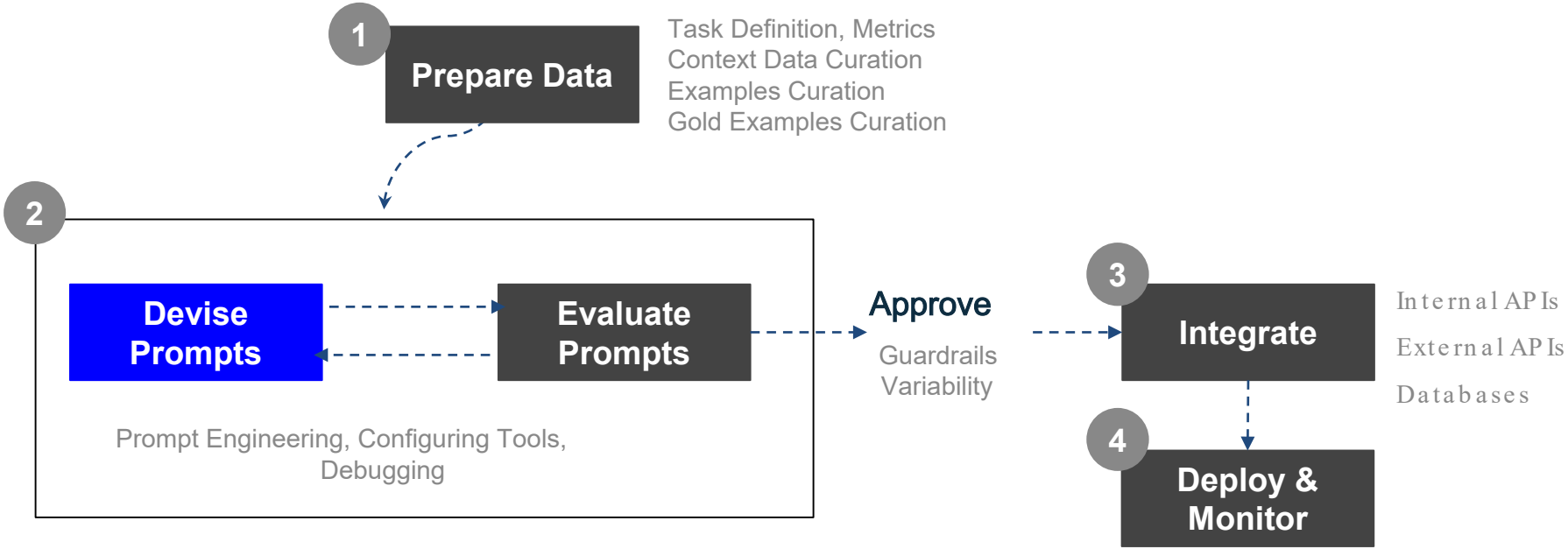
Prompt Engineering: The art and science of designing effective LLM prompts

Agenda

In this session, we'll discuss:

- Introduction to Large Language Models (LLMs)
- Models and Deployments
- Fundamentals of Prompt Engineering

Operationalizing Generative AI

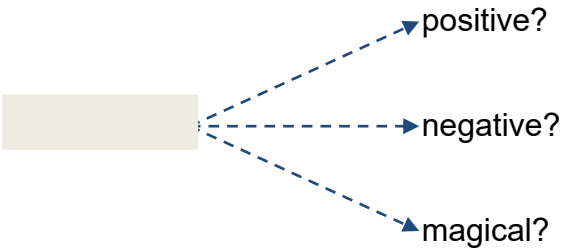


Large Language Models (LLMs)

*LLMs are **train** ed using language modeling, that is, predicting the next word in a sequence.*

Masked Sample

The movie was awesome. Overall, the experience was



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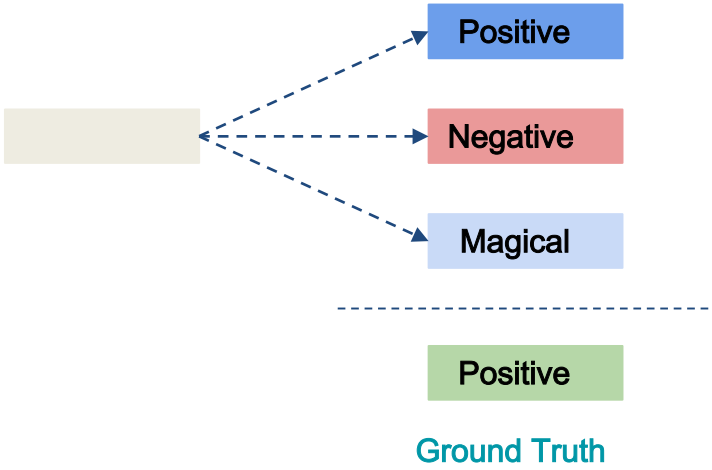

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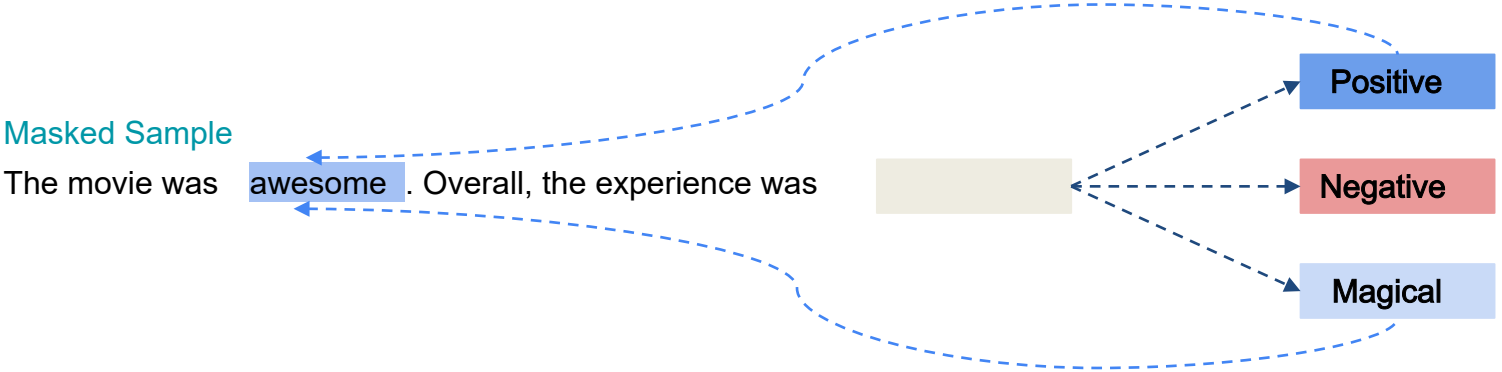

Large Language Models (LLMs)

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The movie is a visually stunning , action -packed, and emotionally resonant thrill ride that will leave you on the edge of the seat from the beginning to end. Overall, the experience was magical.

positive p = .03

negative p = .00001

...

magical p = .83

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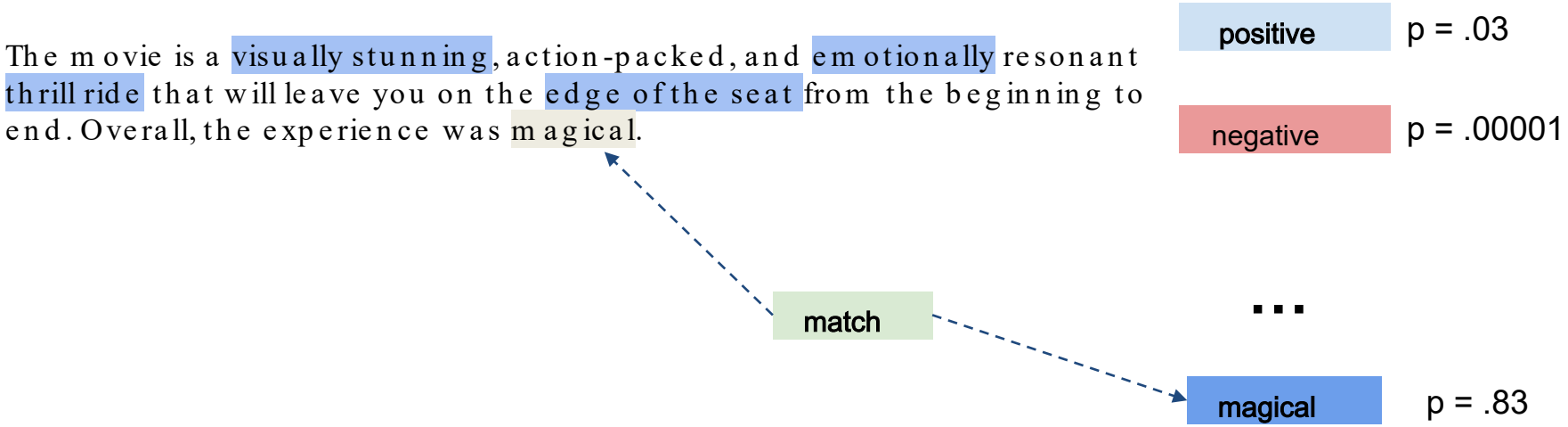

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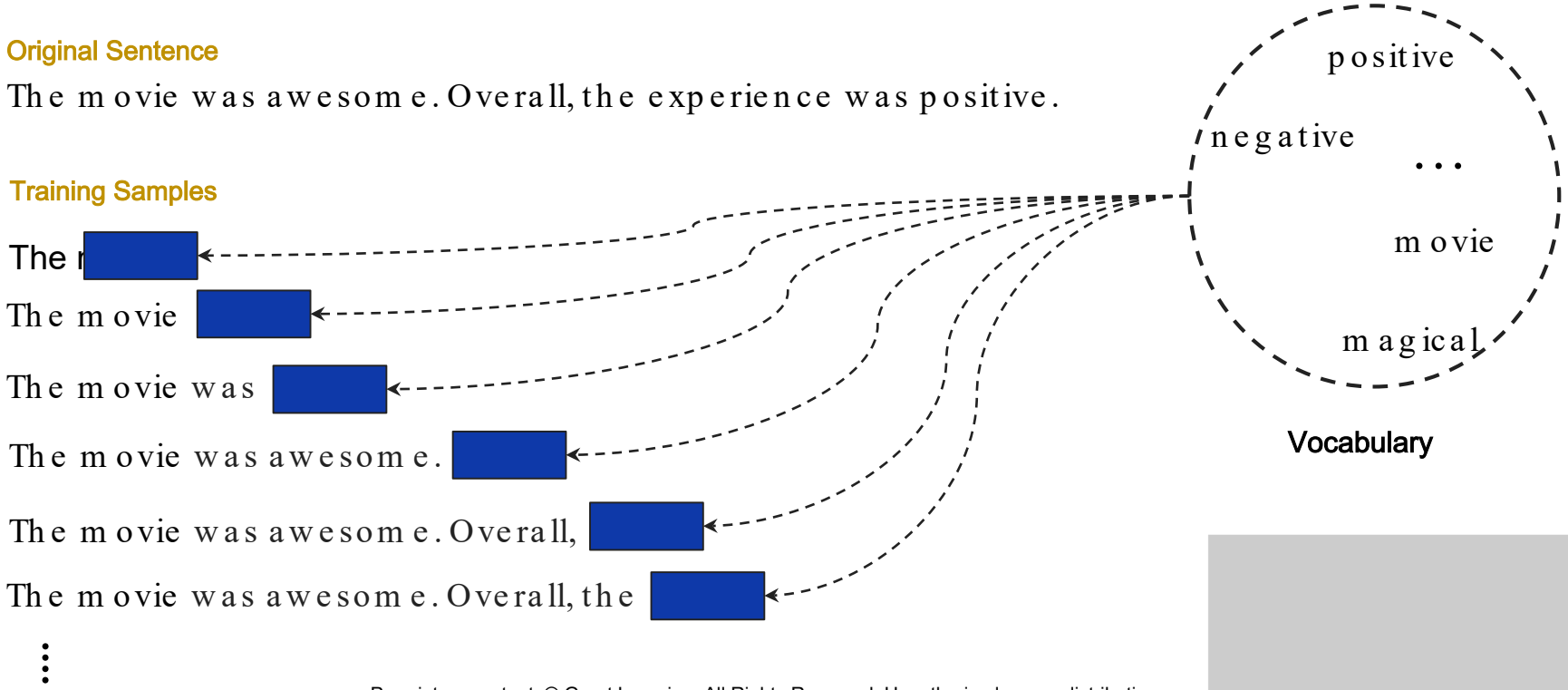
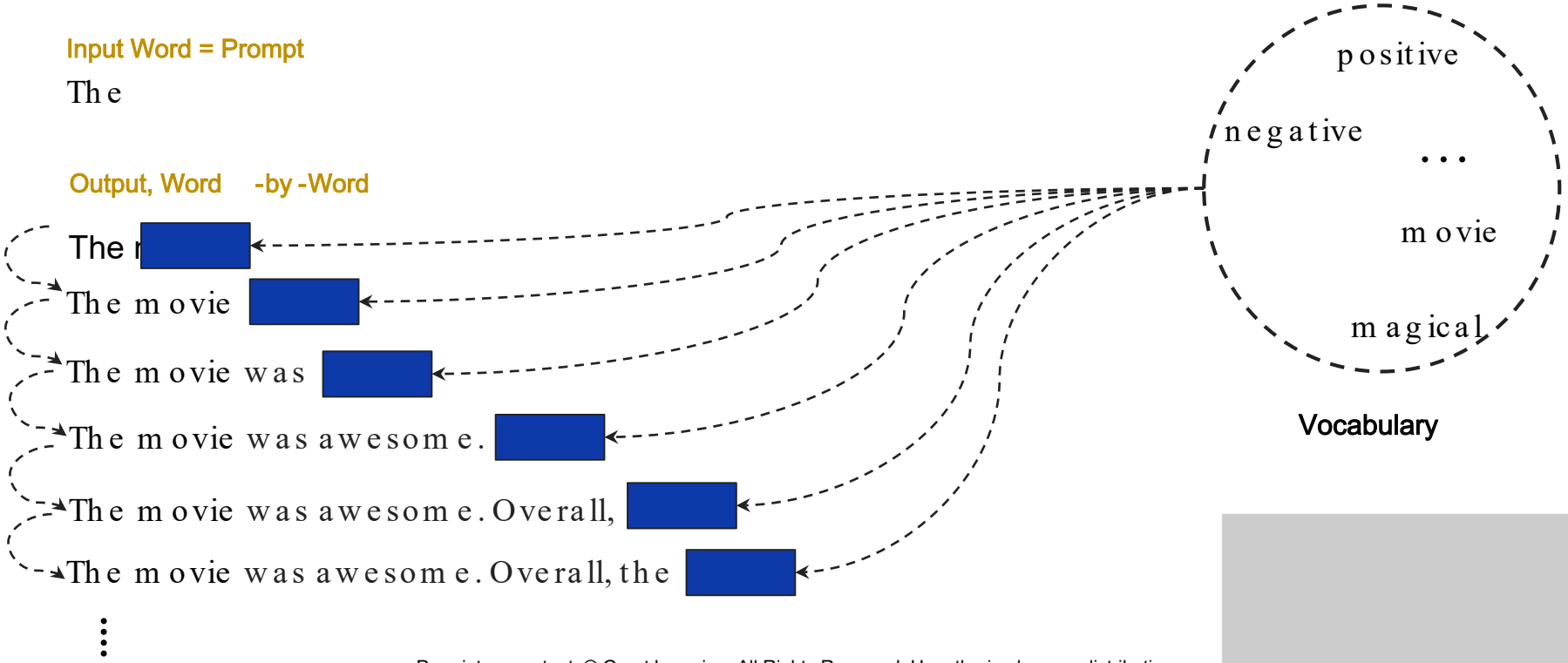


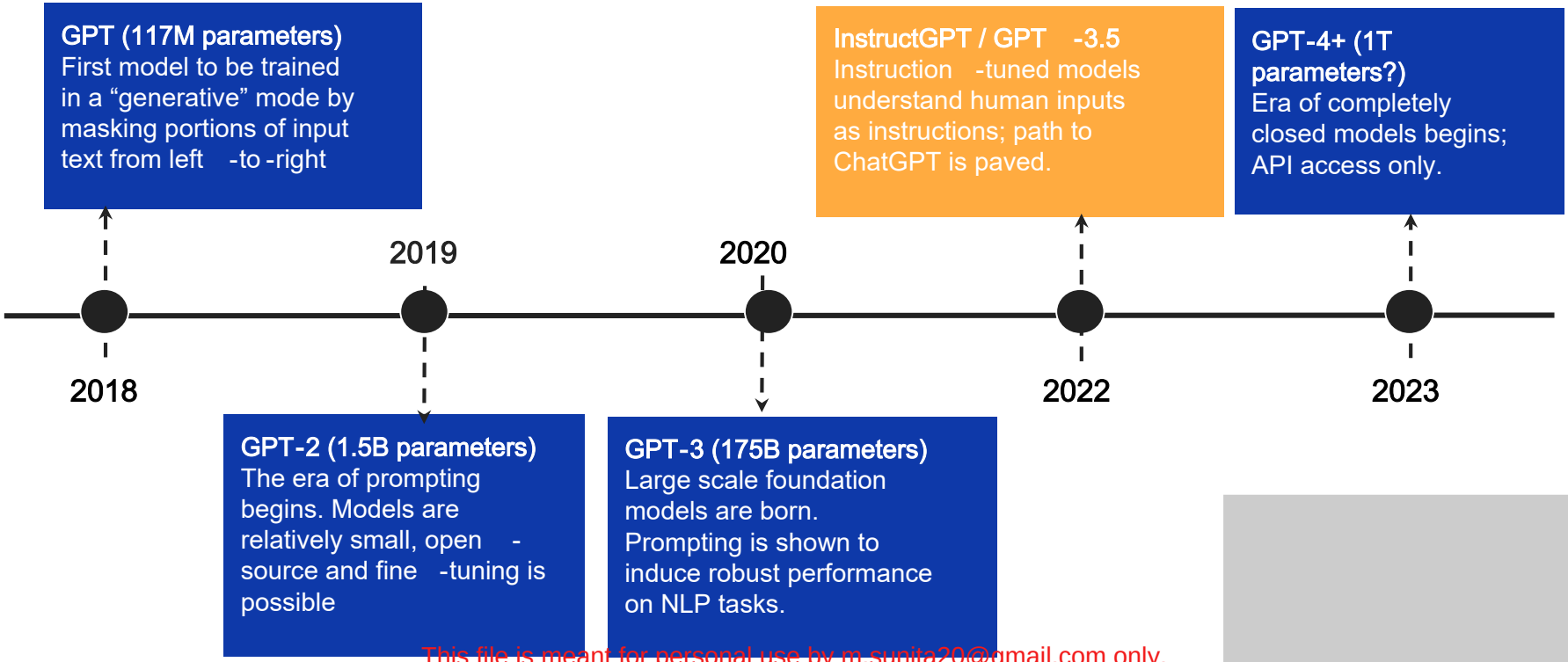
Large Language Models (LLMs)

*During **inference**, the LLM predicts the next word in the input sequence.*



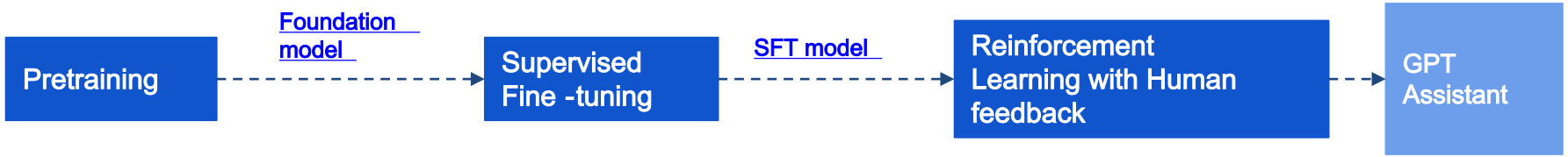
Large Language Models (LLMs)

Over the last 2 years, LLMs like ChatGPT have evolved to become ***Conversational AI assistants.***



Large Language Models (LLMs)

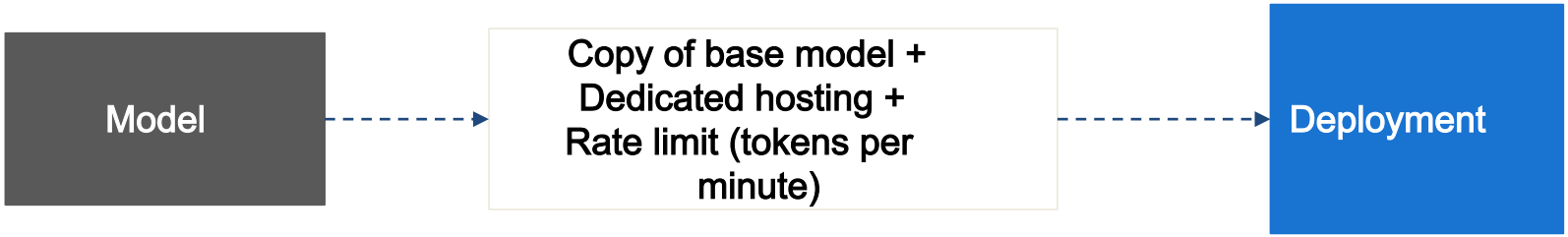
How are LLMs trained today?



Data

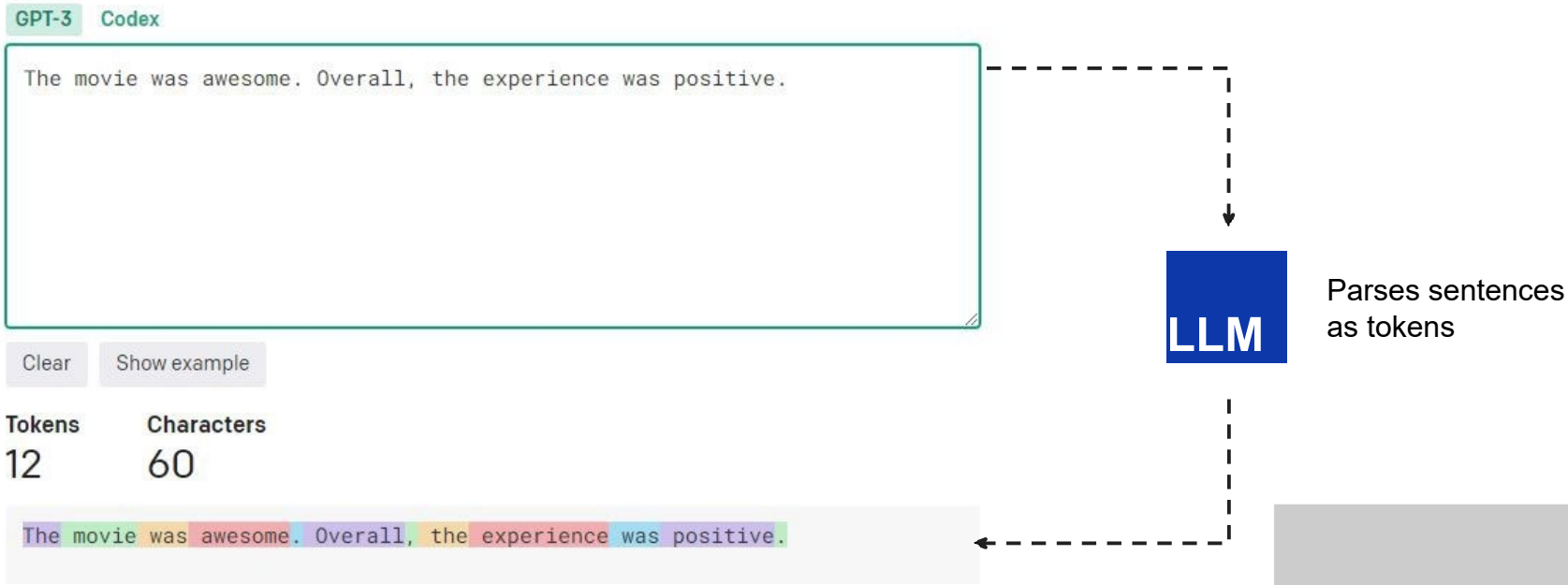
Large corpus of internet data	Curated high quality prompt -response pairs	Ranking of prompt responses on quality

Models and Deployments



Tokens

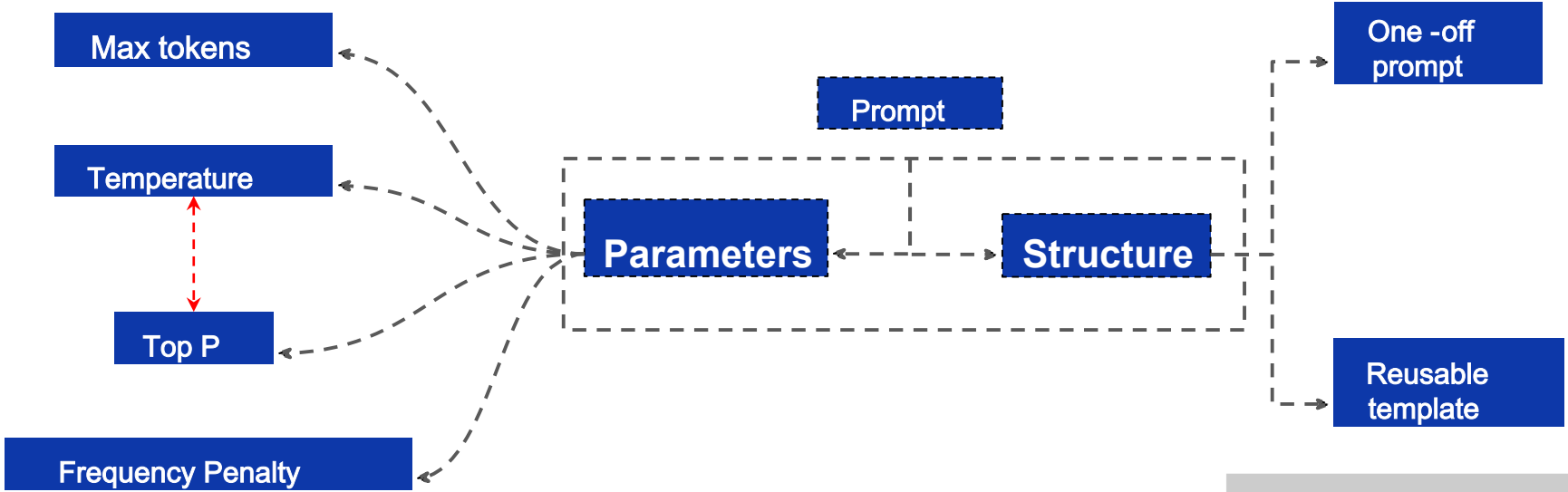
Token = Sequence of characters found in text



Prompt Engineering

Prompt = Specific set of instructions sent to a LLM to accomplish a task

Engineering = Iteratively deriving a specific prompt for the task



*Also referred to as in -context learning

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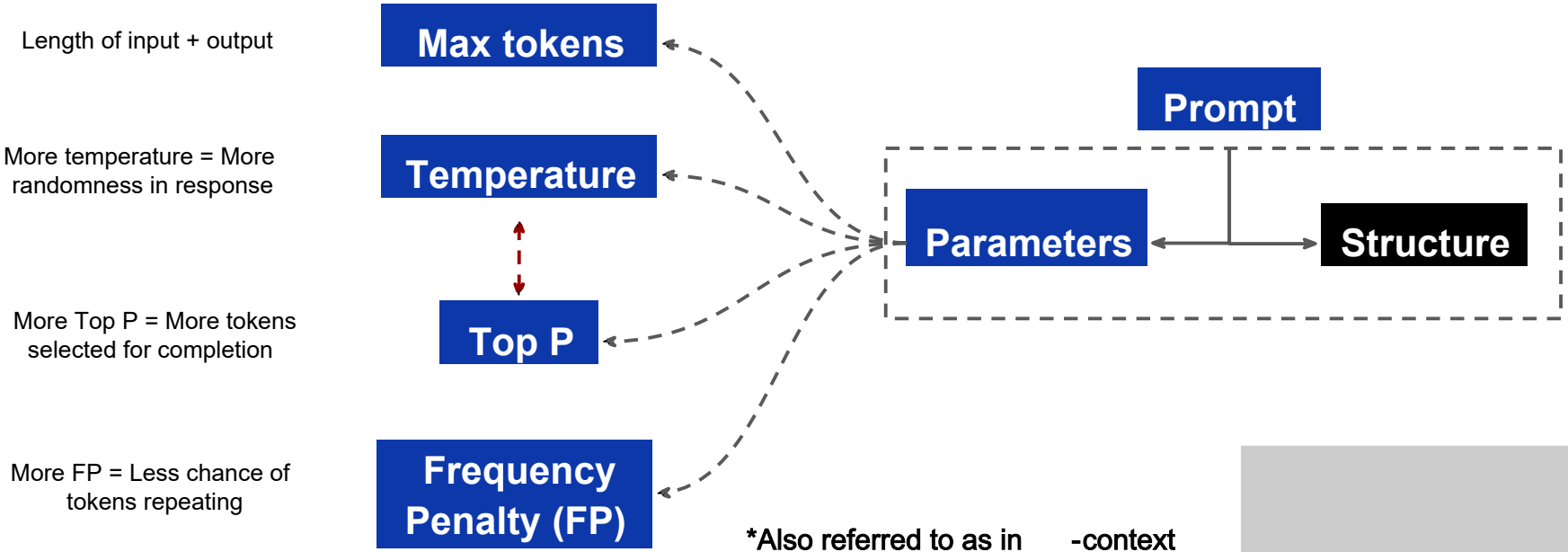

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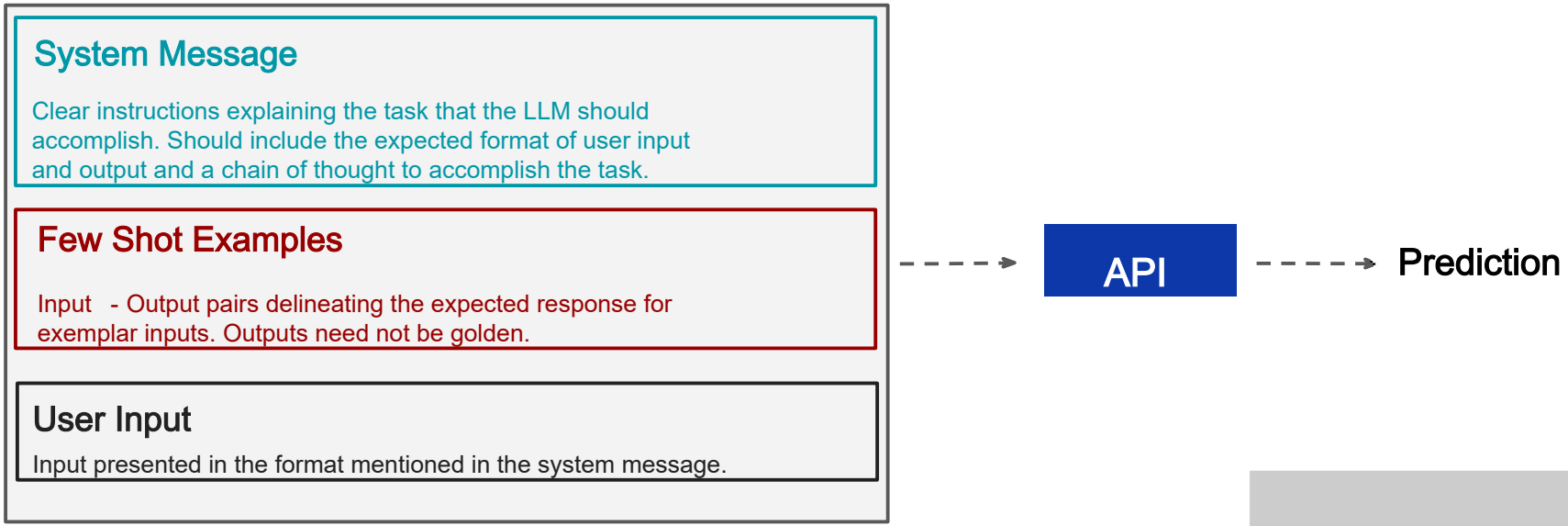
Prompt Engineering

Components of a Prompt Template



Summary