



# Large Language Models

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# Introduction to LLMs

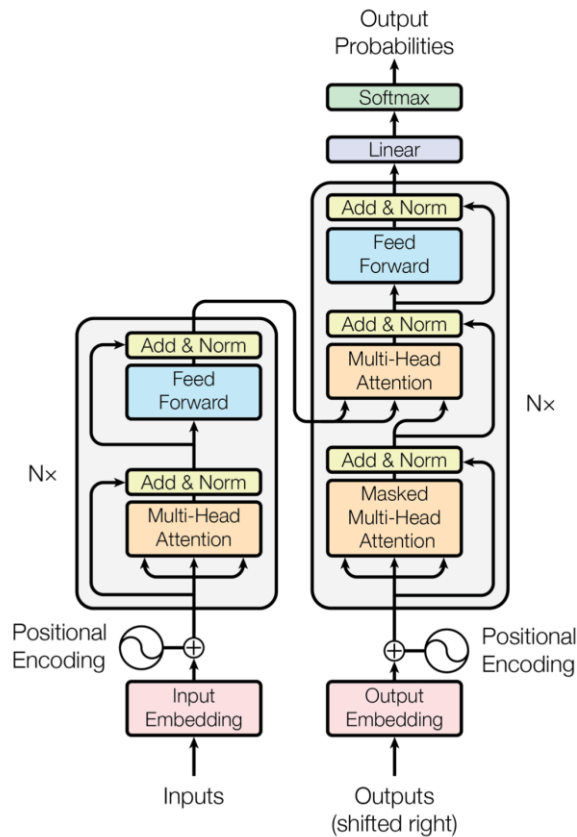
## What Are LLMs?

- Large Language Models are AI systems designed to process, understand, and generate human language.

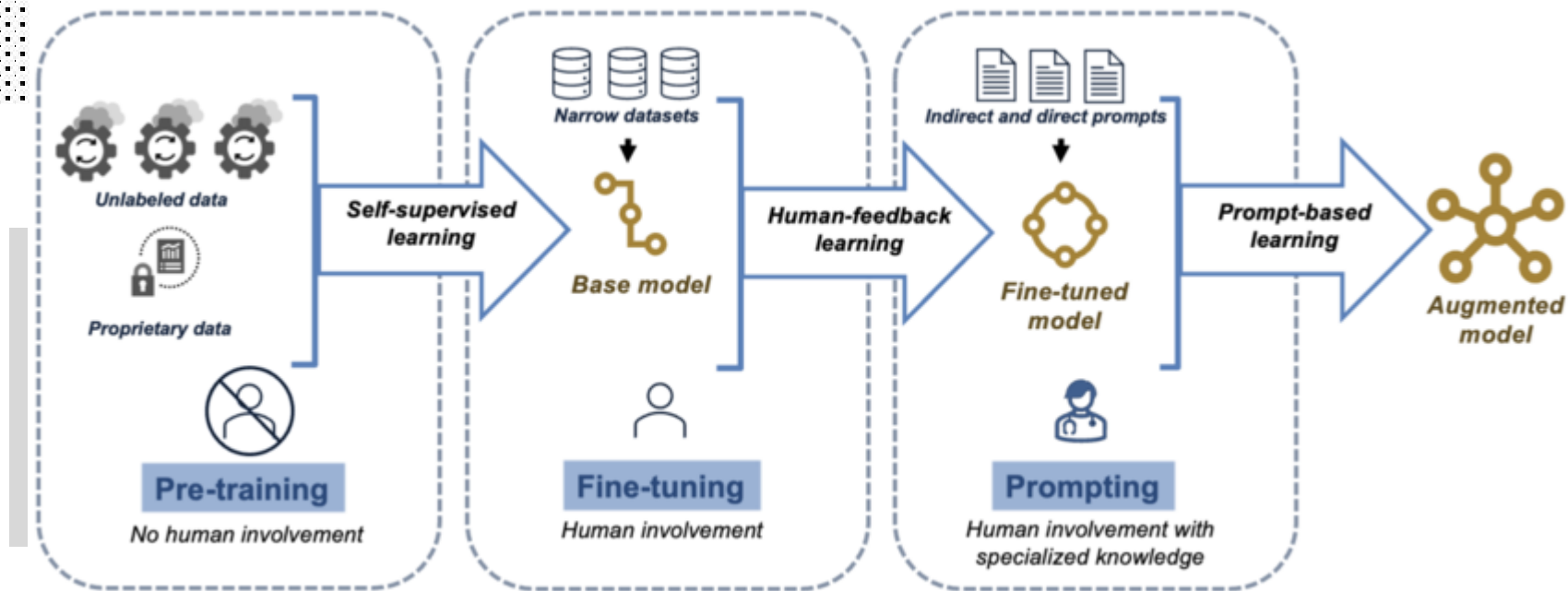
## .Why They Matter?

- LLMs are at the core of applications like chatbots, translation tools, and automated

# The Architecture of LLMs



# Training Process



# The Role of Tokens

Tokens

94

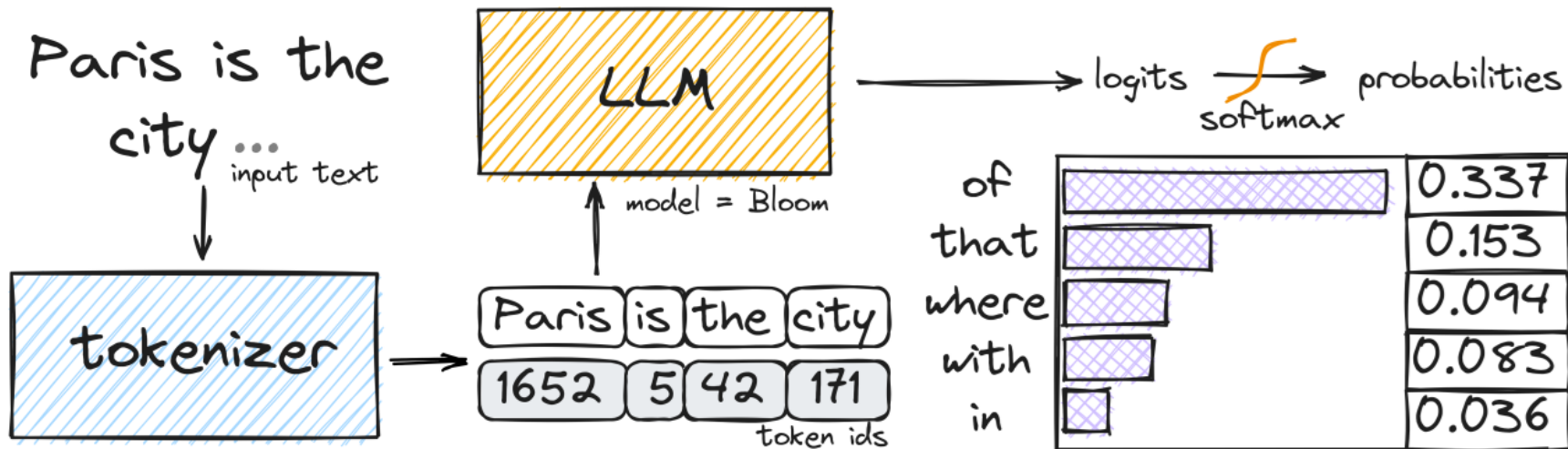
Characters

382

We're no strangers to love  
You know the rules and so do I (do I)  
A full commitment's what I'm thinking of  
You wouldn't get this from any other guy  
I just wanna tell you how I'm feeling  
Gotta make you understand  
Never gonna give you up  
Never gonna let you down  
Never gonna run around and desert you  
Never gonna make you cry  
Never gonna say goodbye  
Never gonna tell a lie and hurt you

Text    Token IDs

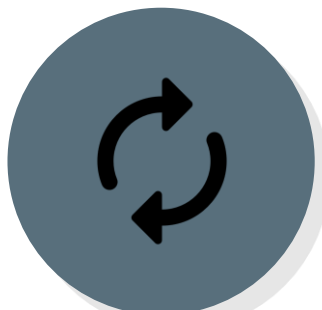
# Generating Text with LLMs



# Limitations of LLMs



.Lack of True  
Understanding



.Bias and  
Misinformation



.Ethical  
Considerations

# **Future Directions for LLMs**

## **Improving Efficiency:**

- Research is ongoing to make LLMs more computationally efficient without sacrificing performance.

## **.Focusing on Smaller, Task-Specific Models:**

- There's growing interest in developing





**Thanks for the Attention!**