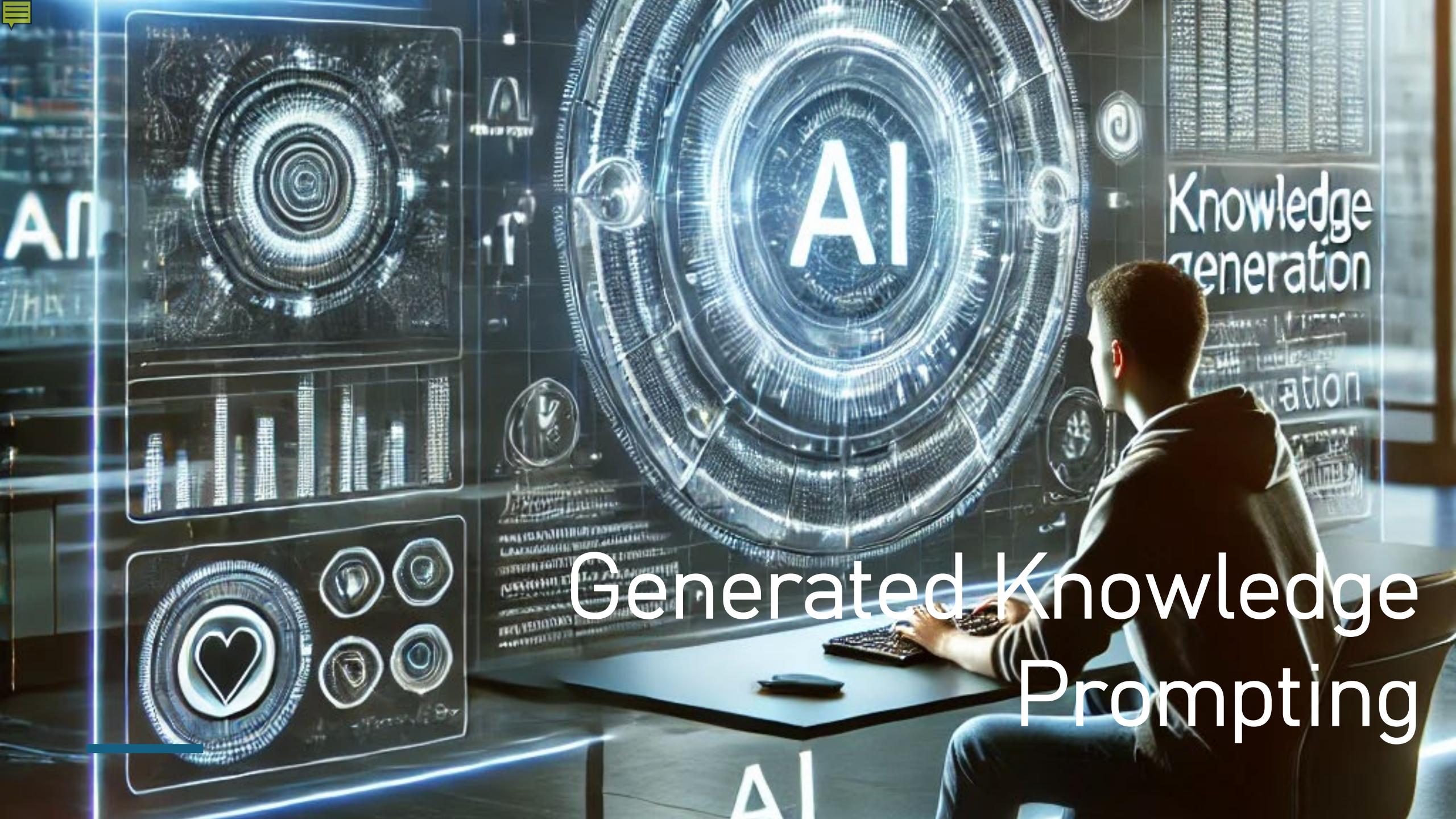
Enhancing AI Adoption for Beginners:

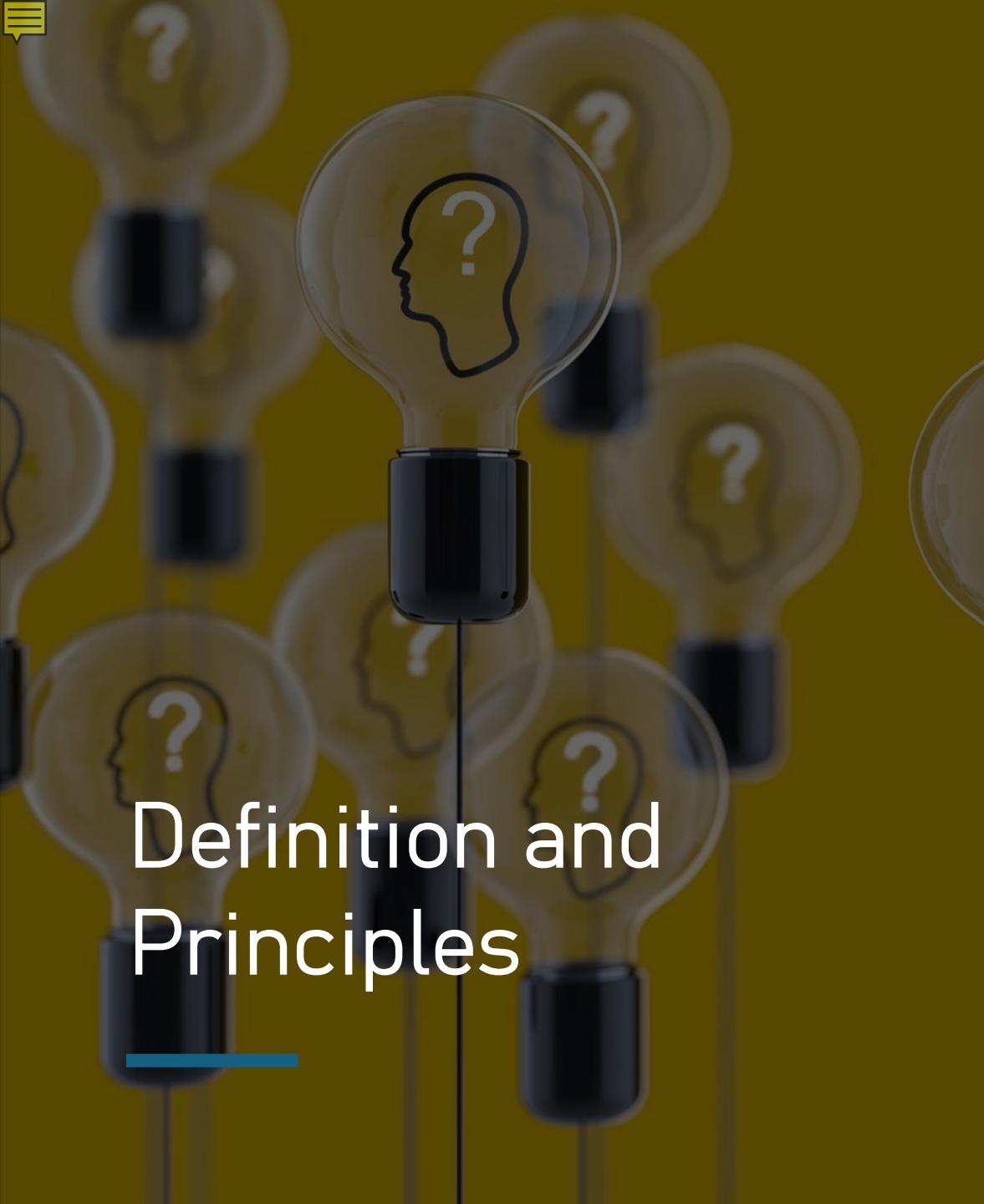
- Complexity-Based prompting helps by
 - Simplifies Complex Problems
 - Performs Structured Approach
 - Builds Confidence
 - Provides an Interactive Learning Platform

Practical Application:

- Define the Task
 - "We want to improve customer satisfaction in our business."
- Break Down the Task
 - "What are the key components of the marketing strategy?"
- Details Each Component
 - "For market research, what are the current market trends and who are the main competitors?"
 - "For the target audience, who are they and what are their preferences and behaviors?"
 - "For marketing channels, which ones will be most effective and how will we use them?"
 - "For the budget, what is the budget and how will it be allocated?"
 - "For the timeline, what is the timeline and what are the key milestones?"
- Get the "Ah HAH!" Moment

Generated Knowledge Prompting





Definition and Principles

Generated Knowledge Prompting

Generated Knowledge Prompting is a method of guiding users towards a solution by leveraging existing knowledge. It provides users with relevant information and insights that can help them solve the problem.

Leveraging Existing Knowledge

Generated Knowledge Prompting is based on the idea of leveraging existing knowledge to guide users towards a solution. This means that users are not starting from scratch but are building on what they already know.

Providing Relevant Information

Generated Knowledge Prompting prompts are designed to provide users with relevant information and insights that can help them solve the problem. This information is tailored to the user's needs and knowledge level.

Leveraging Existing Knowledge Bases

Generated Knowledge Prompting leverages existing knowledge bases to provide users with relevant information that is designed to help them apply this knowledge to solve the problem.



Example: Guide Beginners With Generated Knowledge Prompting

Let's consider a simple scenario:

"We want to create a short story about a futuristic city"

Step-by-Step Process:

- **Define The Topic**
 - The topic is a short story about a futuristic city.
- **Provide Specific Instructions**
 - "Write a short story about a futuristic city where technology has advanced to the point where robots and humans coexist peacefully. Include elements of daily life, challenges faced by the inhabitants, and the role of technology in their society."
- **Generate The Content**
 - The AI will create a short story based on the provided instructions.

Enhancing AI Adoption for Beginners:

- **Generated-Knowledge prompting helps by**
 - Shows Creativity
 - Encourages Exploration
 - Builds Confidence
 - Provides an Interactive Learning Platform

Practical Application:

- **Define the Task**
 - "I want to create a short story about a futuristic city."
- **Provide Specific Instructions**
 - "Write a short story about a futuristic city where technology has advanced to the point where robots and humans coexist peacefully. Include elements of daily life, challenges faced by the inhabitants, and the role of technology in their society."
- **Get the "Ah HAH!" Moment**



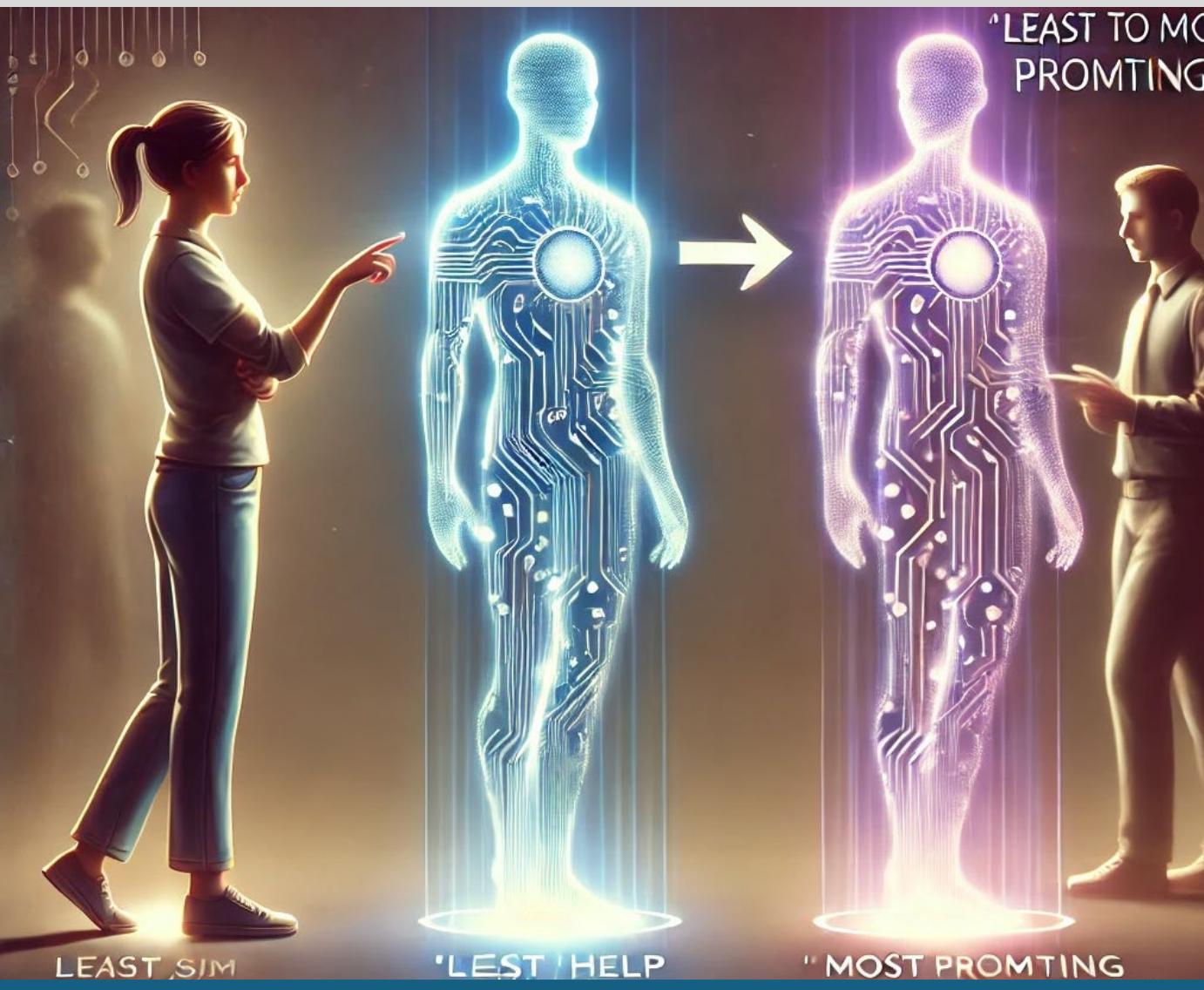
Least-to-Most Prompting



Definition and Principles

Least-to-Most Prompting is a technique that provides users with different levels of guidance based on their individual needs. The prompts start with minimal guidance and gradually provide more guidance as needed. This technique is used to support users in developing new skills and achieving greater independence.



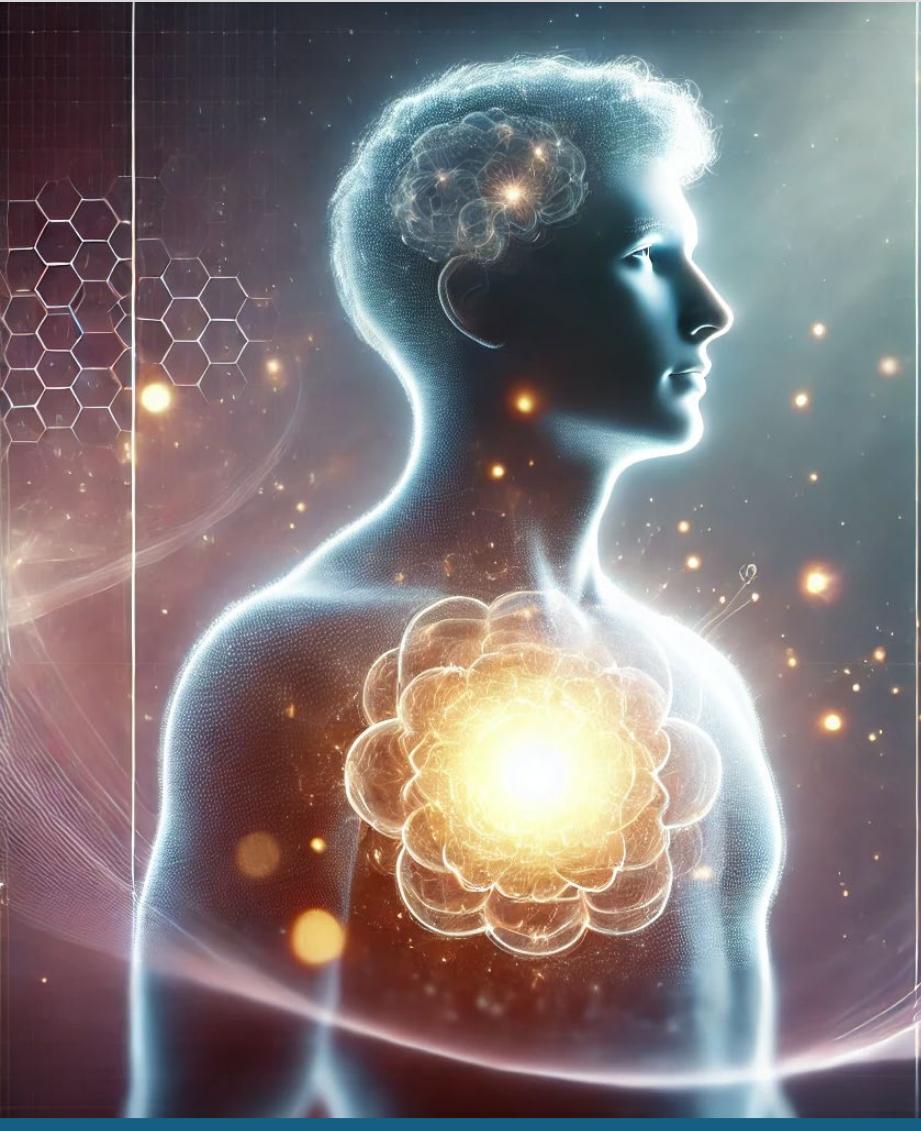


Graduated Guidance Approach

The Graduated Guidance Approach involves Least-to-Most Prompting, where the user starts with minimal guidance and gradually receives more guidance as needed. This approach helps the user learn by doing and is widely used in educational and training programs.



Example of L2M Prompting



Let's consider a simple scenario:

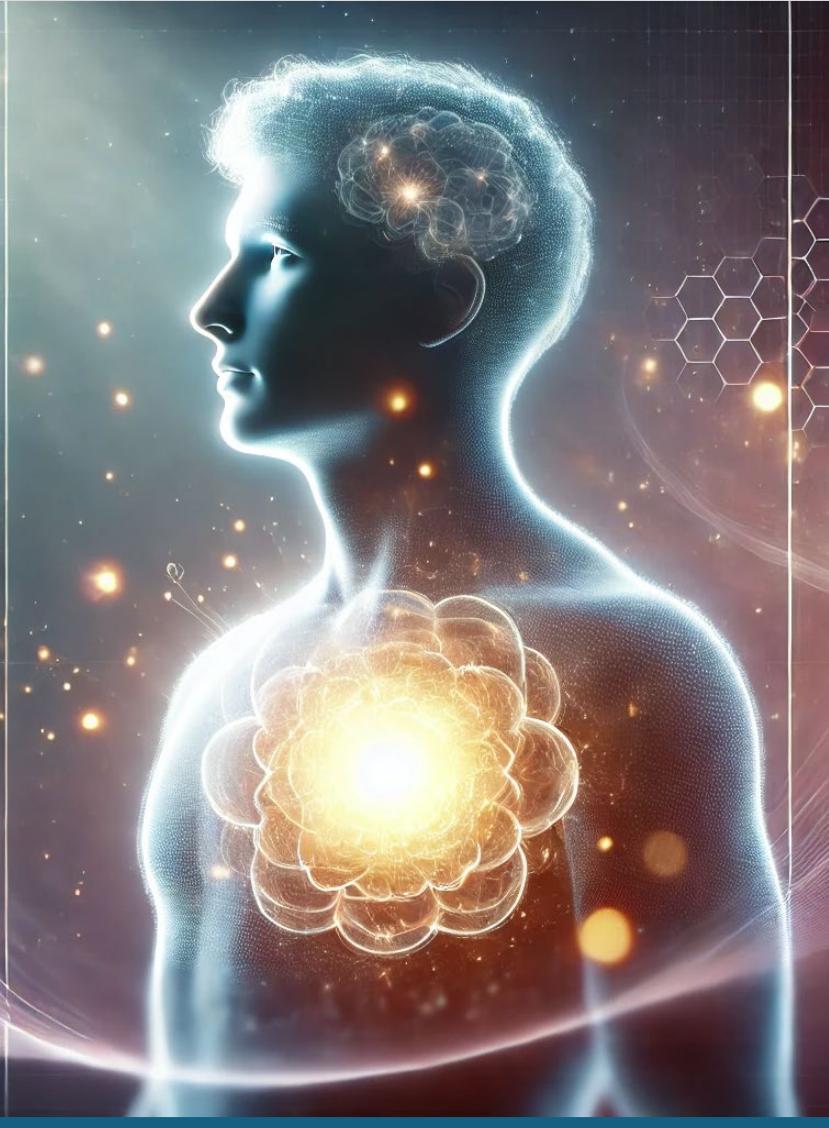
"A beginner wants to solve a math problem: "What is the area of a rectangle with a length of 5 units and a width of 3 units?"

Step-by-Step Process:

- **Initial Prompt**
 - "What is the area of a rectangle with a length of 5 units and a width of 3 units?"
- **AI's Response with Minimal Guidance**
 - "What is the formula for the area of a rectangle?"
(If the user struggles to answer, they might prompt the AI again for more help.)
- **User's Follow-Up Prompt**
 - "I don't know the formula. Can you help?"
- **AI's Additional Hint**
 - "The area of a rectangle is calculated by multiplying its length by its width."
(If the user still needs more assistance, they might ask for further clarification.)
- **User's Next Prompt**
 - "Can you show me how to calculate it?"
- **AI's More Detailed Prompt**
 - "To find the area, multiply the length (5 units) by the width (3 units)."
(If the user is still unsure, they might ask for the final answer.)
- **User's Final Prompt**
 - "What is the final answer?"
- **AI's Complete Solution**
 - "The area of the rectangle is 5 units * 3 units = 15 square units."



Example of L2M Prompting



Let's consider a simple scenario:

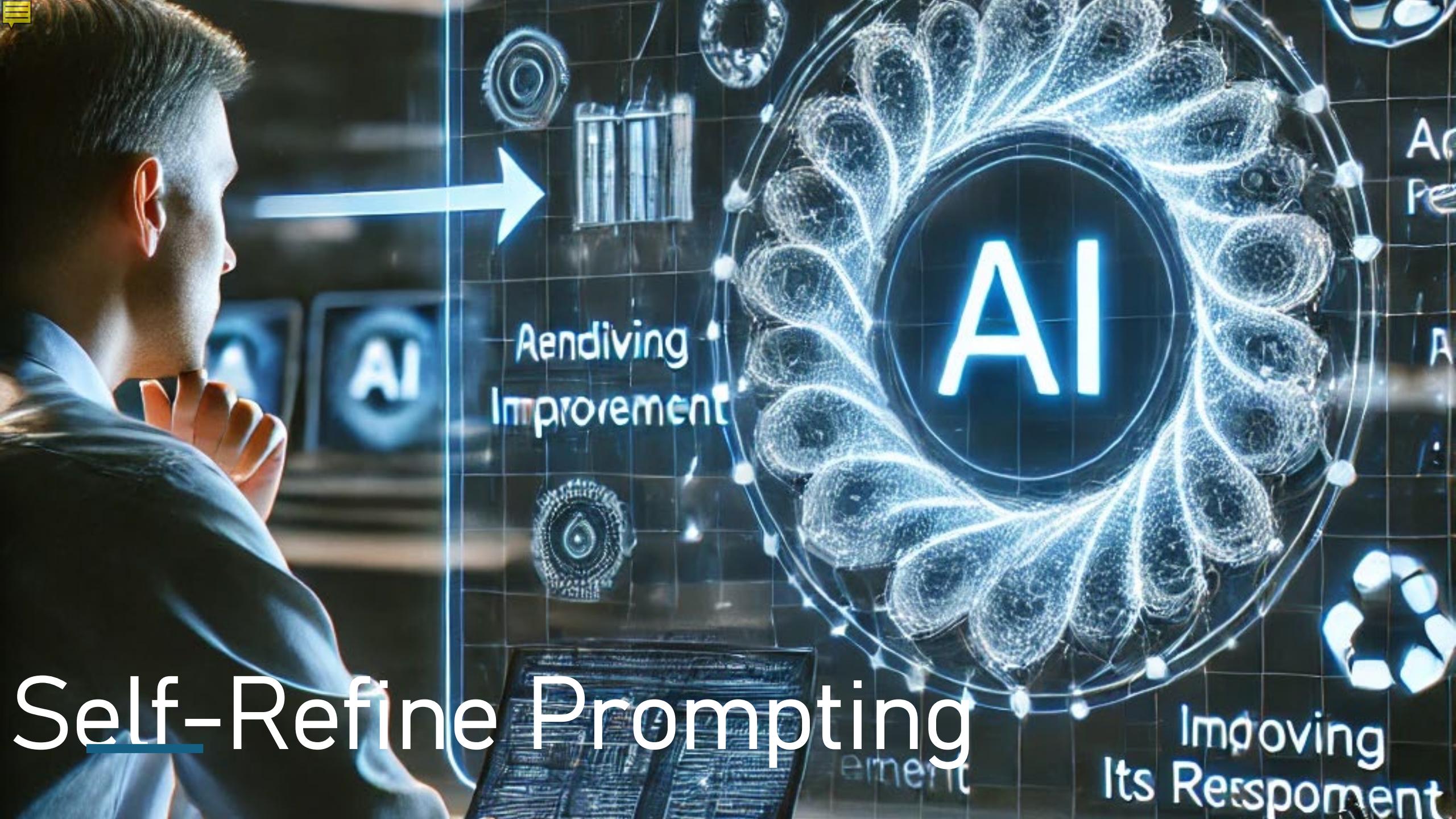
"A beginner wants to solve a math problem: "What is the area of a rectangle with a length of 5 units and a width of 3 units?"

Enhancing AI Adoption for Beginners:

- Least-to-Most prompting helps by
 - Encourages Critical Thinking
 - Personalized Assistance from the AI
 - Builds Confidence
 - Provides an Interactive Learning Platform

Practical Application:

- Define the Task
 - "I want to solve a math problem about the area of a rectangle."
- Minimal Guidance
 - "What is the formula for the area of a rectangle?"
- Additional Hint
 - "The area of a rectangle is calculated by multiplying its length by its width."
- More Detailed Prompt
 - "To find the area, multiply the length (5 units) by the width (3 units)."
- Final Guidance
 - "The area of the rectangle is $5 \text{ units} * 3 \text{ units} = 15 \text{ square units}$."
- Get the "Ah HAH!" Moment



Self-Refine Prompting

Improving
Its Response



Definition and Principles

Self-Refine Prompting is a learning technique based on the idea that users can learn from their mistakes and improve their skills over time. The prompts are designed to help the user reflect on their mistakes and improve their skills.



Iterative Self-Improvement

Self-Refine Prompting is an iterative self-improvement process that guides users through a series of prompts designed to help them learn from their mistakes and make better choices in the future.



Example: Guide Beginners On Self- Refine Prompting



Let's consider a simple scenario:

"A beginner wants to write a short essay on the benefits of renewable energy."

Step-by-Step Process:

- **Initial Prompt**
 - User: "Write a short essay on the benefits of renewable energy."
- **AI's Initial Response**
 - AI: "Renewable energy sources, such as solar, wind, and hydroelectric power, offer numerous benefits. They are sustainable, reduce greenhouse gas emissions, and decrease dependence on fossil fuels."
- **User's Feedback Prompt**
 - User: "Can you add more details about the environmental benefits?"
- **AI's Refined Response**
 - AI: "Renewable energy sources, such as solar, wind, and hydroelectric power, offer numerous benefits. They are sustainable, reduce greenhouse gas emissions, and decrease dependence on fossil fuels. Additionally, renewable energy helps to reduce air and water pollution, conserves natural resources, and mitigates the effects of climate change by lowering carbon footprints."
- **User's Further Feedback Prompt**
 - User: "Include some economic benefits as well."
- **AI's More Detailed Response**
 - AI: "Renewable energy sources, such as solar, wind, and hydroelectric power, offer numerous benefits. They are sustainable, reduce greenhouse gas emissions, and decrease dependence on fossil fuels. Additionally, renewable energy helps to reduce air and water pollution, conserves natural resources, and mitigates the effects of climate change by lowering carbon footprints. Economically, renewable energy can create jobs, reduce energy costs in the long term, and promote energy independence by diversifying the energy supply."



Example: Guide Beginners On Self- Refine Prompting

'SELF-RE
PROP



Let's consider a simple scenario:

"A beginner wants to write a short essay on the benefits of renewable energy."

Enhancing AI Adoption for Beginners:

- Least-to-Most prompting helps by
 - Improvement Through Feedback
 - Personalized Assistance from the AI
 - Builds Confidence
 - Provides an Interactive Learning Platform

Practical Application:

- Initial Prompt
 - "Write a short essay on the benefits of renewable energy."
- Provide Feedback
 - "Can you add more details about the environmental benefits?"
- Provide Additional Feedback
 - "Include some economic benefits as well."
- Get the "Ah HAH!" Moment

VISUAL
& CHOICES

Directional-Stimulus Prompting

VISUAL
& CHOICES

COLLECTS
DIRECTS

VISUAL
DIRECTAL
CHOICES



Definition and Principles

Directional-Stimulus Prompting is a problem-solving technique that helps users focus on the most important aspects of the problem by providing directional hints. This technique is effective for problem-solving in various domains.



Providing Directional Hints

Directional-Stimulus Prompting provides users with directional hints that help them focus on the most important aspects of the problem. The prompts are designed to help the user stay on track and avoid getting sidetracked by irrelevant details.





Example of Directional-Stimulus Prompting



Let's consider a simple scenario:

"A beginner wants to write a persuasive essay on the importance of renewable energy."

Step-by-Step Process:

- **Initial Prompt**
 - User: "I want to write a persuasive essay on the importance of renewable energy."
- **AI's Directional Stimulus**
 - AI: "Great! Let's start by outlining the main points you want to cover. How about we begin with the environmental benefits of renewable energy?"
- **User's Response**
 - User: "Sure, I can talk about how renewable energy reduces greenhouse gas emissions."
- **AI's Follow-Up Stimulus**
 - AI: "Excellent! Now, let's move on to the economic benefits. Can you think of any ways renewable energy can positively impact the economy?"
- **User's Response**
 - User: "It can create jobs and reduce energy costs in the long run."
- **AI's Next Stimulus**
 - AI: "Perfect! Finally, let's consider the social benefits. How does renewable energy contribute to a healthier and more sustainable society?"
- **User's Response**
 - User: "It reduces air and water pollution, which improves public health."
- **AI's Summary and Encouragement**
 - AI: "You've got a solid outline! Now, let's put it all together into a cohesive essay. Start with an introduction that highlights the importance of renewable energy, then discuss the environmental, economic, and social benefits in separate paragraphs, and conclude with a strong closing statement."



Example of Directional-Stimulus Prompting

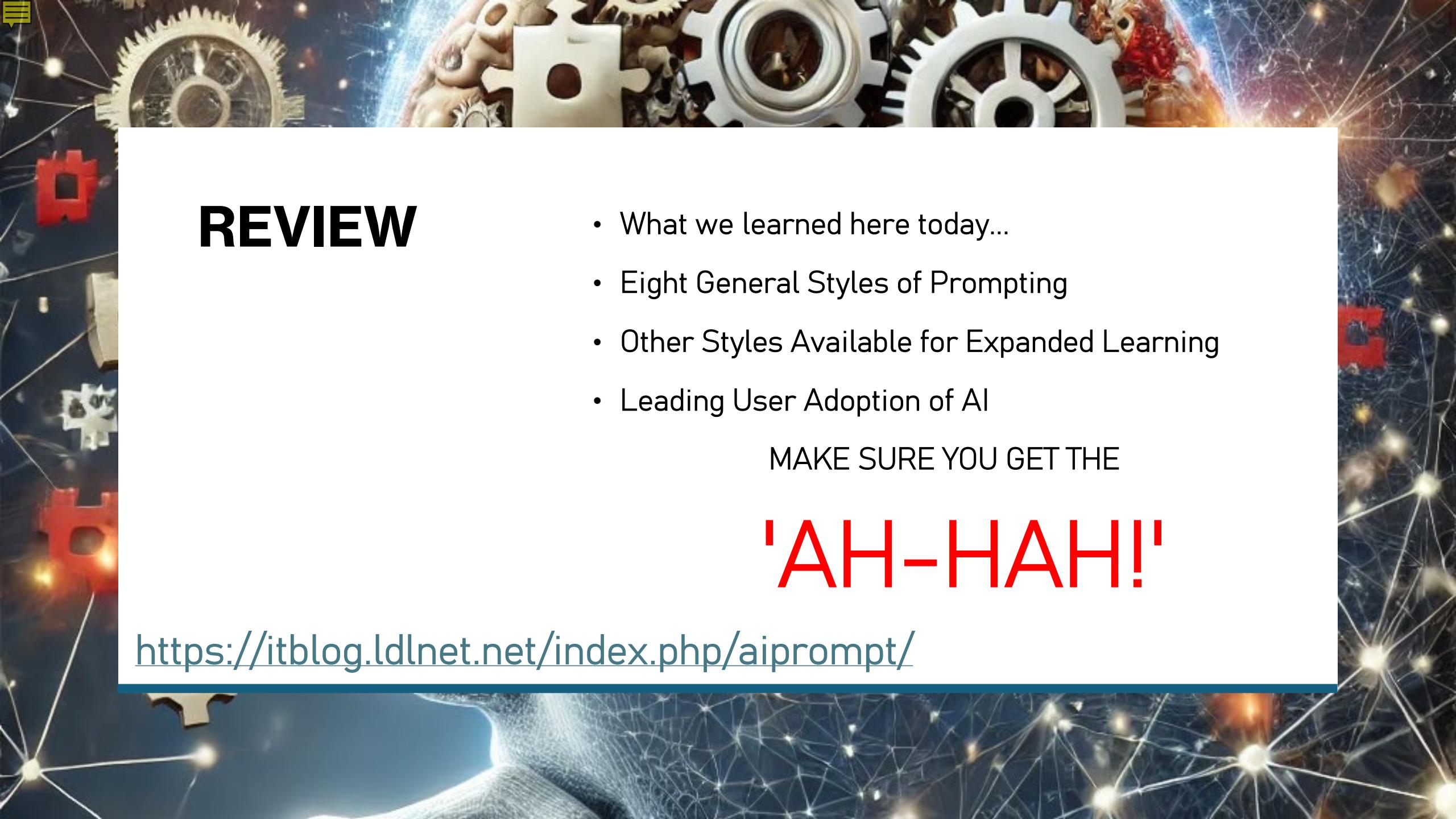


Enhancing AI Adoption for Beginners:

- Directional-Stimulus prompting helps by
 - Provides Structure
 - Guides User Focus
 - Builds User Confidence
 - Provides an Interactive Learning Platform

Practical Application:

- **Initial Prompt:**
 - "I want to write a persuasive essay on the importance of renewable energy."
- **AI's Directional Stimulus:**
 - "Great! Let's start by outlining the main points you want to cover. How about we begin with the environmental benefits of renewable energy?"
- **User's Response:**
 - "Sure, I can talk about how renewable energy reduces greenhouse gas emissions."
- **AI's Follow-Up Stimulus:**
 - "Excellent! Now, let's move on to the economic benefits. Can you think of any ways renewable energy can positively impact the economy?"
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 - "Perfect! Finally, let's consider the social benefits. How does renewable energy contribute to a healthier and more sustainable society?"
- **User's Response:**
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- **AI's Summary and Encouragement:**
 - "You've got a solid outline! Now, let's put it all together into a cohesive essay. Start with an introduction that highlights the importance of renewable energy, then discuss the environmental, economic, and social benefits in separate paragraphs, and conclude with a strong closing statement."



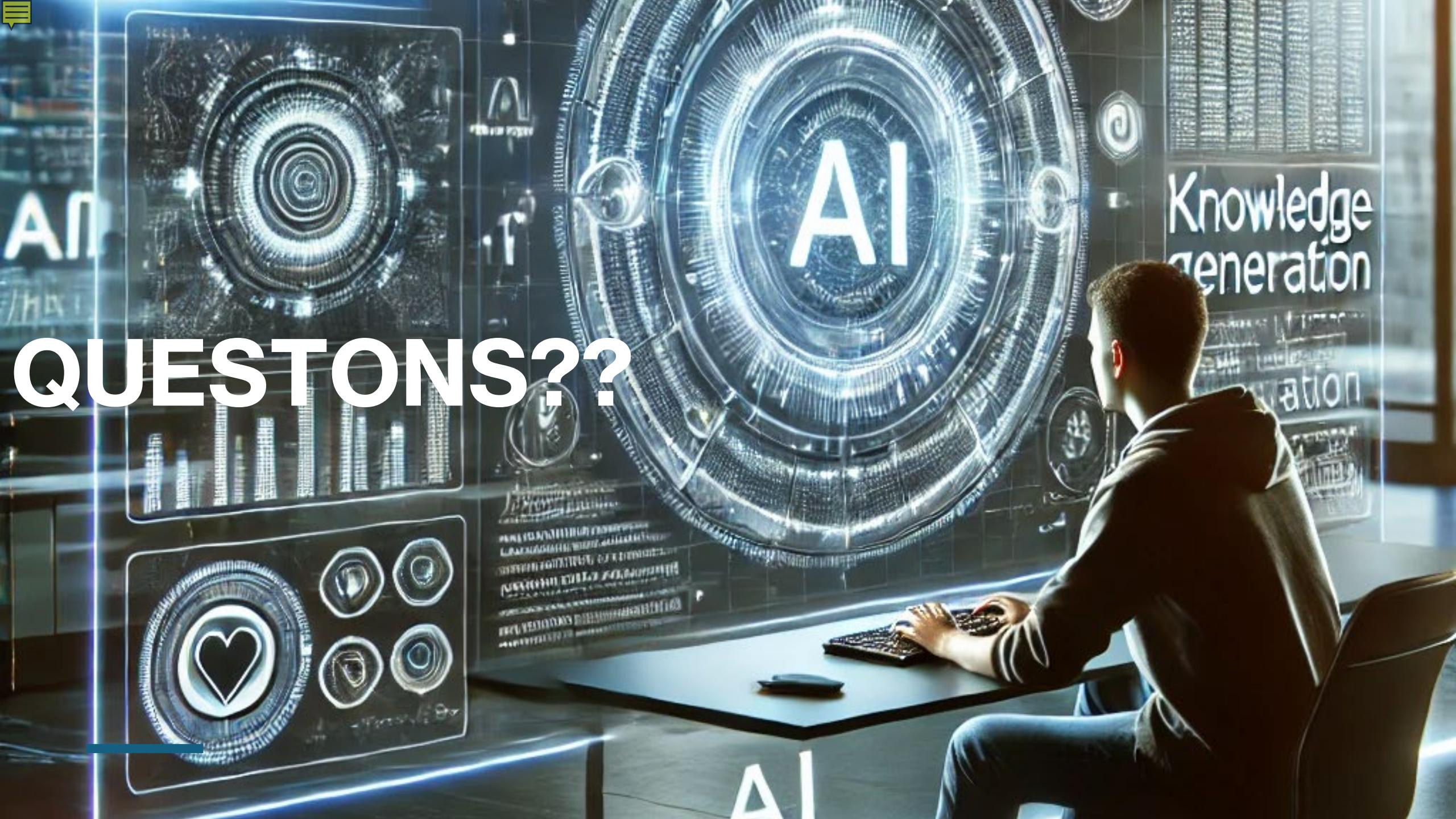
REVIEW

- What we learned here today...
- Eight General Styles of Prompting
- Other Styles Available for Expanded Learning
- Leading User Adoption of AI

MAKE SURE YOU GET THE

'AH-HAH!'

<https://itblog.ldlnet.net/index.php/aiprompt/>



AI

QUESTIONS??

AI

THANK YOU



Microsoft Ignite

Come join me
at #MSIgnite!

Online:
aka.ms/ignite
November 19–21, 2024 CT

In Chicago:
Optional Pre-day: November 18, 2024 CT
Event dates: November 19–22, 2024 CT



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