

How does Generative AI work?

Instructor

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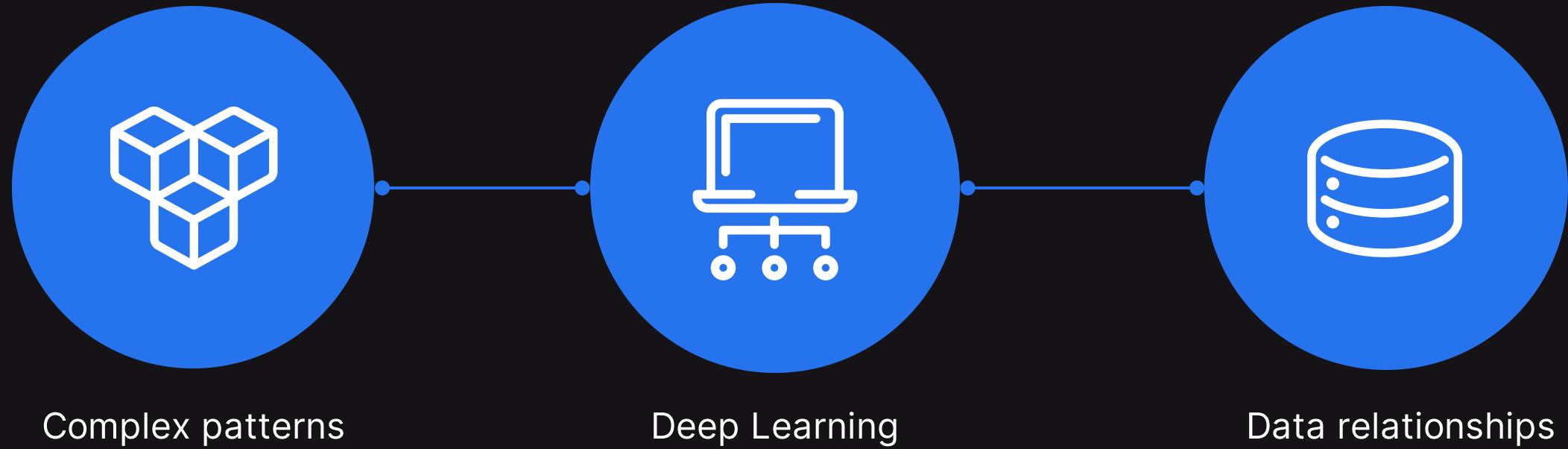


Generative AI

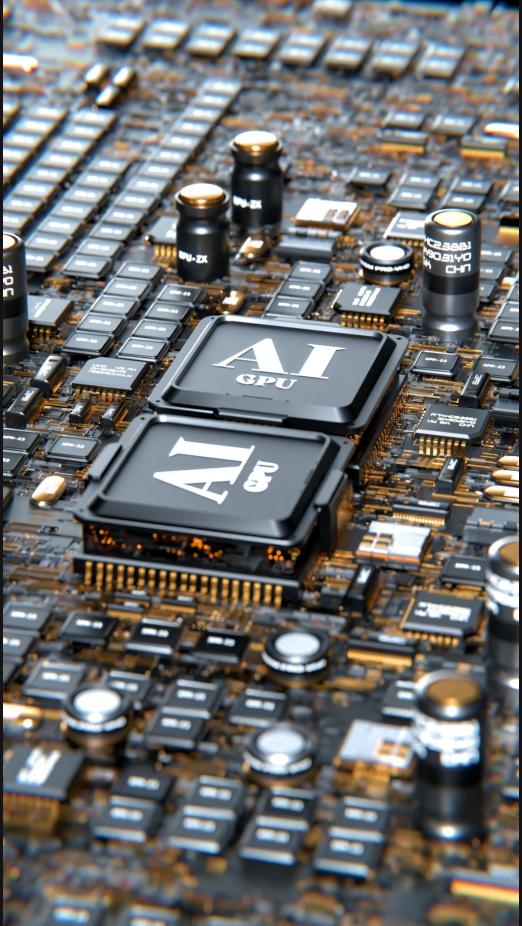


Generative AI is a type of artificial intelligence technique that is used to generate new data.

How does Deep Learning work?



Types of Generative AI Models

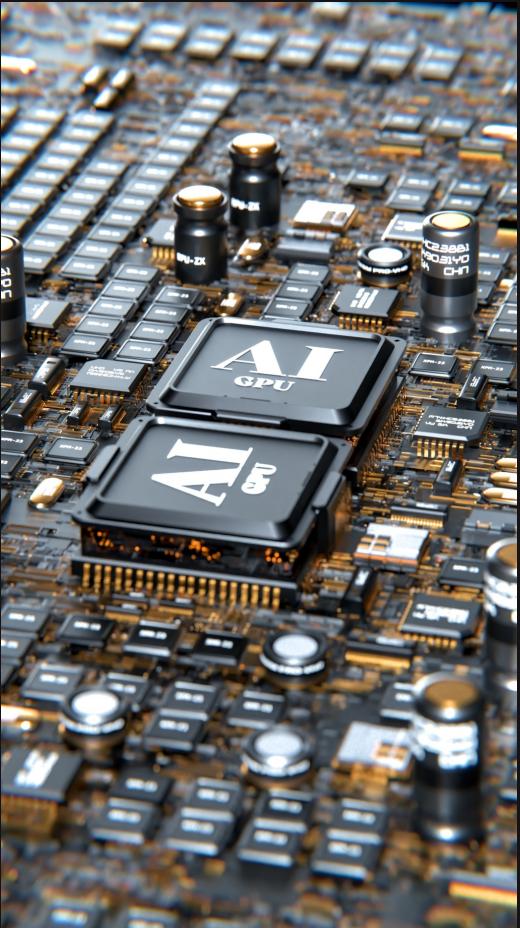


GANs

Transformer

Diffusion Model

Types of Generative AI Models



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Transformer

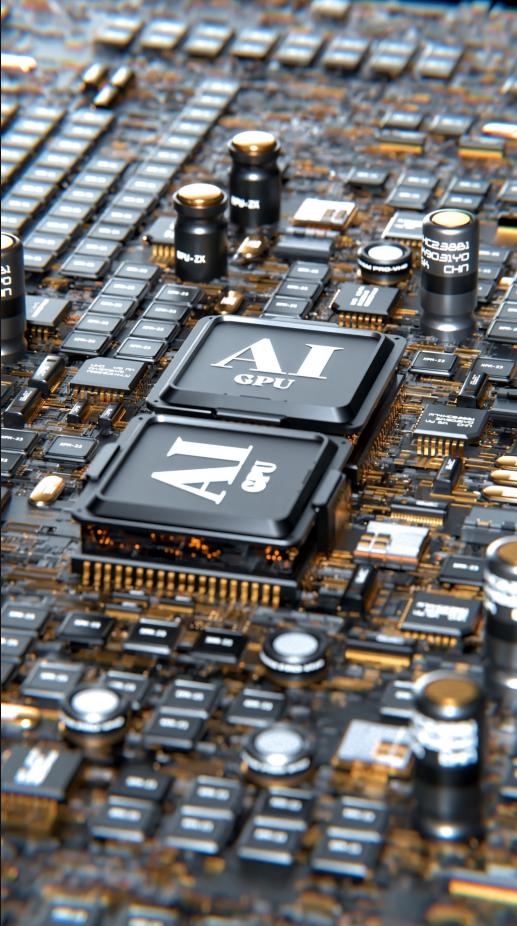
Diffusion Model

Created by Ian J
Goodfellow

Used to generate images

Examples: GANlab,
HyperGAN, Imaginaire

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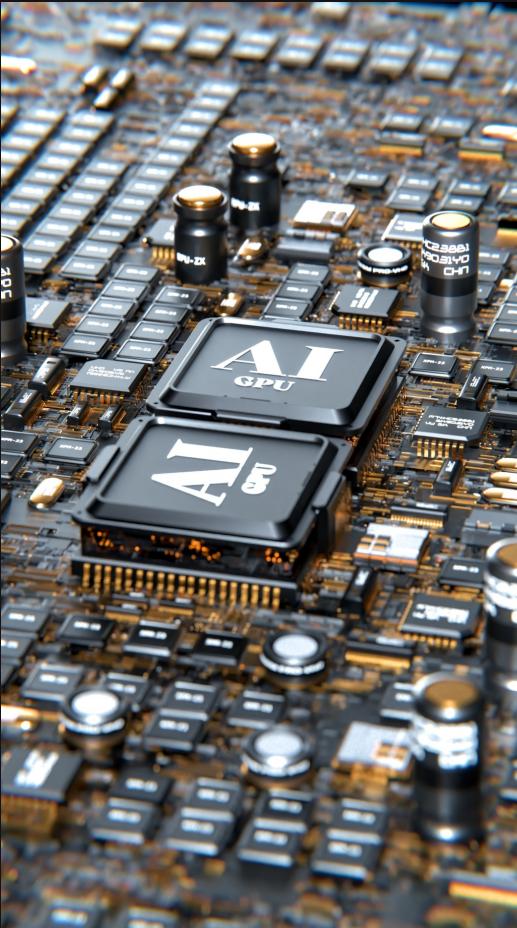
Created by team at Google Brain

Used to generate text

Examples: GPT-3&4, LaMBDA, BERT

Diffusion Model

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Diffusion Model

Created by Sohl-Dickstein et al.

Used to generate images

Examples: Stable Diffusion, Imagen

Types of Input



Text



Image



Audio

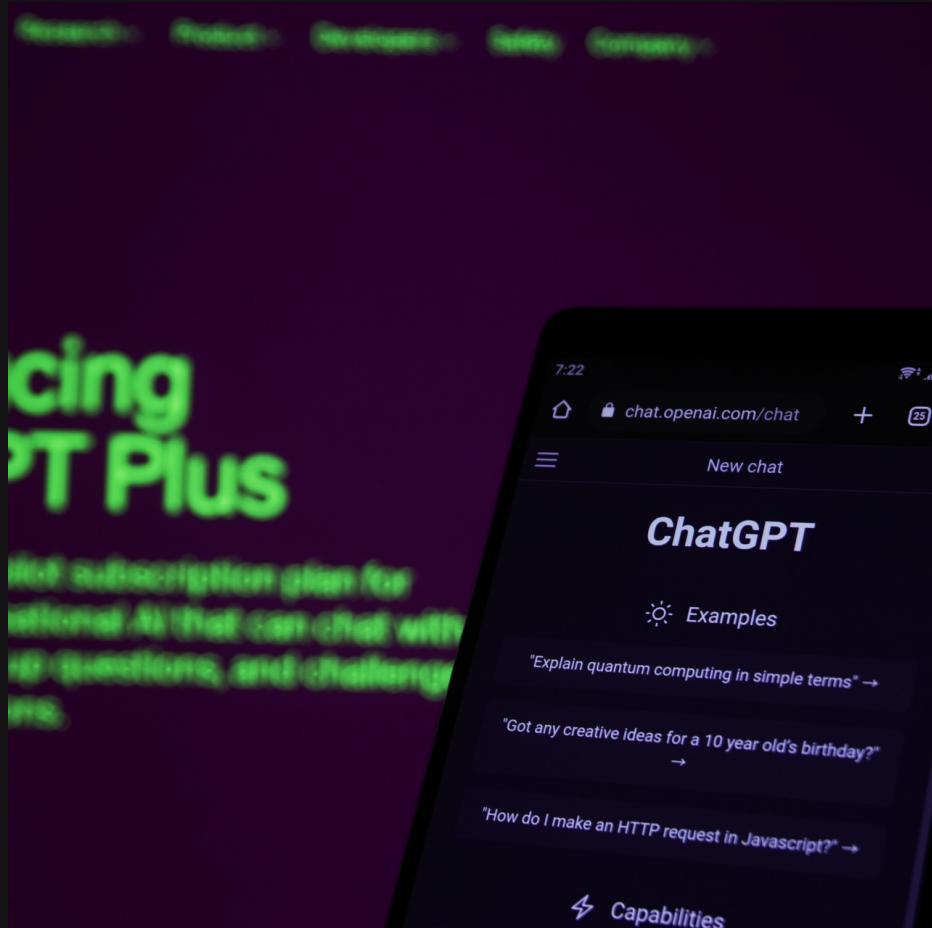


Video



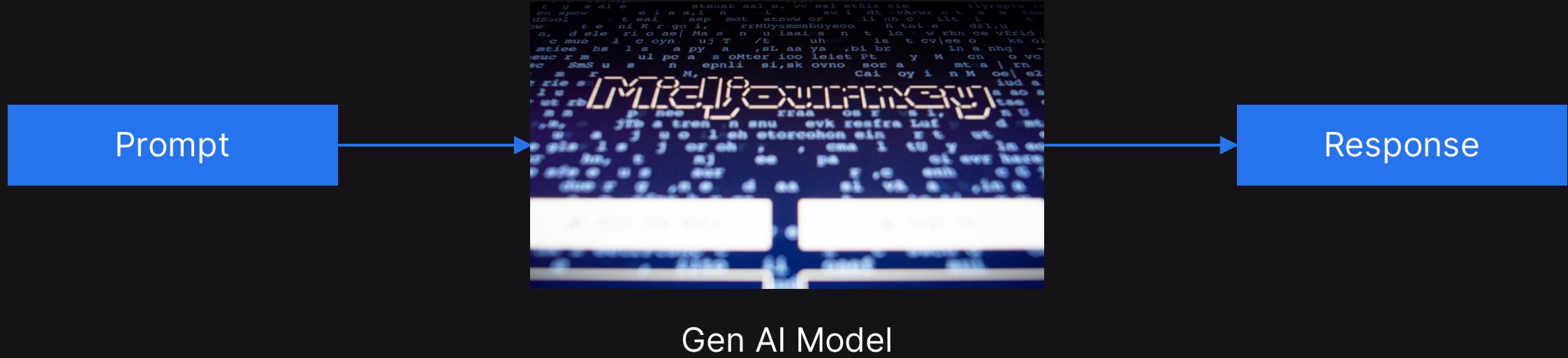
Multimodal

What is a Prompt?

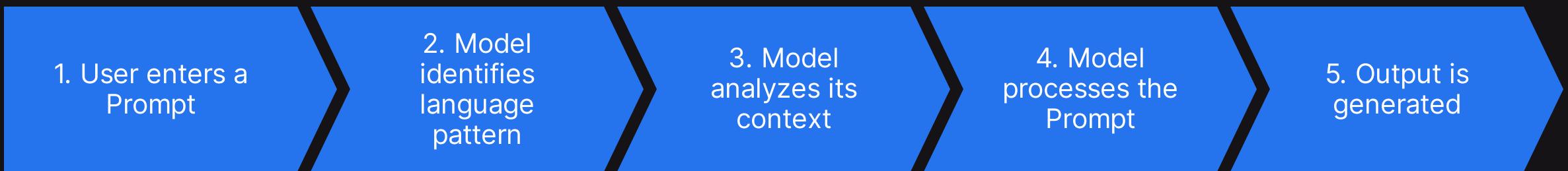


Prompt is an input to a Gen AI model to accomplish a task

How does a Prompt work?



How does a Gen AI model generate a response?



Features of Gen AI Model

- 1 Adapt and learn from its previous outputs
- 2 Improve its ability to generate outputs
- 3 Generate personalized outputs

Examples of Gen AI



Prompt - "Football player reading a newspaper in picasso style"

Created using DALLE-3

Examples of Gen AI

 **You**
Write a sonnet on generative ai

 **ChatGPT**

In realms of code and data, we create,
A world of words and thoughts, both small and great,
Generative AI, a digital muse,
Unveils new vistas, endless paths to choose.

With algorithms humming, deep and wise,
It weaves a tapestry of words that rise,
From bits and bytes, a symphony of thought,
A testament to what we humans sought.

It paints with words, a canvas blank and vast,
A masterpiece of stories unsurpassed,
From Shakespearean verse to modern prose,
In endless creativity, it flows.

Generative AI, a tool to inspire,
A testament to human mind's desire.

Prompt – “create an essay about the Industrial Revolution in the USA”

Created using ChatGPT