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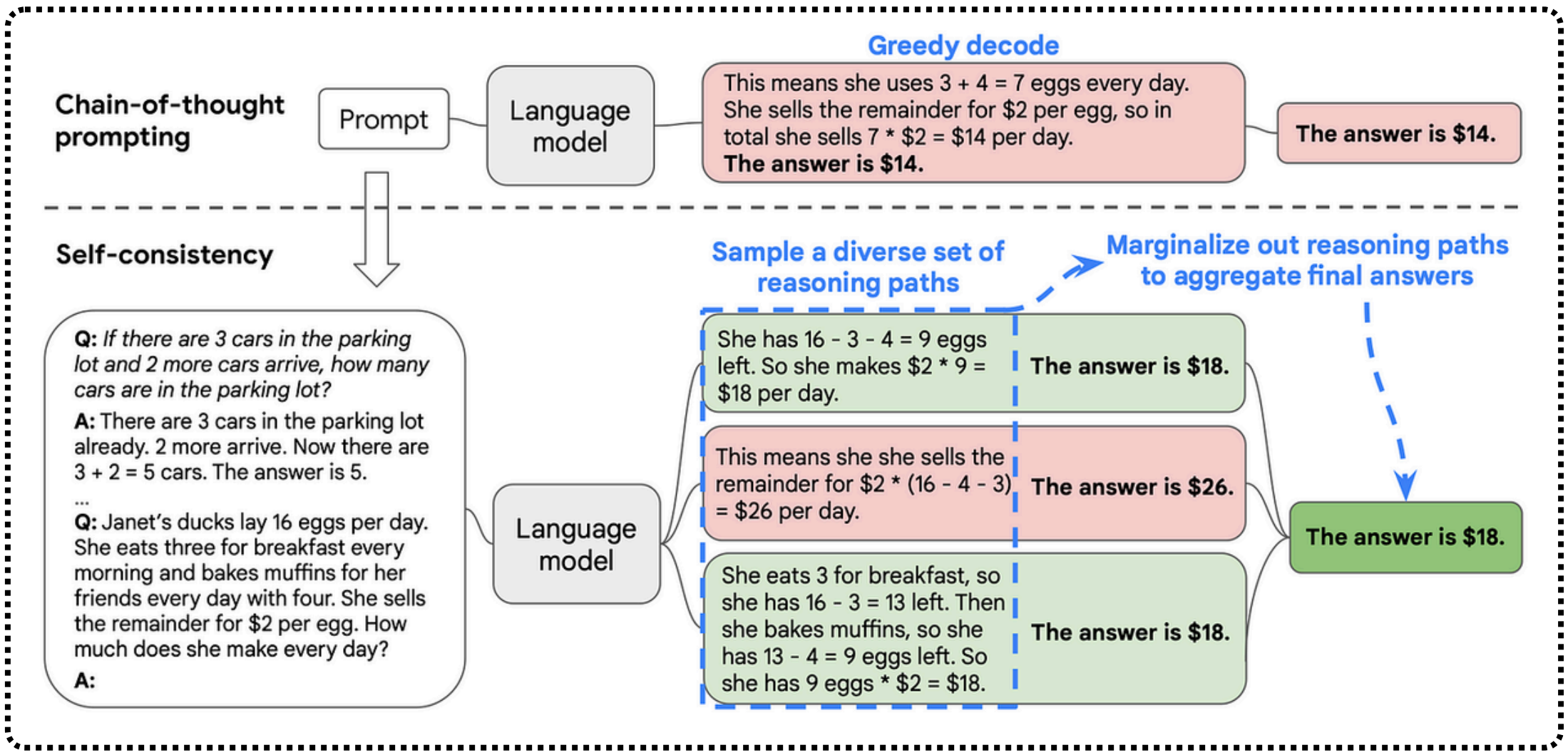
Different Types of Prompt Engineering Techniques



01 Role-Based Prompts

02 Scenario-Based Prompts

03 Direct Prompts (Zero-Shot)

04 Chain of Thought Prompts (CoT)

05 Zero-Shot Chain of Thought Prompts

06 Instructional Prompts

07 Contextual Prompts

08 Binary Prompts

09 Multiple-Choice Prompts

10 Fill-in-the-Blank Prompts

11 Conversational Prompts

Zero-Shot Prompting

Zero-shot prompting involves asking the AI to generate a response without providing any examples or prior context. This technique relies entirely on the model's pre-trained knowledge.

Example

What are the main benefits of artificial intelligence in healthcare?

Pros

- Quick and direct
- Requires minimal input

Cons

- May lead to vague or incorrect responses
- Can lack specificity

One-shot prompting

One-shot prompting provides a single example before asking the model to generate a response, helping it understand the expected format or answer style.

Example

A cat is a small domesticated animal that is often kept as a pet. Now, describe a dog.

Pros

- Gives the model context for response style
- Helps steer the model in the right direction

Cons

- May not be sufficient for complex tasks

Few-Shot Prompting

Few-shot prompting includes multiple examples before asking for a response, improving the quality of the output by reinforcing patterns.

Example

Example 1: A cat is a small domesticated animal that is often kept as a pet.

Example 2: A horse is a large domesticated animal used for riding and work.

Now, describe an elephant.

Pros

- Provides better accuracy than zero- and one-shot prompting
- Helps AI generalize responses better

Cons

- Requires more input data
- Can be inefficient for longer prompts

Chain-of-Thought (CoT) Prompting

This technique guides the AI to break down complex reasoning tasks step by step, improving logical consistency.

Example

If Tom has 3 apples and he buys 2 more, how many does he have? Let's think step by step.

Pros

- Enhances logical reasoning
- Useful for mathematical and problem-solving tasks

Cons

- Increases response length
- Might still generate errors if the reasoning process is flawed

Instruction-Based Prompting

Instruction-based prompts explicitly define the format and structure the AI should follow, increasing response accuracy.

Example

Summarize the following text in two sentences:
[Insert text here]

Pros

- Improves clarity and response structure
- Reduces ambiguity

Cons

- Requires precise wording