The Rise of Large Language Models

Large Language Models (LLMs) are transforming how we interact with computers. They are a type of AI that can understand and generate human-like text, perform various tasks, and learn from vast amounts of data.



Transformers: A Revolution in NLP

Key Innovation

Transformers use self-attention to focus on relevant parts of the input text. This allows them to handle long-range dependencies and process text in parallel.

Why It Matters

Transformers have enabled LLMs to surpass older architectures. They are key to their rapid development and ability to perform complex tasks.

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A History of Growing Capabilities

1 OpenAI GPT (2018)|117M params.

Introduced generative pre-training, enabling LLMs to generate human-like text.

BERT (2019) | 110M params.

Revolutionized understanding tasks by incorporating bidirectional context.

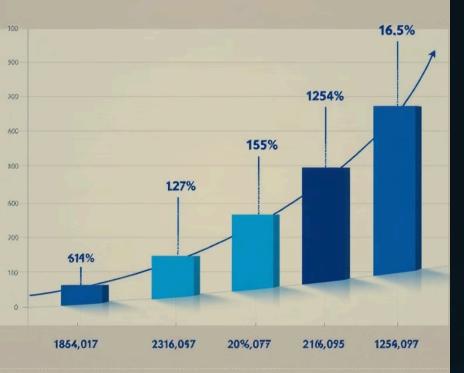
____ GPT-3 (2020)|175B params.

Set a new standard for generative AI with massive scale and a broad range of abilities.

GPT-4 & Claude 2 (2023)|>1T params

Further advancements in reasoning, contextual depth, and multitasking.

LARGE LANGUAGE MODEL.



87%

70%

The Importance of Scale and Efficiency

More Power

Larger models can learn more complex patterns and contexts, improving their ability to perform sophisticated tasks.

Challenges

Scaling LLMs demands enormous computational power, memory, and energy, presenting practical challenges.

Future Focus

Research is shifting towards efficiency and fine-tuning smaller, task-specific models.

