

Different types of LLMs: Based on Model Architecture

Instructor

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Different types of LLMs

Based on Response

Based on Model Architecture

1. Continuing the text LLMs
2. Instruction following LLMs

Different types of LLMs

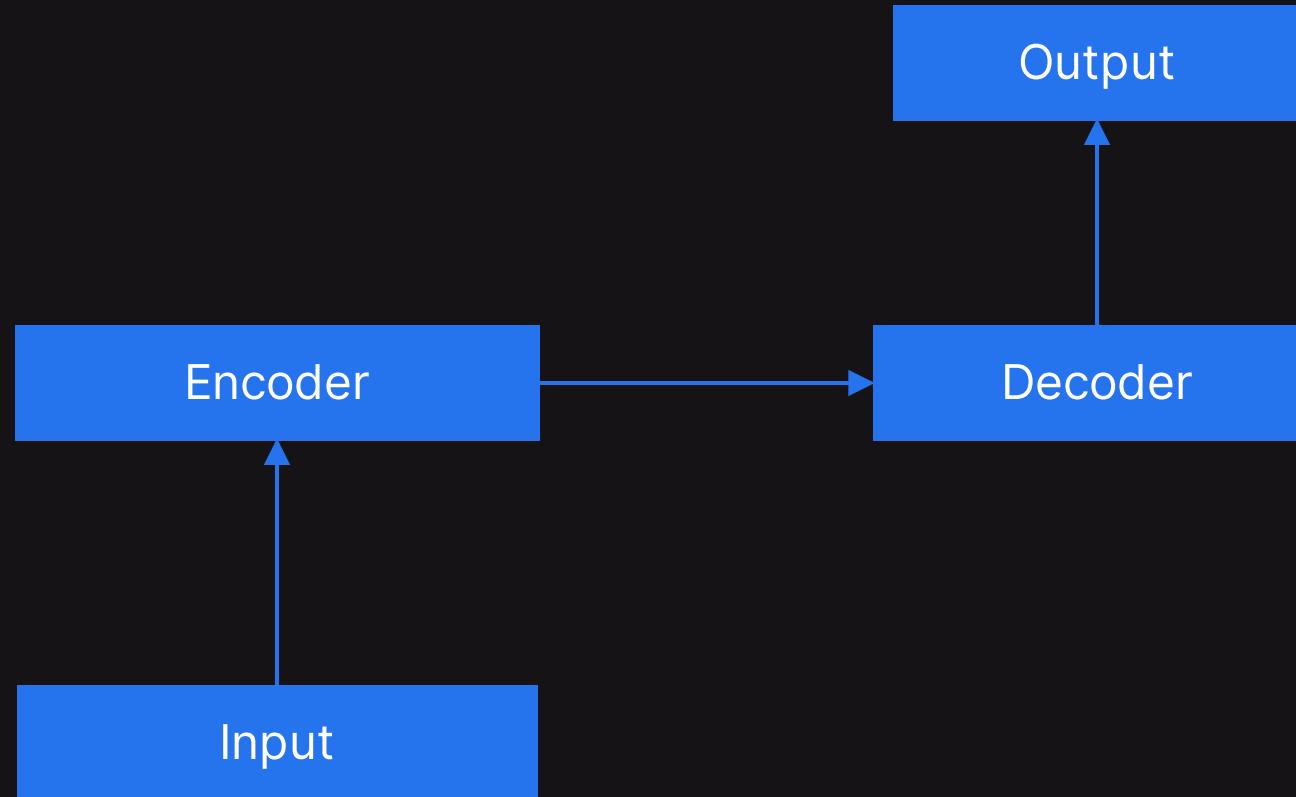
Based on Response

Based on Model Architecture

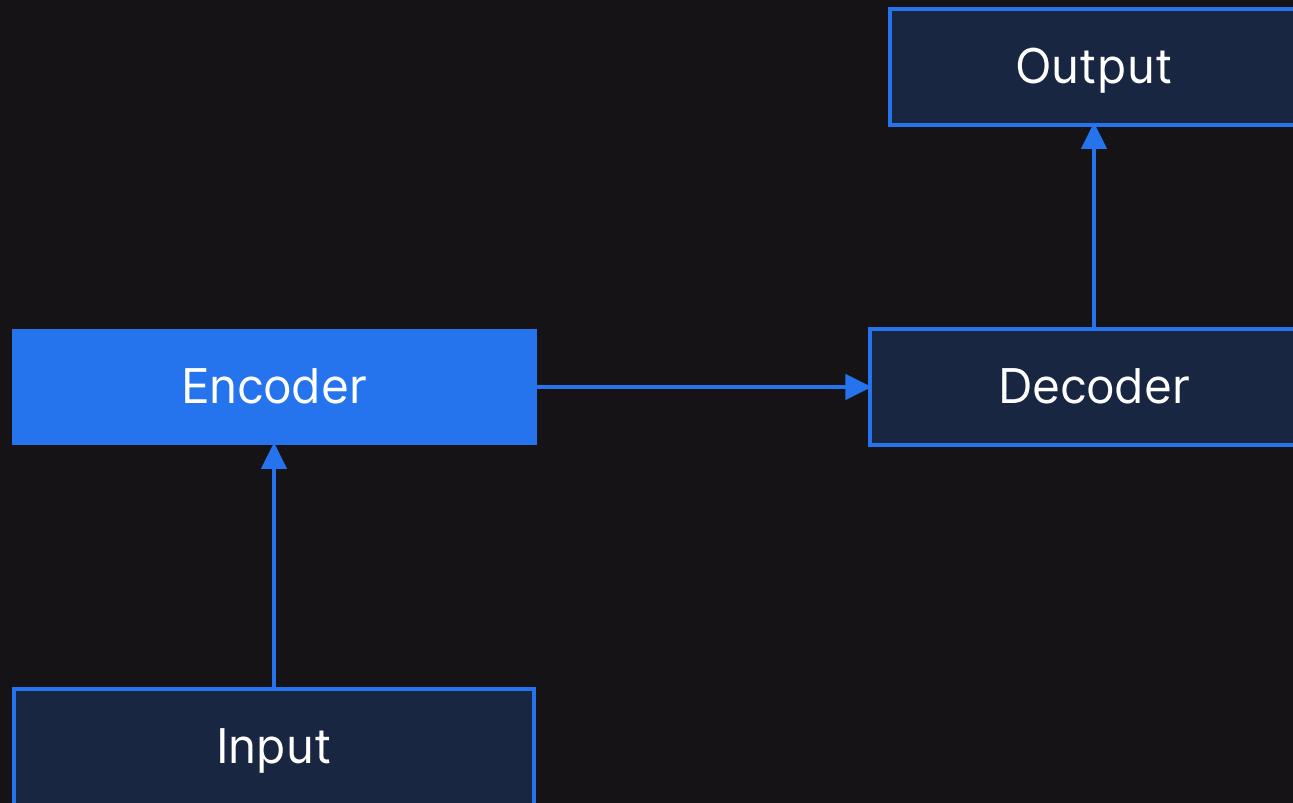
1. Continuing the text LLMs
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Introduction

Most LLMs are inspired by the transformers architecture.



Encoder LLMs



Different types of LLMs

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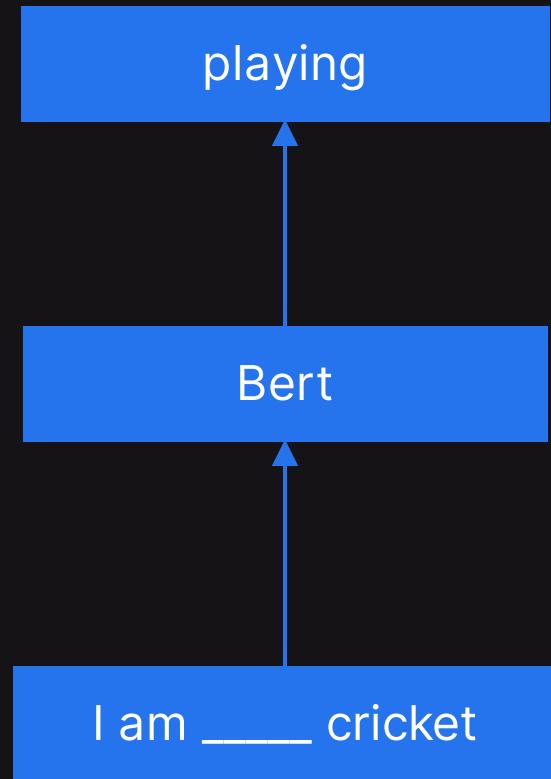
1. Encoder LLMs

Examples of Encoder LLMs

- BERT
- RoBERTa
- DistilBERT
- ALBERT

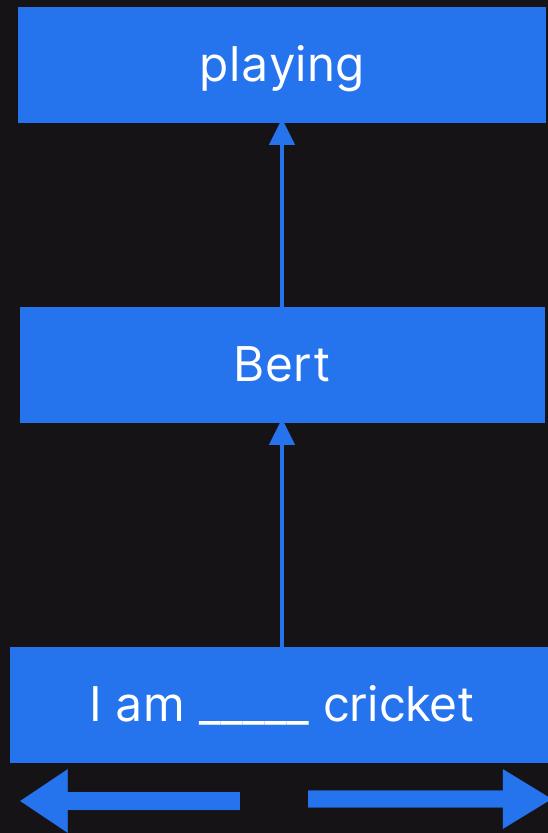
Encoder LLMs

Trained to predict the missing word present anywhere in the sentence

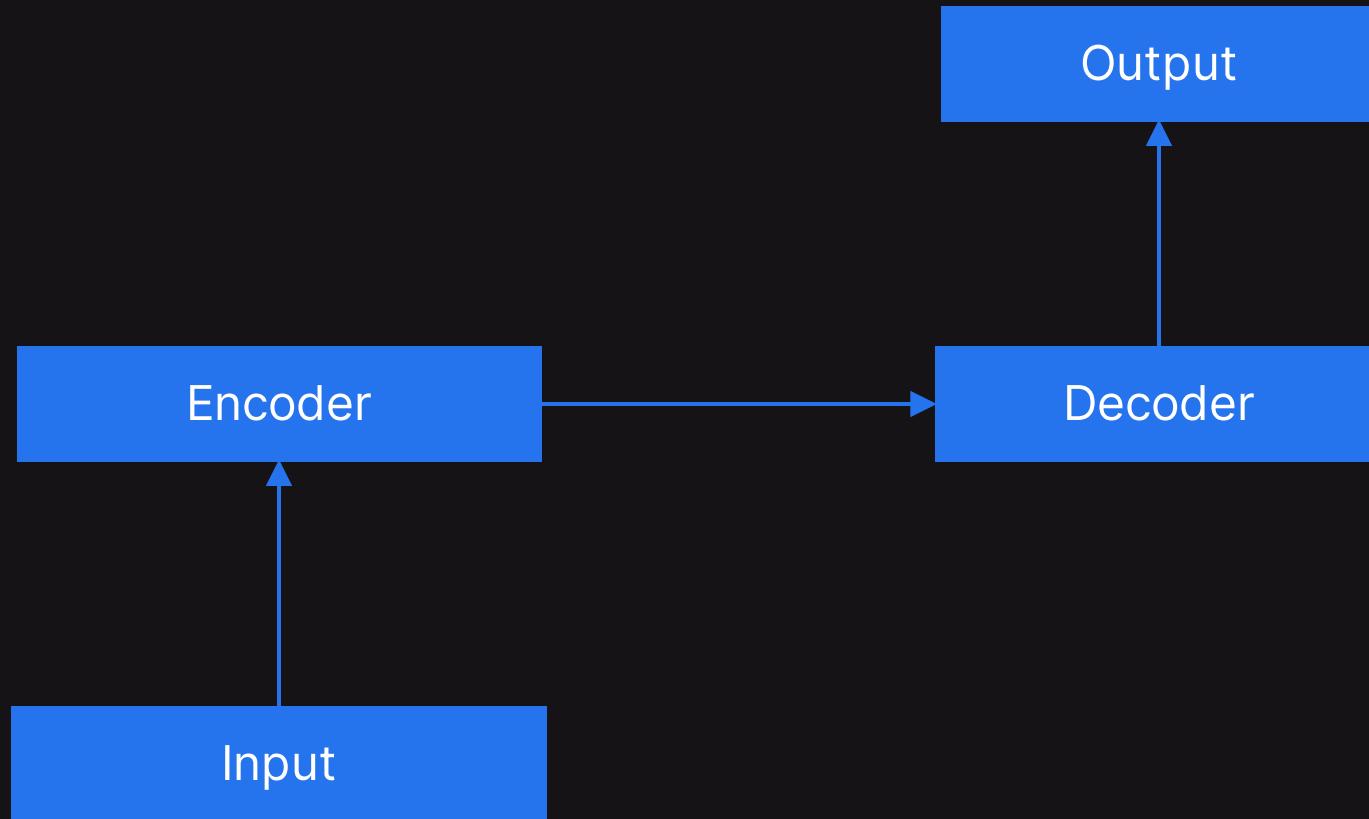


Encoder LLMs

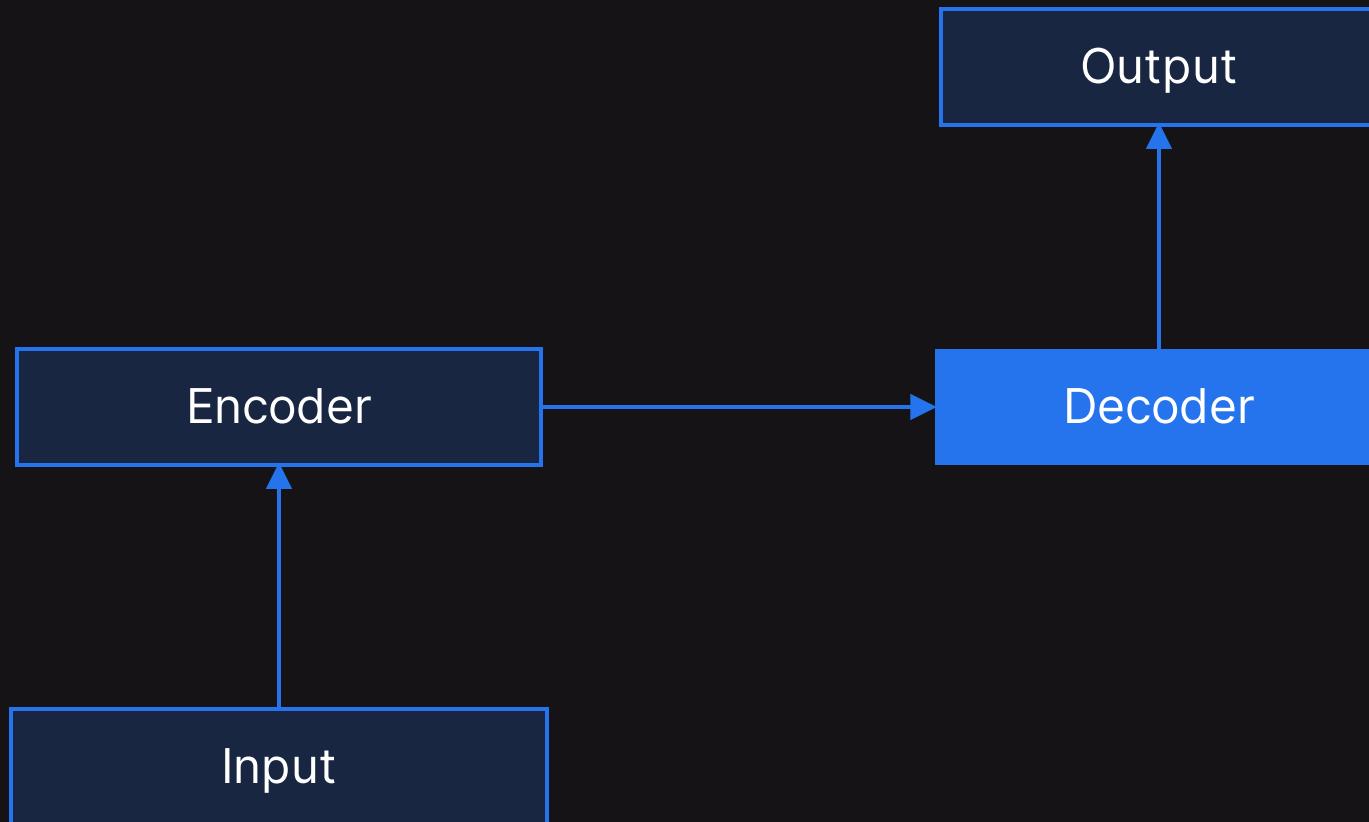
Trained to predict the missing word present anywhere in the sentence



Decoder LLMs



Decoder LLMs



Different types of LLMs

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Based on Model Architecture

1. Encoder LLMs
2. Decoder LLMs

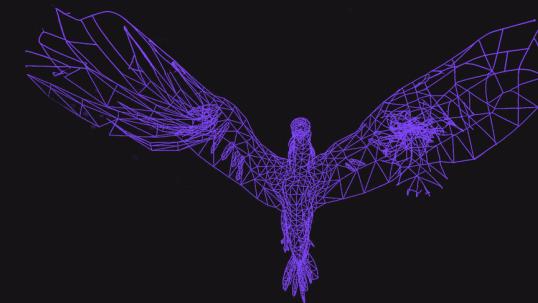
Decoder LLMs: Examples



GPT-3



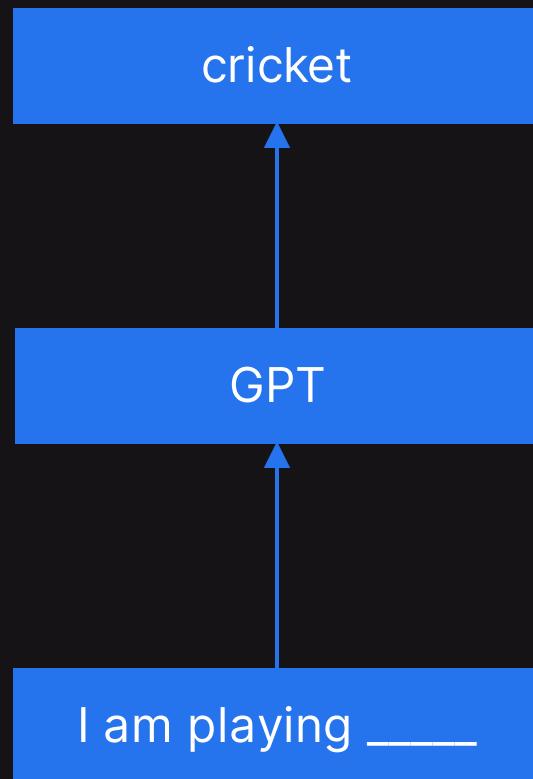
GPT-4



Falcon LLM

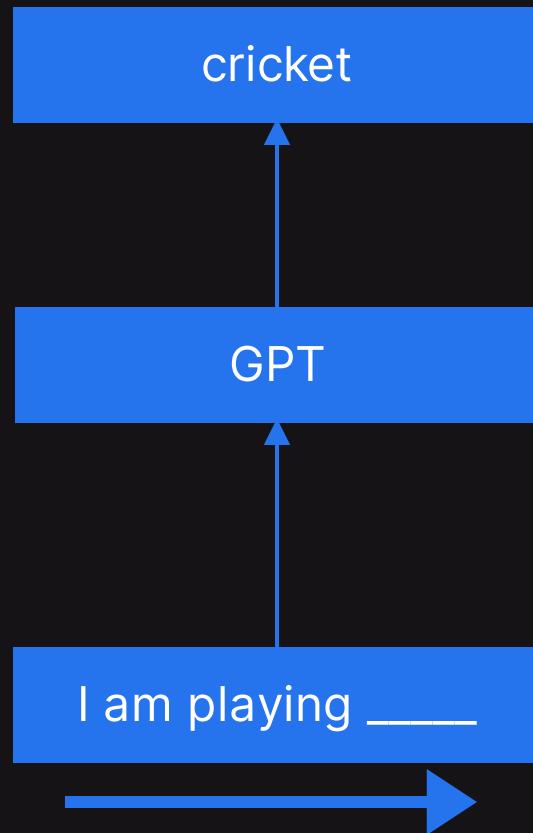
Decoder LLMs

Trained to predict next word in the sentence



Decoder LLMs

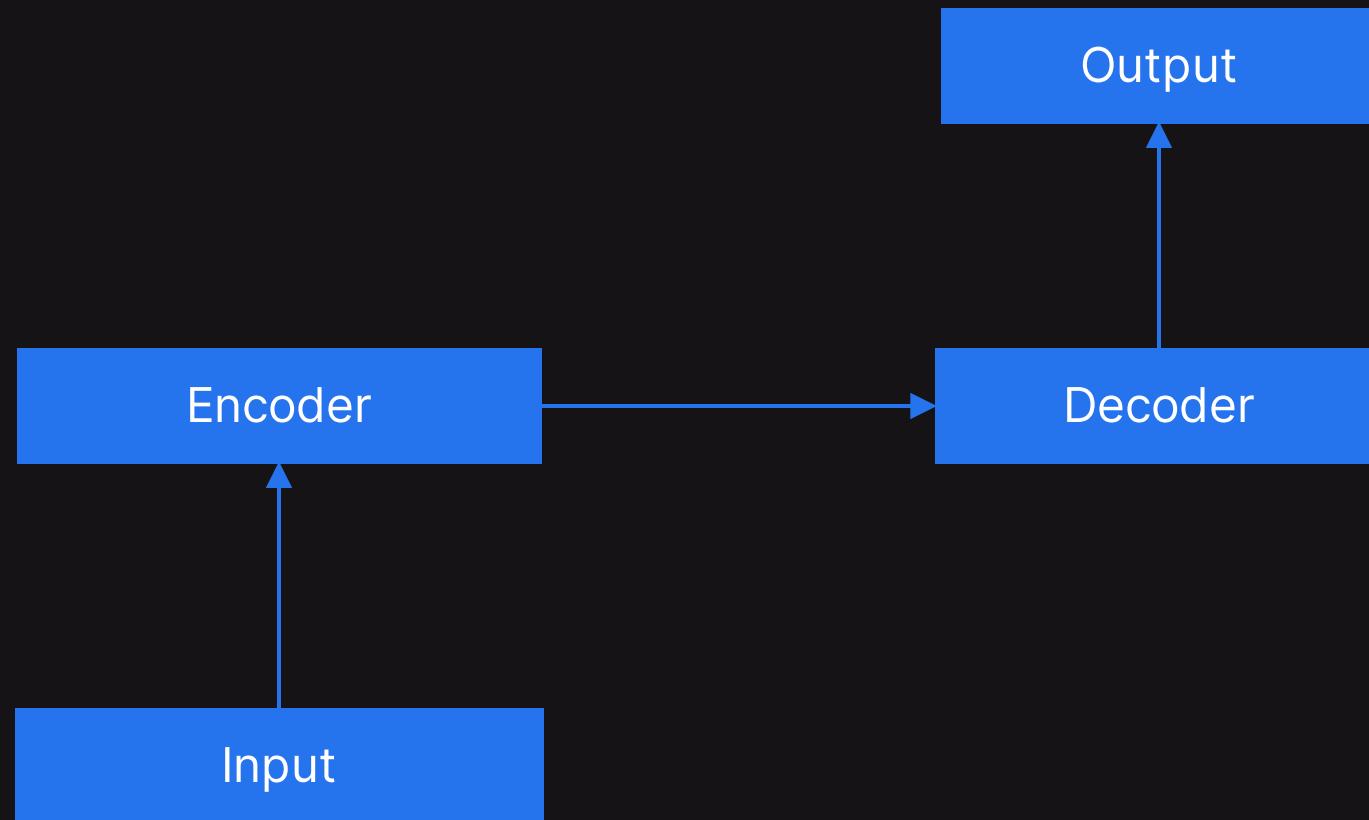
Trained to predict next word in the sentence



Encoder LLMs vs Decoder LLMs

Encoder LLMs	Decoder LLMs
Captures context from both the directions	Captures context from left to right only
Predicts the missing words present anywhere in the text	Predicts the next word in the text
Not good at continuing the text	Good at continuing the text
Not Autoregressive	Autoregressive
Examples: BERT, RoBERTa, ALBERT	Examples: GPT, Llama 2, Falcon 180B

Encoder and Decoder LLMs



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1. Encoder LLMs
2. Decoder LLMs
3. Encoder and Decoder LLMs

Examples of Encoder and Decoder LLMs

- T5
- mT5
- Flan T5
- Switch

Why is it important?

Decide the architecture before building your own LLMs

Encoder only

Decoder only

Encoder and Decoder

Most of the LLMs developed today are based on Decoder only architecture.

Thank You
