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Self-Consistency Prompting

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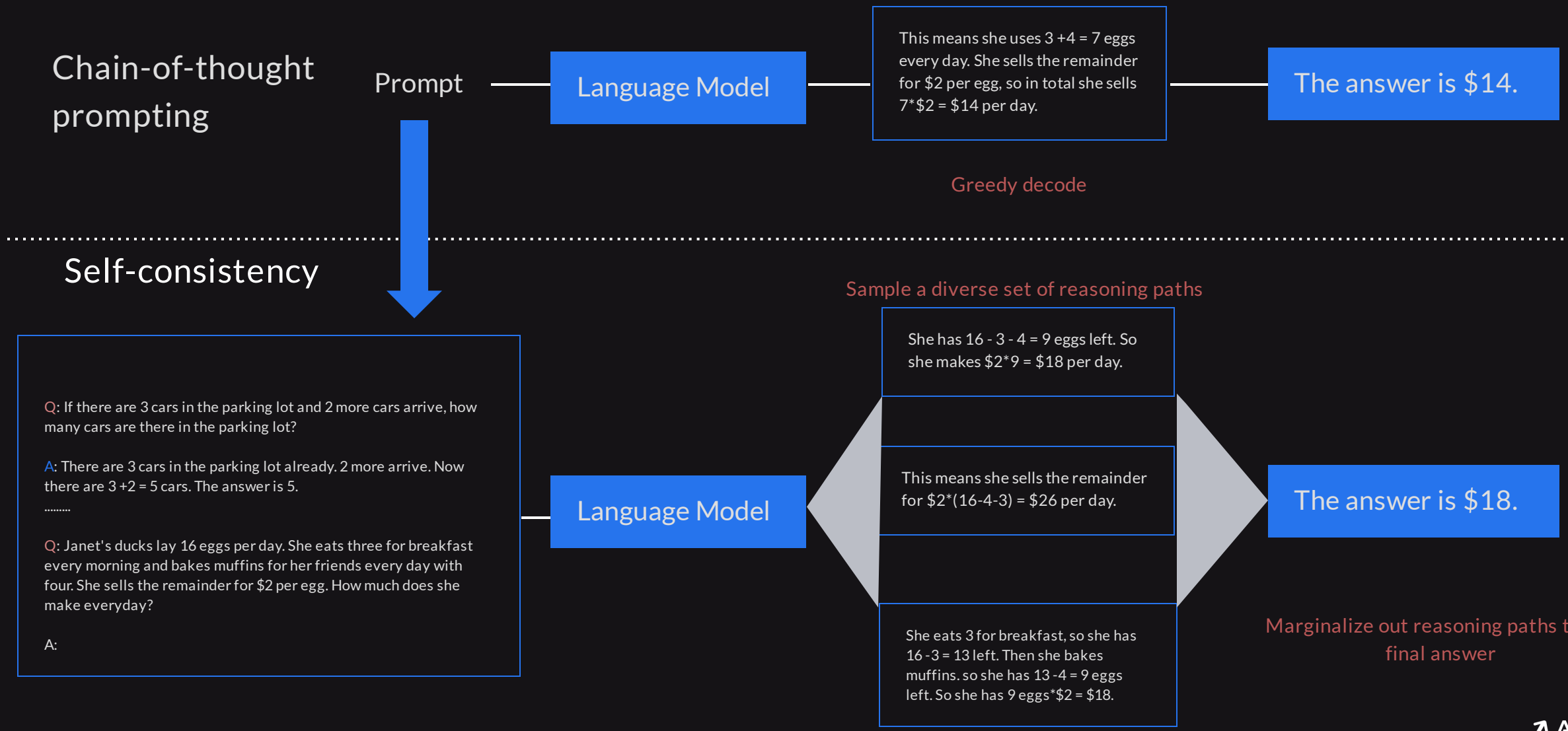
Definition

- Self-consistency Prompting is a method that helps language models solve complex problems by considering multiple ways to think about a problem and then choosing the most common solution.

How Does it Work?

- Multi-path Reasoning: Generates and evaluates various reasoning paths, choosing the most recurring outcome.
- Confidence Through Consensus: Achieves reliability when different reasoning approaches converge on a single answer, mimicking human confidence in decision-making.
- Beyond 'Greedy Decoding': Surpasses traditional 'greedy decoding' by avoiding pitfalls like repetition and local-optimality issues.

Self-consistency Prompting: Example



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Pros: Self-consistency Prompting

Self-consistency Prompting finds the most common answer from different ways of solving a problem.

- Makes the computer program's answers more reliable by checking them in many ways
- Tells us how sure the program is about the answer, which is helpful
- Simple method and doesn't need extra training, which saves time and effort

Cons: Self-consistency Prompting

Self-consistency Prompting finds the most common answer from different ways of solving a problem.

- Evaluates multiple solutions, requiring more processing power.
- Potential for generating nonsensical or incorrect answers necessitates cautious use.
- Provides better results than some methods but doesn't guarantee correctness.

Thank You

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