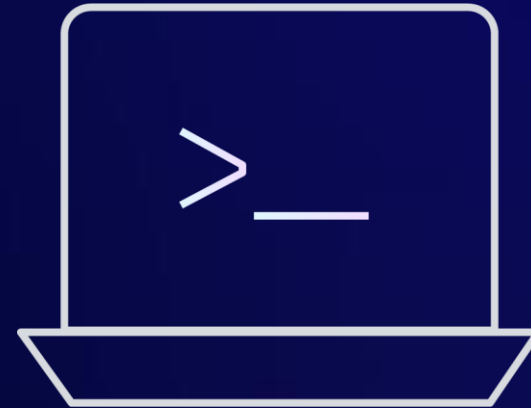


**Prompt engineering is the fastest way to harness the power of large language models**

# Key concepts of prompt engineering

# Fine-tuning vs. prompt tuning



# Elements of a prompt



1

**Instructions**



2

**Context**



3

**Input data**



4

**Output  
indicator**

# Prompt example

Prompt	Output
<p>Write a summary of a service review using two sentences.</p> <p>Store: Online Service: Shipping</p> <p>Review: Amazon Prime Student is a great option for students looking to save money. Not paying for shipping is the biggest save in my opinion. As a working mom of three that is also a student, it saves me tons of time with free 2-day shipping, and I get things I need quickly and sometimes as early as the next day, while enjoying all the free streaming services and books that a regular Prime membership has to offer for half the price. Amazon Prime Student is only available for college students, and it offers so many things to help make college life easier. This is why Amazon Prime is the no-brainer that I use to order my school supplies, my clothes, and even to watch movies in between classes. I think Amazon Prime Student is a great investment for all college students.</p> <p>Summary:</p>	<p>Amazon Prime Student is a fantastic option for college students, offering free 2-day shipping, streaming services, books, and other benefits for half the price of a regular Prime membership. It saves time and money, making college life easier.</p>

# Elements of the prompt example

Instructions  
and  
output indicator

Context

Input data

Prompt	Output
<p>Write a summary of a service review using two sentences.</p> <p>Store: Online Service: Shipping</p> <p>Review: Amazon Prime Student is a great option for students looking to save money. Not paying for shipping is the biggest save in my opinion. As a working mom of three who is also a student, it saves me tons of time with free 2-day shipping, and I get things I need quickly and sometimes as early as the next day, while enjoying all the free streaming services and books that a regular Prime membership has to offer for half the price. Amazon Prime Student is only available for college students, and it offers so many things to help make college life easier. This is why Amazon Prime is the no-brainer that I use to order my school supplies, my clothes, and even to watch movies in between classes. I think Amazon Prime Student is a great investment for all college students.</p> <p>Summary:</p>	<p>Amazon Prime Student is a fantastic option for college students, offering free 2-day shipping, streaming services, books, and other benefits for half the price of a regular Prime membership. It saves time and money, making college life easier.</p>



# Best practices for designing effective prompts



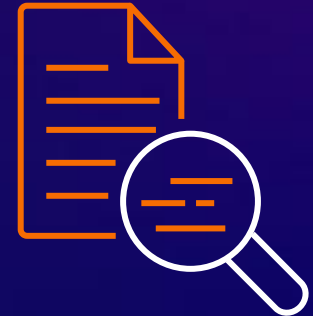
Be clear and  
concise



Include context



Use directives



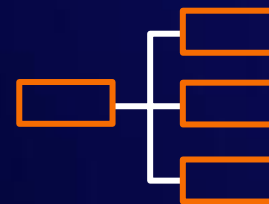
Include output



Start with a  
question



Provide example  
responses



Break up  
complex tasks



Experiment  
and be creative

# Which prompt follows prompting best practices?

BE CLEAR AND CONCISE

## Prompt 1

Compute the sum total of the subsequent sequence of numerals: 4, 8, 12, 16.

or

## Prompt 2

What is the sum of these numbers: 4, 8, 12, 16?



# Which prompt follows prompting best practices?

BE CLEAR AND CONCISE

## Prompt 1

Compute the sum total of the subsequent sequence of numerals: 4, 8, 12, 16.

or

## Prompt 2

What is the sum of these numbers: 4, 8, 12, 16?

# Which prompt follows prompting best practices?

INCLUDE CONTEXT IF NEEDED

## Prompt 1

Summarize this article:  
[insert article text]

or

## Prompt 2

Provide a summary of this article to be used in a blog post:  
[insert article text]

# Which prompt follows prompting best practices?

INCLUDE CONTEXT IF NEEDED

## Prompt 1

Summarize this article:  
[insert article text]

or

## Prompt 2

Provide a summary of this article to be used in a blog post:  
[insert article text]

# Which prompt follows prompting best practices?

USE DIRECTIVES FOR THE DESIRED RESPONSE TYPE

## Prompt 1

What is the capital of New York? Provide the answer in a full sentence.

or

## Prompt 2

What is the capital of New York?

# Which prompt follows prompting best practices?

USE DIRECTIVES FOR THE DESIRED RESPONSE TYPE

## Prompt 1

What is the capital of New York? Provide the answer in a full sentence.

or

## Prompt 2

What is the capital of New York?

# Which prompt follows prompting best practices?

CONSIDER THE OUTPUT IN THE PROMPT

## Prompt 1

Calculate the area of a circle.

or

## Prompt 2

Calculate the area of a circle with a radius of 3 inches (7.5 cm). Round your answer to the nearest integer.

# Which prompt follows prompting best practices?

CONSIDER THE OUTPUT IN THE PROMPT

## Prompt 1

Calculate the area of a circle.

or

## Prompt 2

Calculate the area of a circle with a radius of 3 inches (7.5 cm). Round your answer to the nearest integer.

# Which prompt follows prompting best practices?

START PROMPTS WITH A QUESTION

## Prompt 1

Why did this event happen?  
Explain in three sentences.

or

## Prompt 2

Summarize this event.



# Which prompt follows prompting best practices?

START PROMPTS WITH A QUESTION

## Prompt 1

Why did this event happen?  
Explain in three sentences.

or

## Prompt 2

Summarize this event.

# Which prompt follows prompting best practices?

PROVIDE AN EXAMPLE RESPONSE

## Prompt 1

Determine the sentiment of this social media post: “[insert post]”

or

## Prompt 2

Determine the sentiment of the following social media post using these examples:

post: “great pen” // Positive

post: “I hate when my phone battery dies” // Negative

“[insert post]” //

# Which prompt follows prompting best practices?

PROVIDE AN EXAMPLE RESPONSE

## Prompt 1

Determine the sentiment of this social media post: “[insert post]”

or

## Prompt 2

Determine the sentiment of the following social media post using these examples:

post: “great pen” // Positive

post: “I hate when my phone battery dies” // Negative

“[insert post]” //

# Remember to evaluate and adjust

Review responses and consider...

**Quality**

**Type**

**Range**

...and make changes to the prompts as needed.



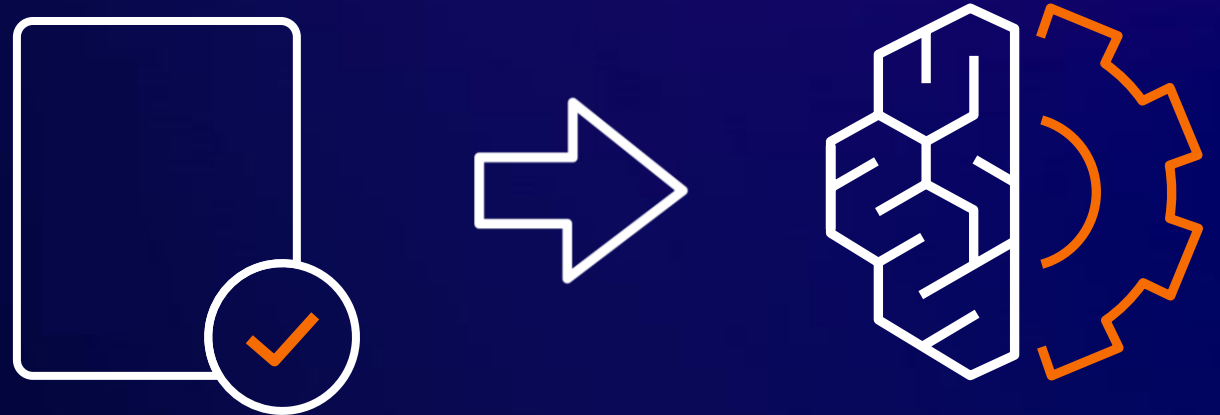
# Basic prompt techniques

# Zero-shot prompting

Providing tasks to an LLM with no examples, or *shots*, of the task

Tips:

- The larger the LLM, the more effective the results
- Instruction tuning can improve zero-shot learning



# Zero-shot prompt example

Prompt	Output
<p>Tell me the sentiment of the following social media post and categorize it as positive, negative, or neutral:</p> <p>Don't miss the electric vehicle revolution! AnyCompany is ditching muscle cars for EVs, creating a huge opportunity for investors.</p>	Positive

# Few-shot prompting

Providing tasks with contextual information, or a *few shots*, of the output

## Tips:

- Correct labels are not needed for effective results, but formatting is important
- Use techniques to obey token limits of your LLM

