What is Prompt Engineering

Instructor

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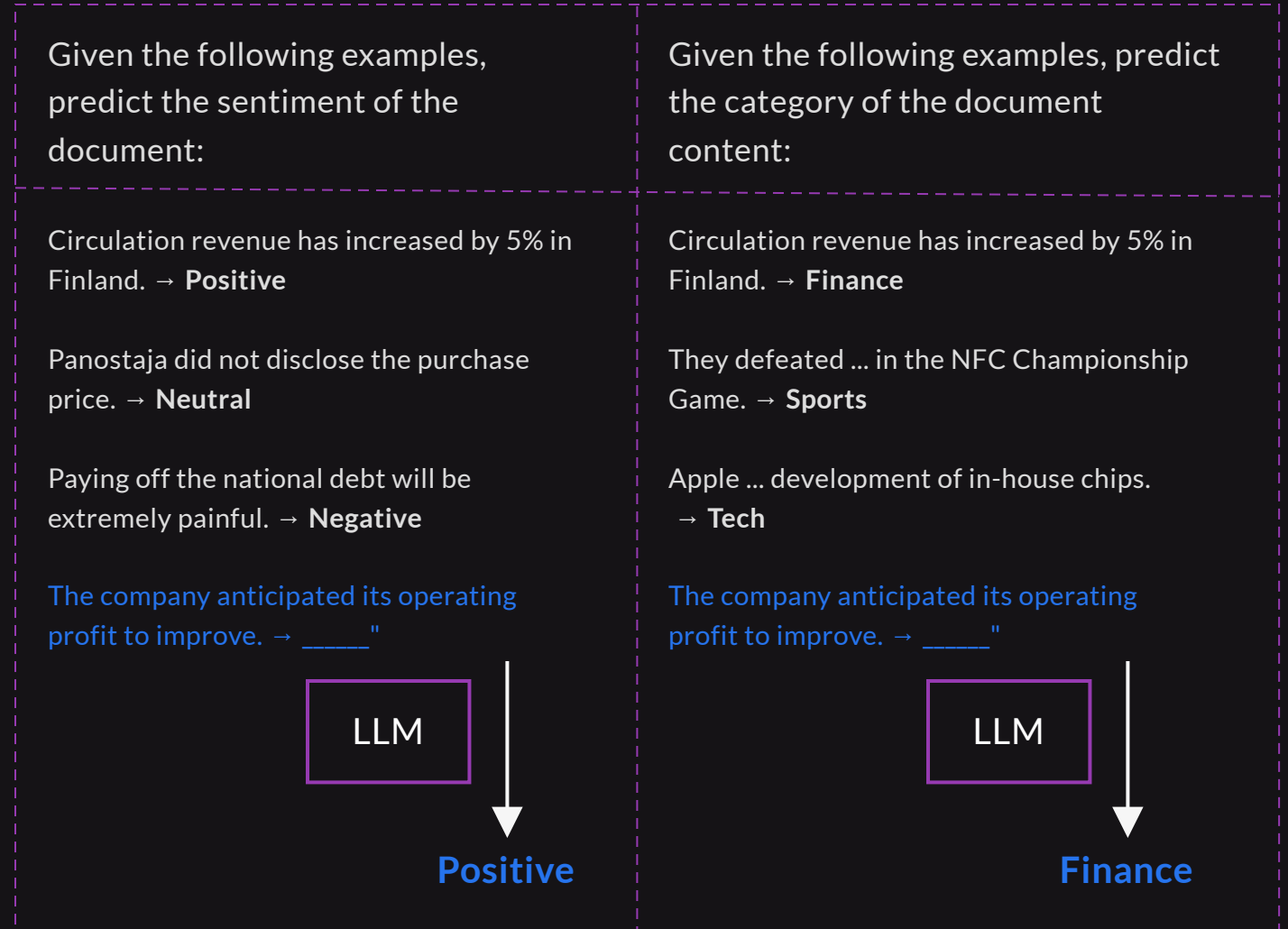
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Importance of In-Context Learning & Prompting

- In-context learning was introduced in the original GPT-3 paper as a method for utilizing language models to learn tasks through prompts and a few examples.

- Prompt instructions along with a few examples have dramatically improved the performance of LLMs to solve diverse tasks and are frequently used in building systems like RAG and Agents


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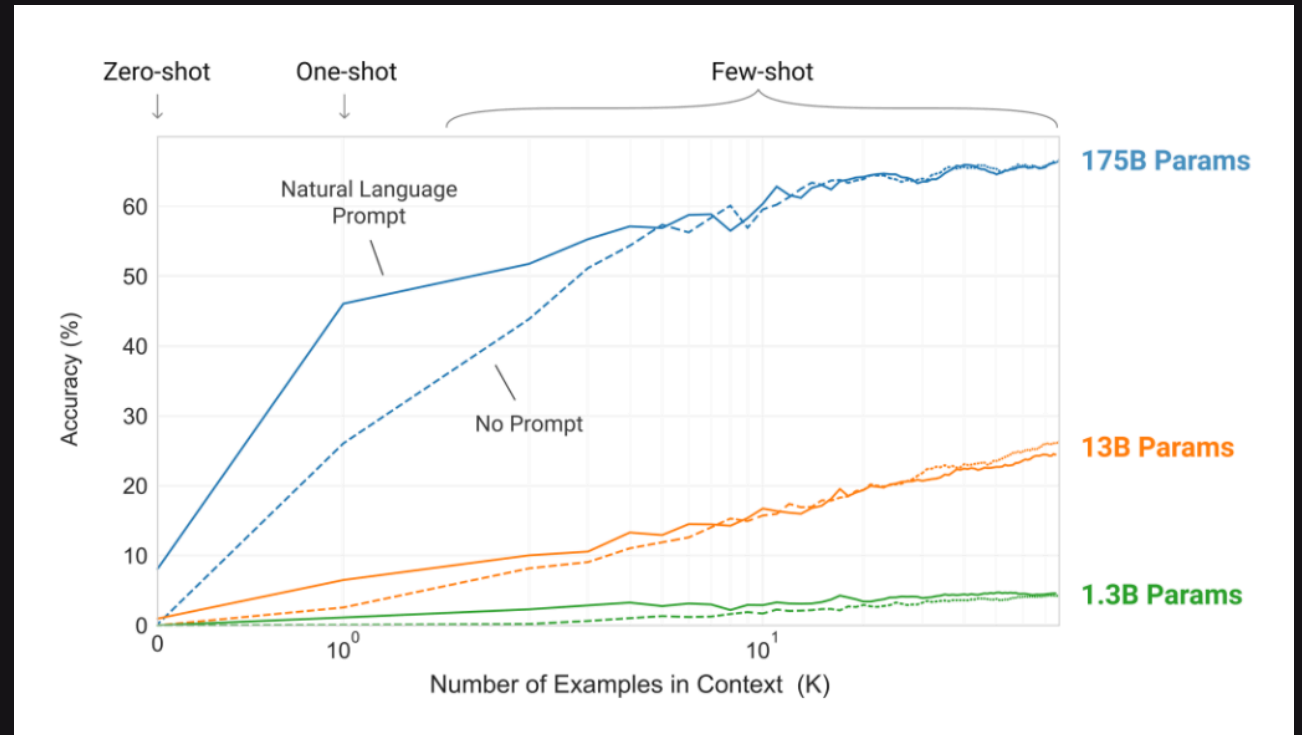
Importance of In-Context Learning & Prompting

- Providing clear prompt instructions and examples helps LLMs address various use cases effectively.

- Creating the right prompt is crucial for achieving the results you want in your tasks.

- Using prompting and in-context learning is often preferred to solve problems without needing to train the model explicitly.

Given the following examples, predict the sentiment of the document:

Circulation revenue has increased by 5% in Finland. → **Positive**

Panostaja did not disclose the purchase price. → **Neutral**

Paying off the national debt will be extremely painful. → **Negative**

The company anticipated its operating profit to improve. → _____"

LLM

Positive

Given the following examples, predict the category of the document content:

Circulation revenue has increased by 5% in Finland. → **Finance**

They defeated ... in the NFC Championship Game. → **Sports**

Apple ... development of in-house chips. → **Tech**

The company anticipated its operating profit to improve. → _____"

LLM

Finance

What is a Prompt?

Prompt is the text you give to the LLM as an instruction to get a desired response
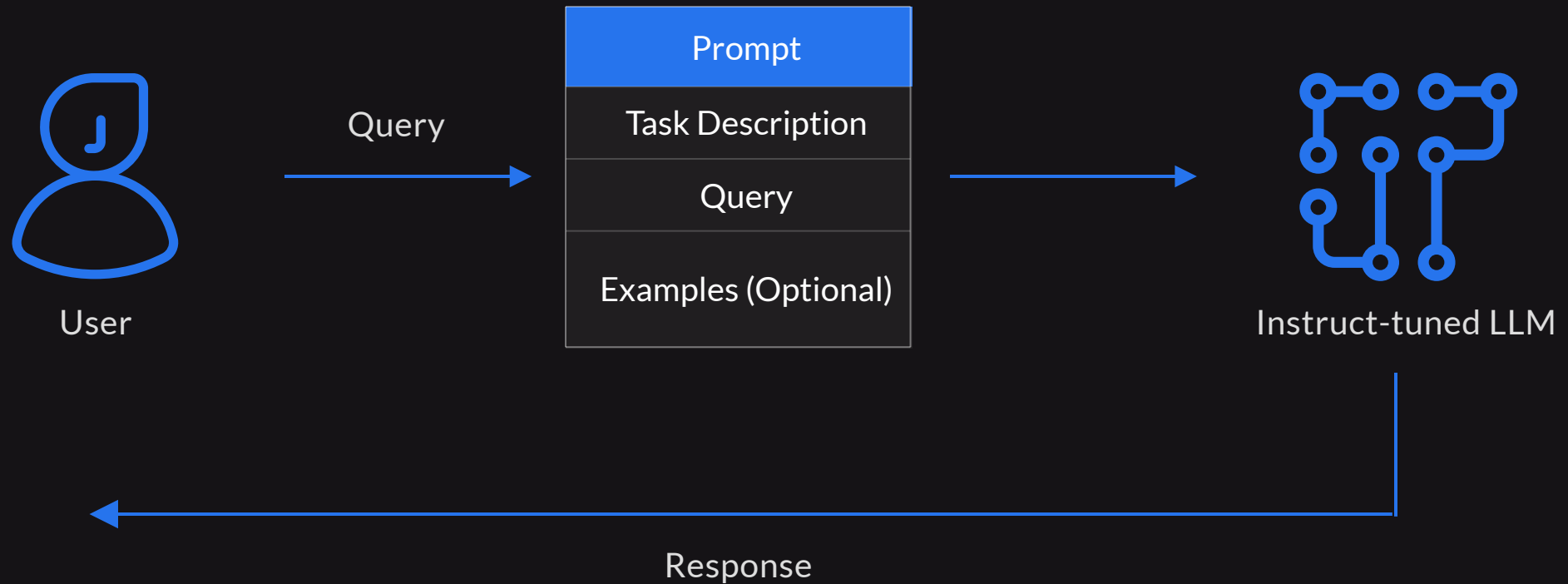
What is a Prompt?

In the context of prompt engineering, what is a prompt?

In prompt engineering, a *prompt* is the input text or instruction given to a generative AI model to guide its output. The prompt can be a question, a command, or a detailed scenario, designed to evoke a specific response or type of output from the model. Effective prompts are carefully structured to achieve clear, relevant, and accurate results, often with contextual hints or constraints to shape the model's response.

Simple Example of a Prompt

Give an example of a prompt

Prompt: "Create a list of actionable strategies a small business can use to improve its online presence and attract more local customers. Include cost-effective marketing techniques, social media tips, and ways to enhance customer engagement."

This prompt guides the model to generate practical, real-world solutions tailored to a small business owner's objective of boosting visibility and customer interaction, focusing on cost-efficiency and actionable steps.

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Simple Example of a Prompt

Create a list of actionable strategies a small business can use to improve its online presence and attract more local customers (Max 4). Include cost-effective marketing techniques, social media tips, and ways to enhance customer engagement.
Output the result as a markdown table.

Strategy	Description
Leverage Local SEO	Optimize your website for local search terms (e.g., "bakery near me") and register on Google My Business. This makes it easier for nearby customers to find your business online.
Run Social Media Contests	Host giveaways or contests on social media platforms like Instagram or Facebook, encouraging participants to tag friends or share posts. This increases brand visibility and engagement without high costs.
Partner with Local Influencers	Collaborate with local influencers or micro-influencers who resonate with your target audience to promote your products. They often charge less than larger influencers but can be very effective for local outreach.
Engage with Online Reviews	Actively respond to customer reviews on platforms like Yelp and Google. Thank positive reviewers, and address any concerns raised in negative reviews. Engaging authentically with customers builds trust and loyalty.

What is Prompt Engineering?

What is prompt engineering?

Prompt engineering is the **process of designing and optimizing prompts** to **achieve specific, relevant, and accurate outputs** from a generative AI model. It involves crafting clear instructions, providing contextual details, and using structured language to guide the AI's response effectively. In prompt engineering, users experiment with phrasing, structure, and additional hints to improve the AI's performance on tasks ranging from answering questions to generating stories, performing data analysis, or solving real-world problems.

Effective prompt engineering enables users to tailor AI responses for a variety of applications, from customer service chatbots and automated content generation to advanced problem-solving in business and education.

Iterative Prompt Engineering Example

Iteration 1

Iterative Prompt Engineering Example

Iteration 2

Create a short message to explain how an Agentic AI System works with an informal tone

An Agentic AI System is like an independent problem-solver—it doesn't just follow set instructions but actually figures things out on its own! It can look at the situation around it, decide what actions to take, and even adapt on the fly if things change. Think of it as an AI that's a bit more "street smart," handling tasks step-by-step, learning from its choices, and tweaking its actions to get better over time. Perfect for those tricky, unpredictable scenarios where it needs to think on its feet!

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Iterative Prompt Engineering Example

Iteration 3

Create a short message to explain how an Agentic AI System works with an informal tone and in less than 30 words

An Agentic AI System is like a smart, self-guided problem-solver—it senses, decides, adapts, and learns on its own, handling tasks step-by-step, even when things get unpredictable!

Thank You

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