

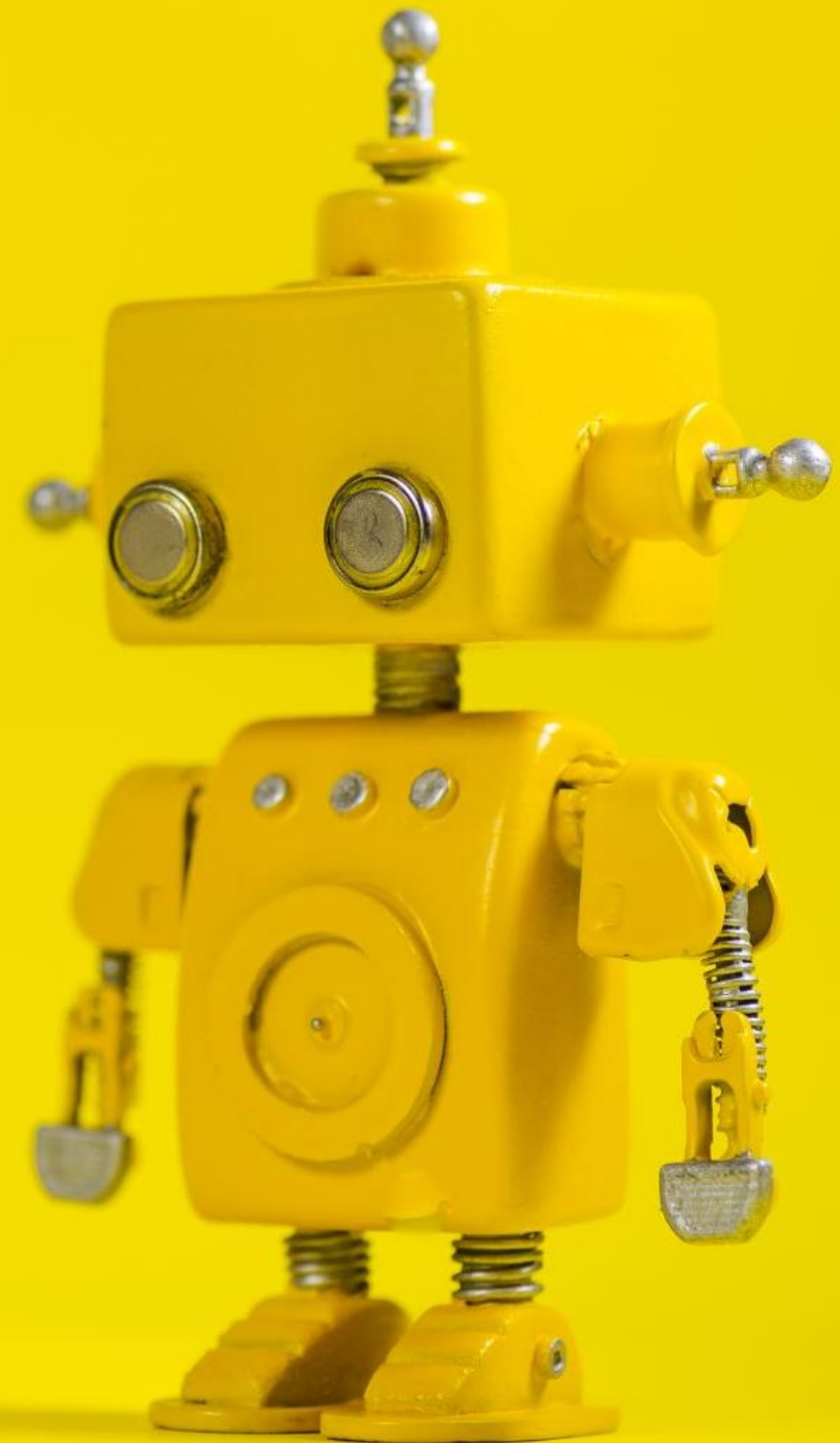
INTELIGÊNCIA ARTIFICIAL GENERATIVA

Enquadramentos, aplicações e desafios!



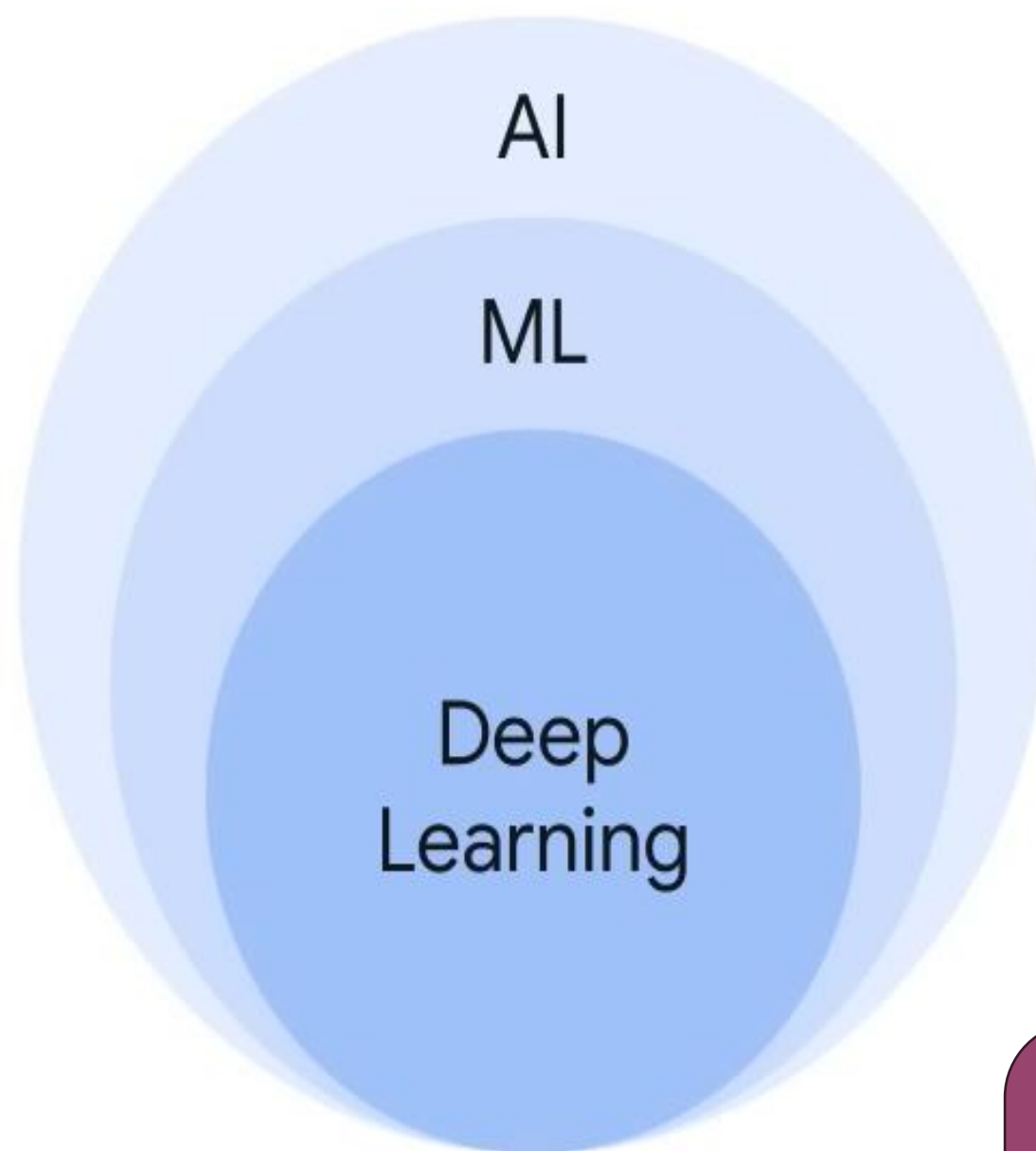
ISLA
Santarém

INTELIGÊNCIA ARTIFICIAL



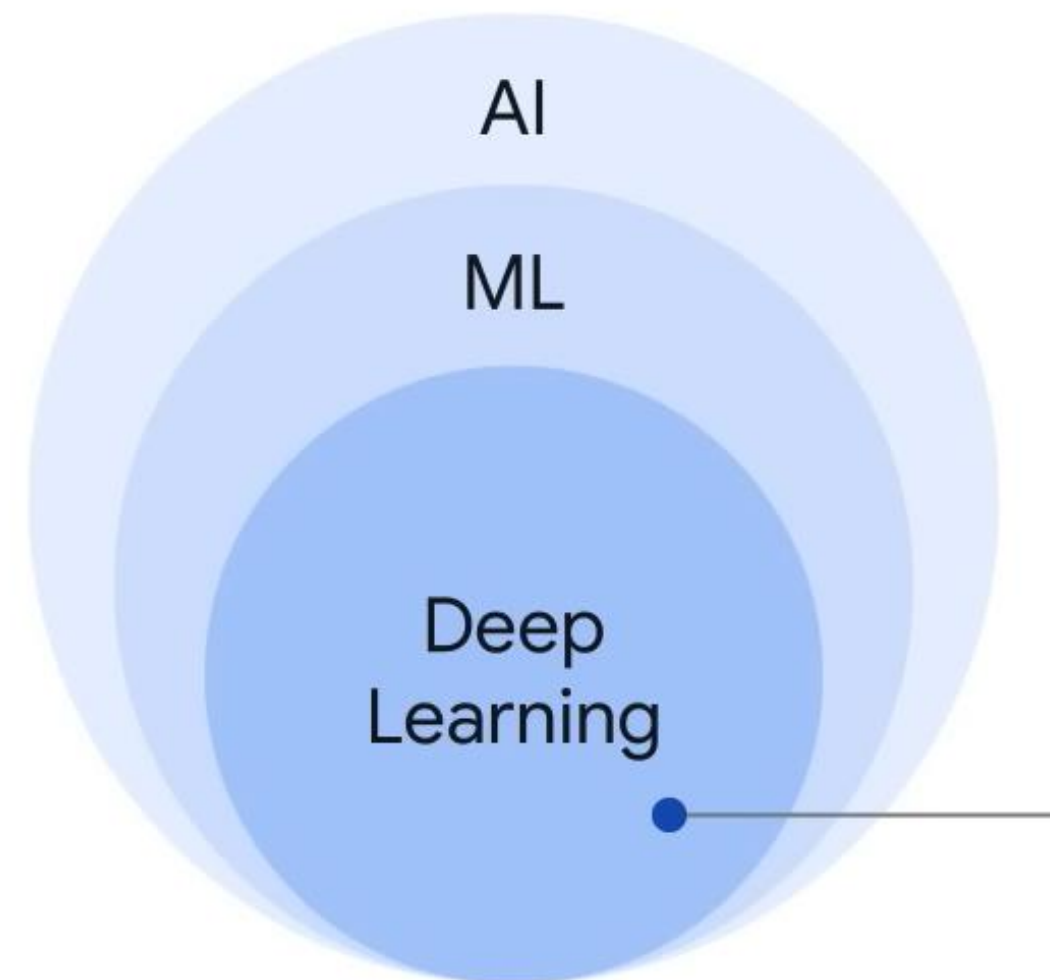


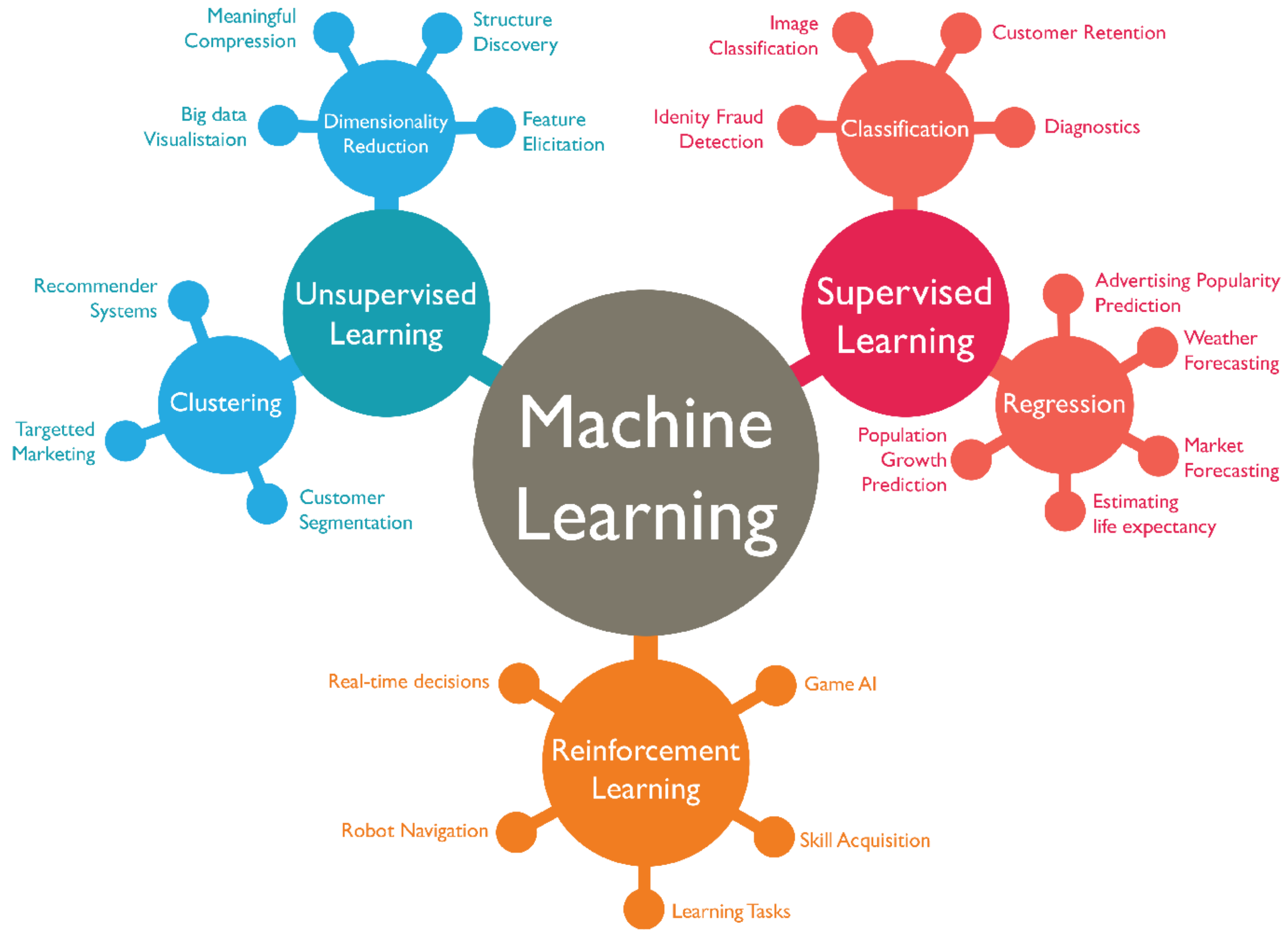
A inteligência Artificial
é uma **disciplina**



Machine Learning ou
Aprendizagem Automática
é um sub-campo da IA

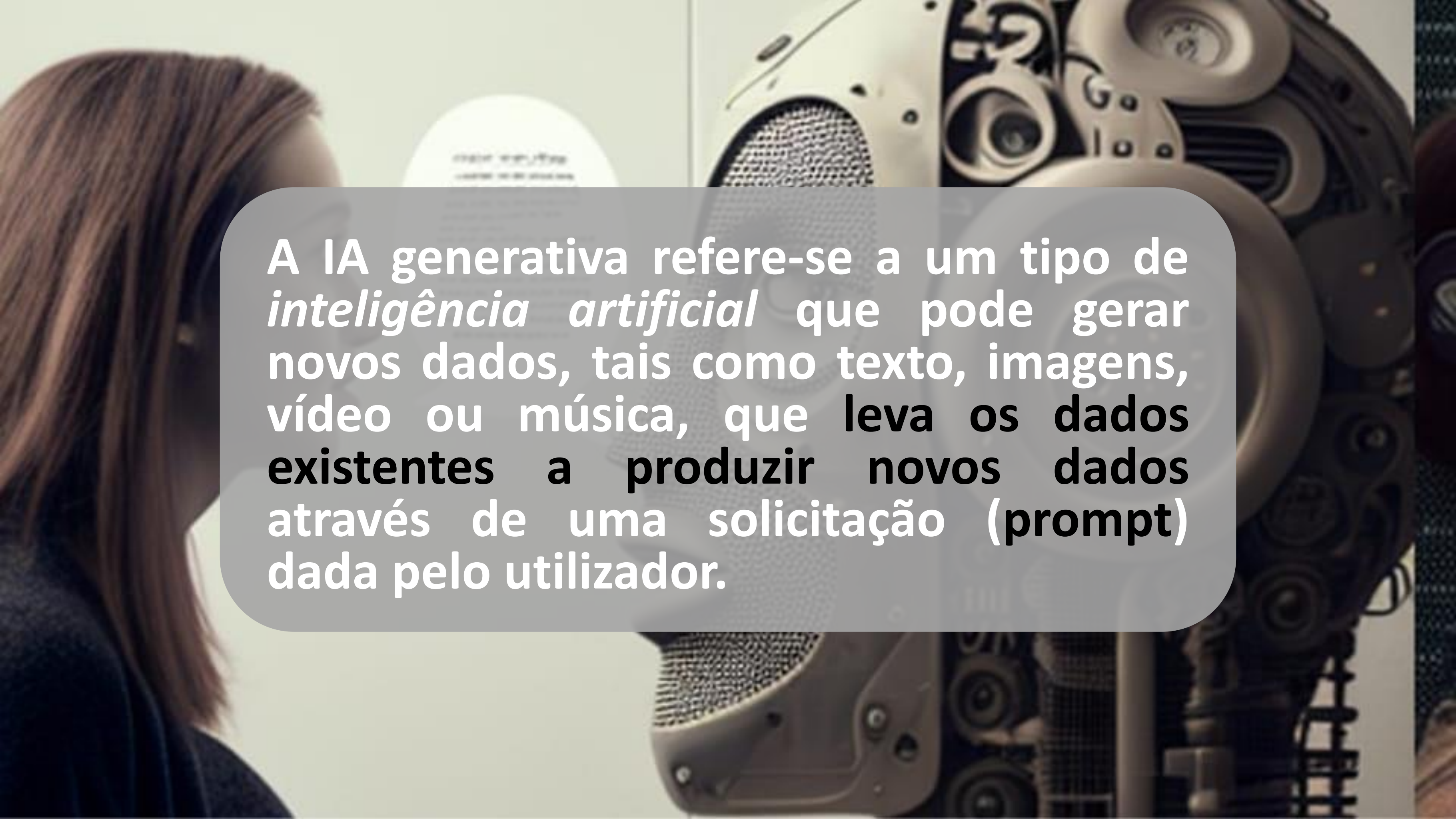
**Deep Learning ou
Aprendizagem Profunda é
um subcampo da ML**





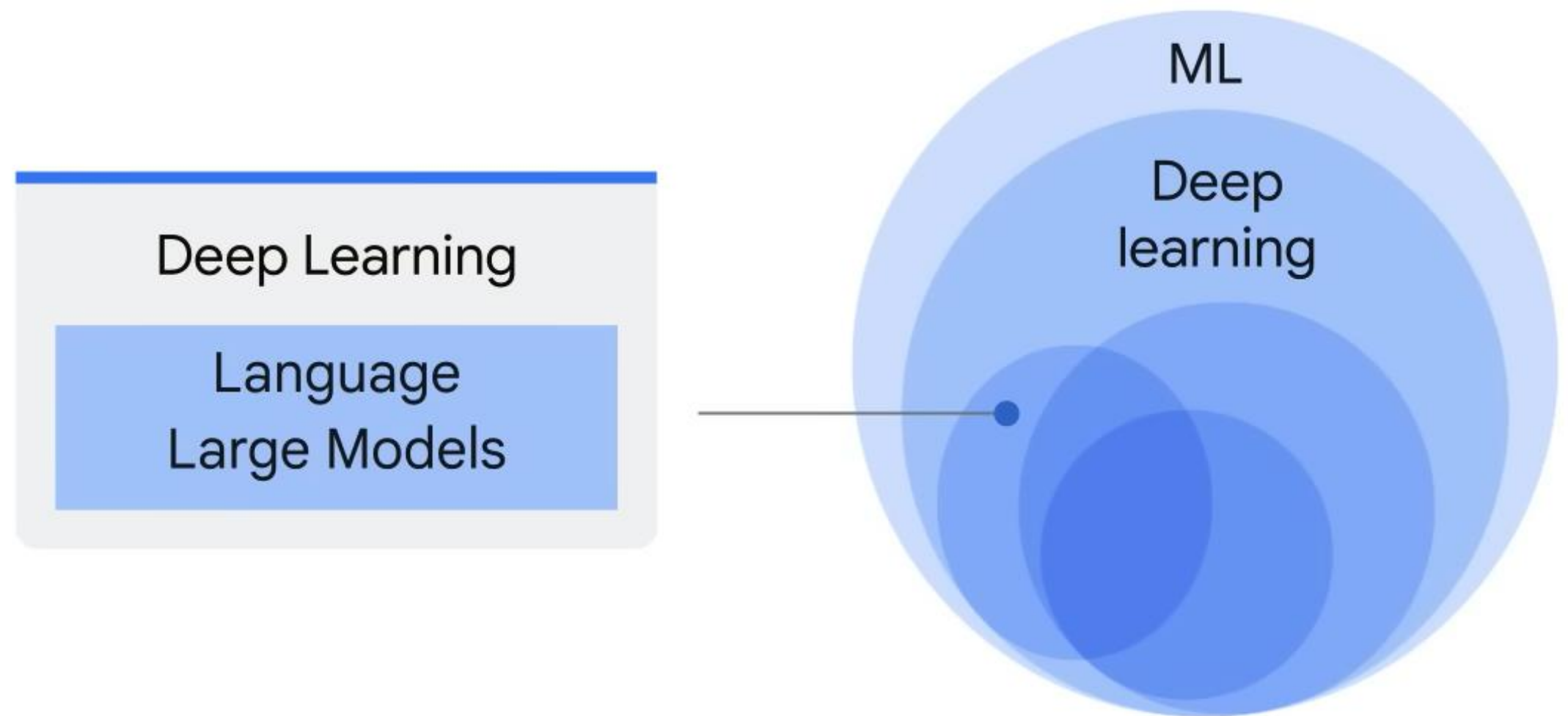


**Inteligência
Artificial
Generativa**

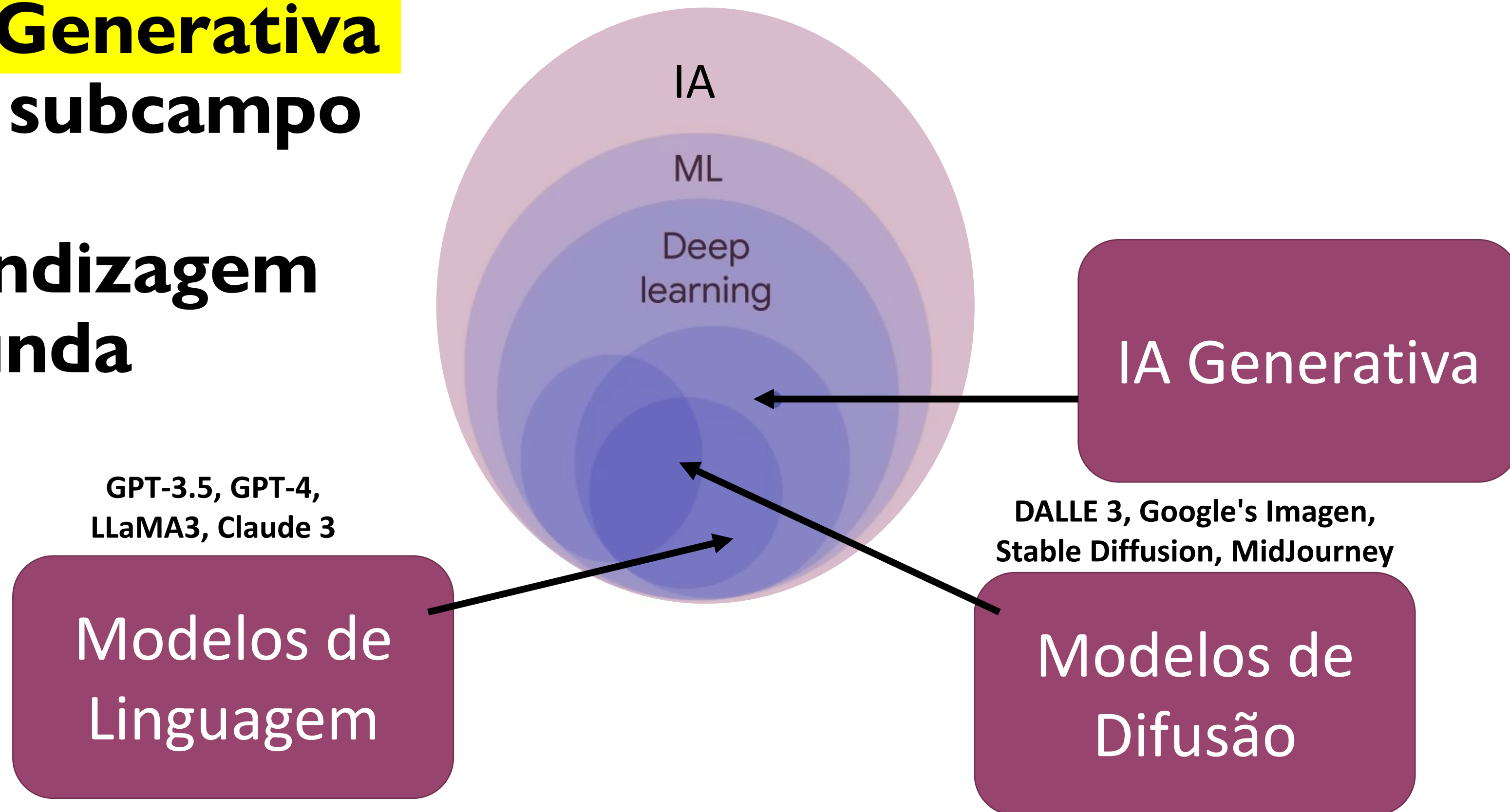
A woman with long brown hair is shown in profile on the left side of the image, looking towards a complex mechanical device on the right. The device features a large, silver, mesh-covered microphone in the foreground and a dense arrangement of brass gears and mechanical components in the background. The scene is dimly lit, with a soft light source creating a glow behind the woman's head and highlighting the metallic surfaces of the machinery.

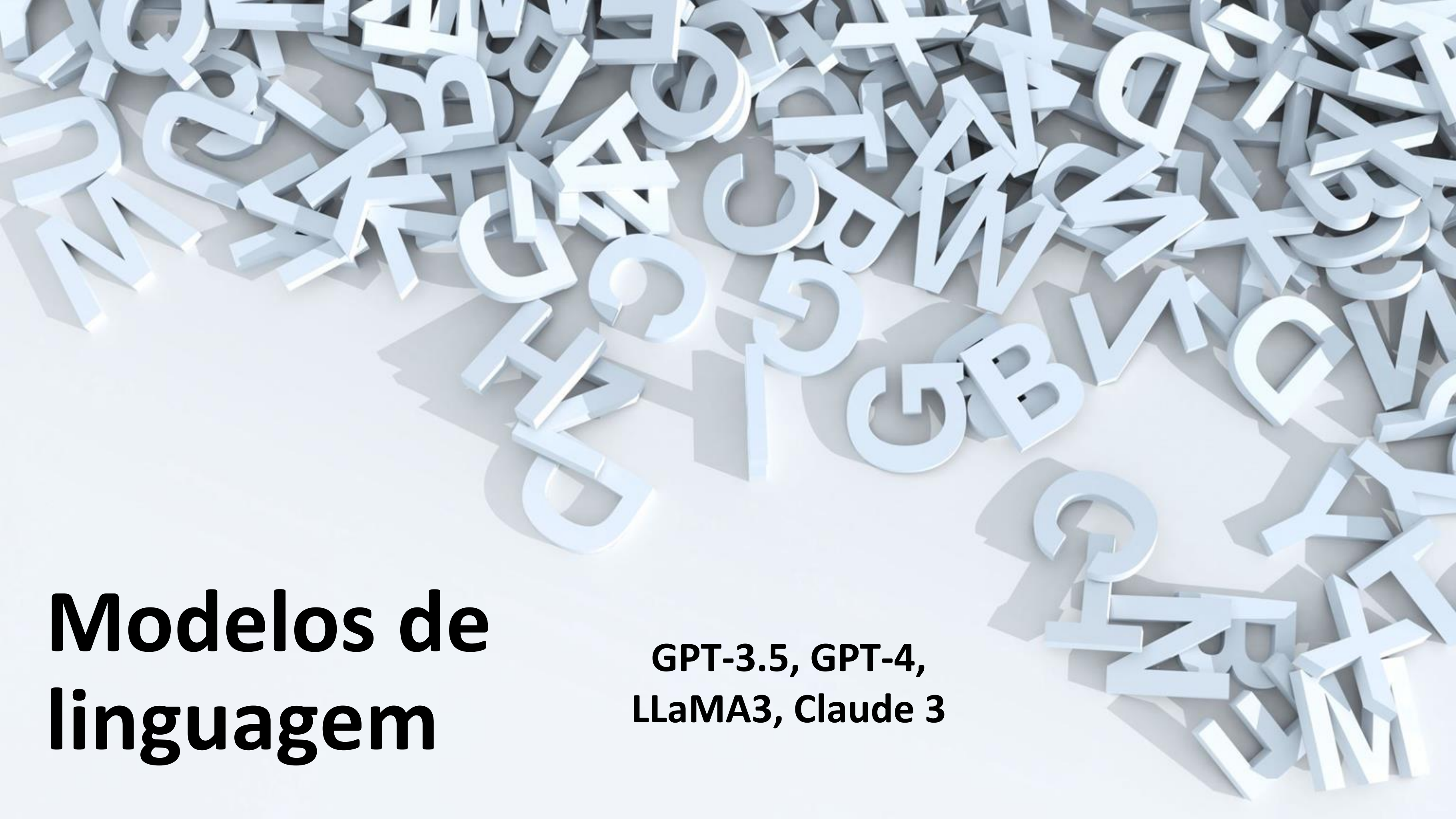
A IA generativa refere-se a um tipo de *inteligência artificial* que pode gerar novos dados, tais como texto, imagens, vídeo ou música, que **leva os dados existentes a produzir novos dados através de uma solicitação (prompt) dada pelo utilizador.**

**Modelos de Linguagem
de Grande Dimensão
(LLMs) são um subcampo
da Aprendizagem
Profunda**



**A IA Generativa
é um subcampo
da
Aprendizagem
Profunda**





Modelos de linguagem

GPT-3.5, GPT-4,
LLaMA3, Claude 3



MODELOS DE DIFUSÃO

**DALLE 3, Google's Imagen,
Stable Diffusion,
MidJourney**



This is happening
too fast for our
usual model of
digesting and
integrating
technology

Modelos de Linguagem

GPT 3.5

GPT 4

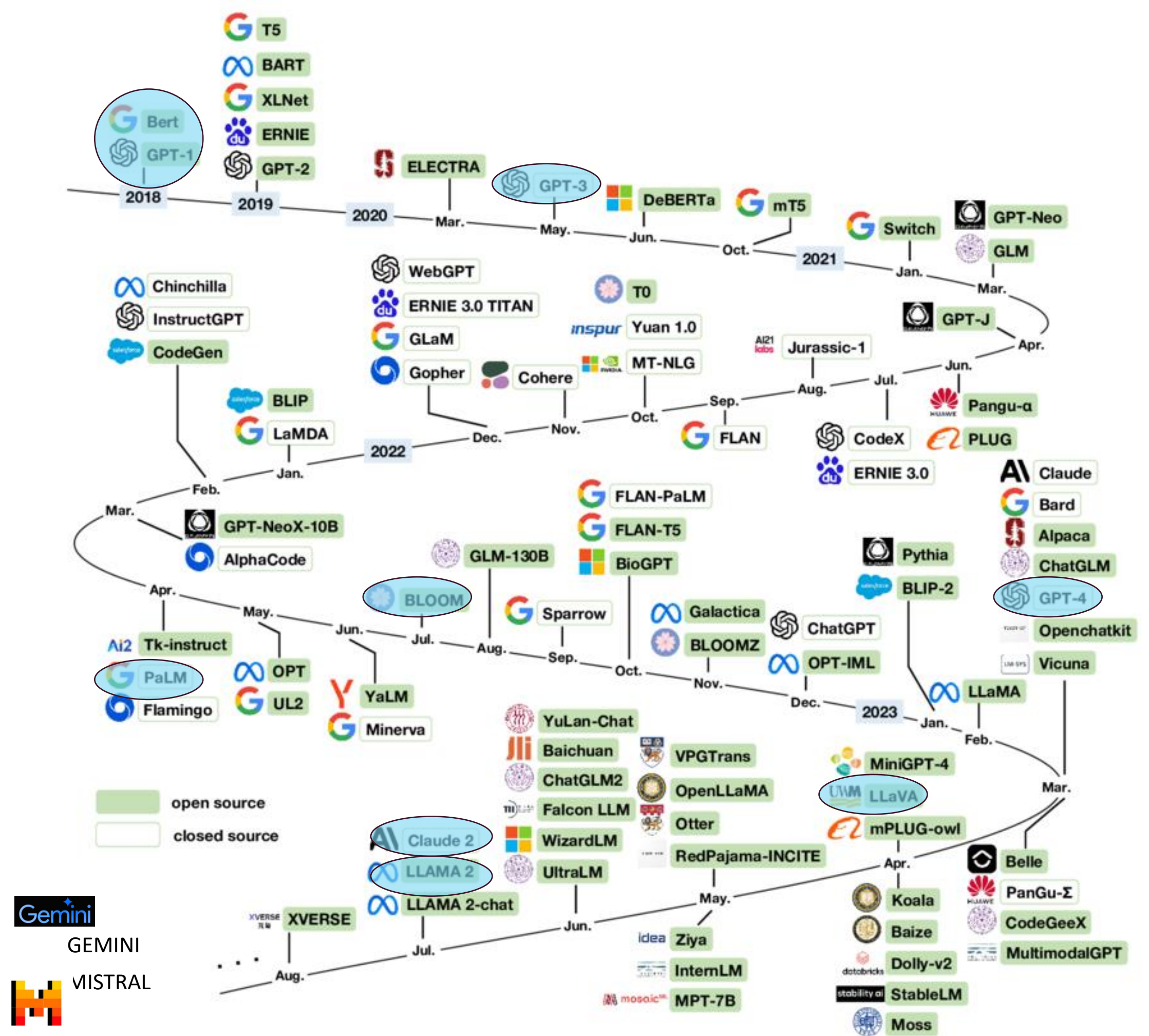
Palm 2

GEMINI Nano/Pro/Advanced

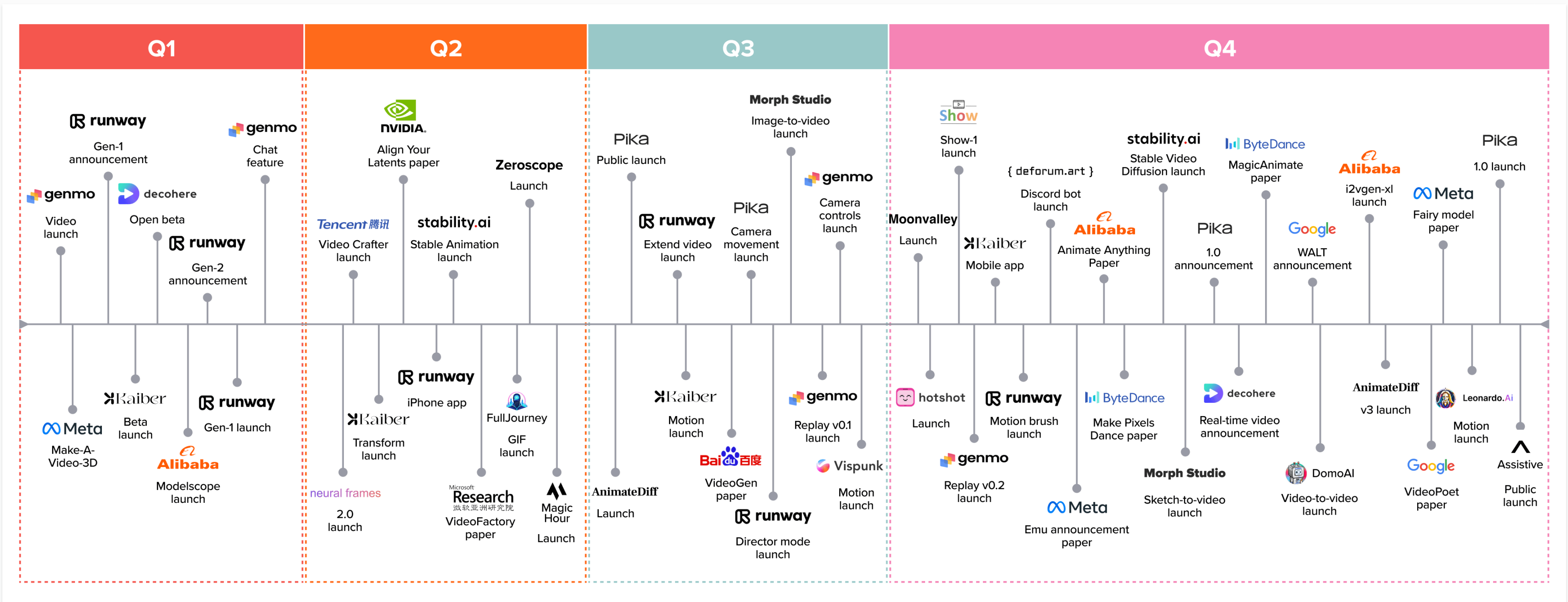
CLAUDE

MISTRAL

Llama2



Generative AI Video Timeline: 2023

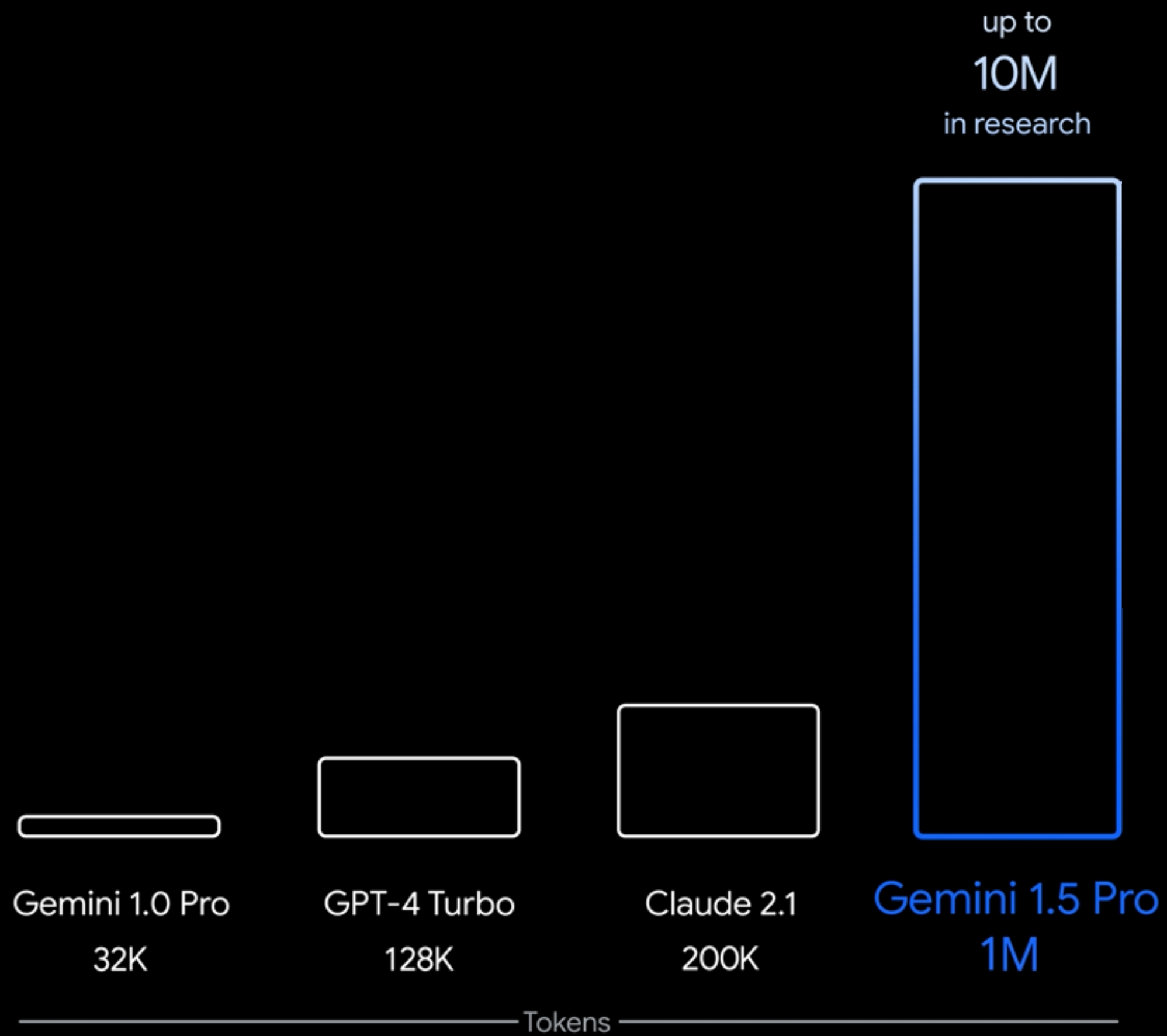


Source: @venturetwins

Charts provided herein are for informational purposes only and should not be relied upon when making any investment decision. Past performance is not indicative of future results. None of the above should be taken as investment advice; please see a16z.com/disclosures for more information.



do *unimodal* para o
multimodal



BC

Antes do
ChatGPT

?

AC

Depois do
ChatGPT





State of the Art

ChatGPT correctly diagnosed a 4-year-old's mysterious disease after 17 doctors failed

Kate Hull Sep 12, 2023, 11:20 PM WEST

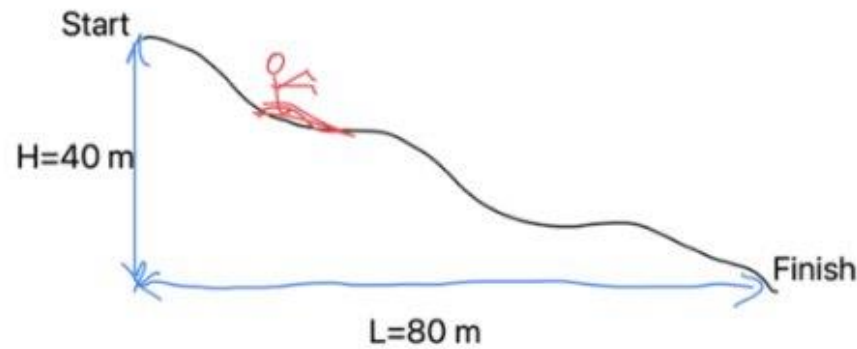


<https://www.insider.com/chatgpt-diagnose-child-disease-tethered-cord-syndrome-doctors-2023-9>

Prompt

Here's a solution to a Physics problem by a student.

23. A skier slides down the frictionless slope as shown. What is the skier's speed at the bottom?



Solution:

The conservation of energy means that the energy of the skier is same at the beginning and at the end.

$$\text{Start: } E = mgh$$

$$\text{End: } E = \frac{1}{2}mv^2$$

$$\Rightarrow mgh = \frac{1}{2}mv^2$$

$$\Rightarrow v = \sqrt{2gh} = \sqrt{2 \times 9.81 \times 40} = 28.01 \text{ m.s}^{-1}$$

Try to reason about the question step by step.

Did the student get the correct answer? If the solution is wrong, please explain what is wrong and solve the problem.

Make sure to use LaTeX for math and round off the final answer to two decimal places.

The student's solution to the physics problem contains an error. The problem involves a skier sliding down a frictionless slope, and we're asked to find the speed of the skier at the bottom. The student attempted to apply the conservation of energy principle correctly but made a mistake in the calculation.

According to the conservation of energy principle, the total mechanical energy (potential plus kinetic) of the system remains constant in the absence of non-conservative forces (like friction or air resistance, which are assumed to be negligible or zero in this problem).

The potential energy at the start (PE_{start}) is converted entirely into kinetic energy at the bottom (KE_{end}), since there is no friction. The potential energy at the top is given by $PE_{\text{start}} = mgh$, where m is the mass of the skier, g is the acceleration due to gravity (9.81 m/s^2), and h is the height of the hill (40 m).

The kinetic energy at the bottom is given by $KE_{\text{end}} = \frac{1}{2}mv^2$, where v is the speed of the skier at the bottom.

Setting PE_{start} equal to KE_{end} gives us:

$$mgh = \frac{1}{2}mv^2$$

Solving for v gives us:

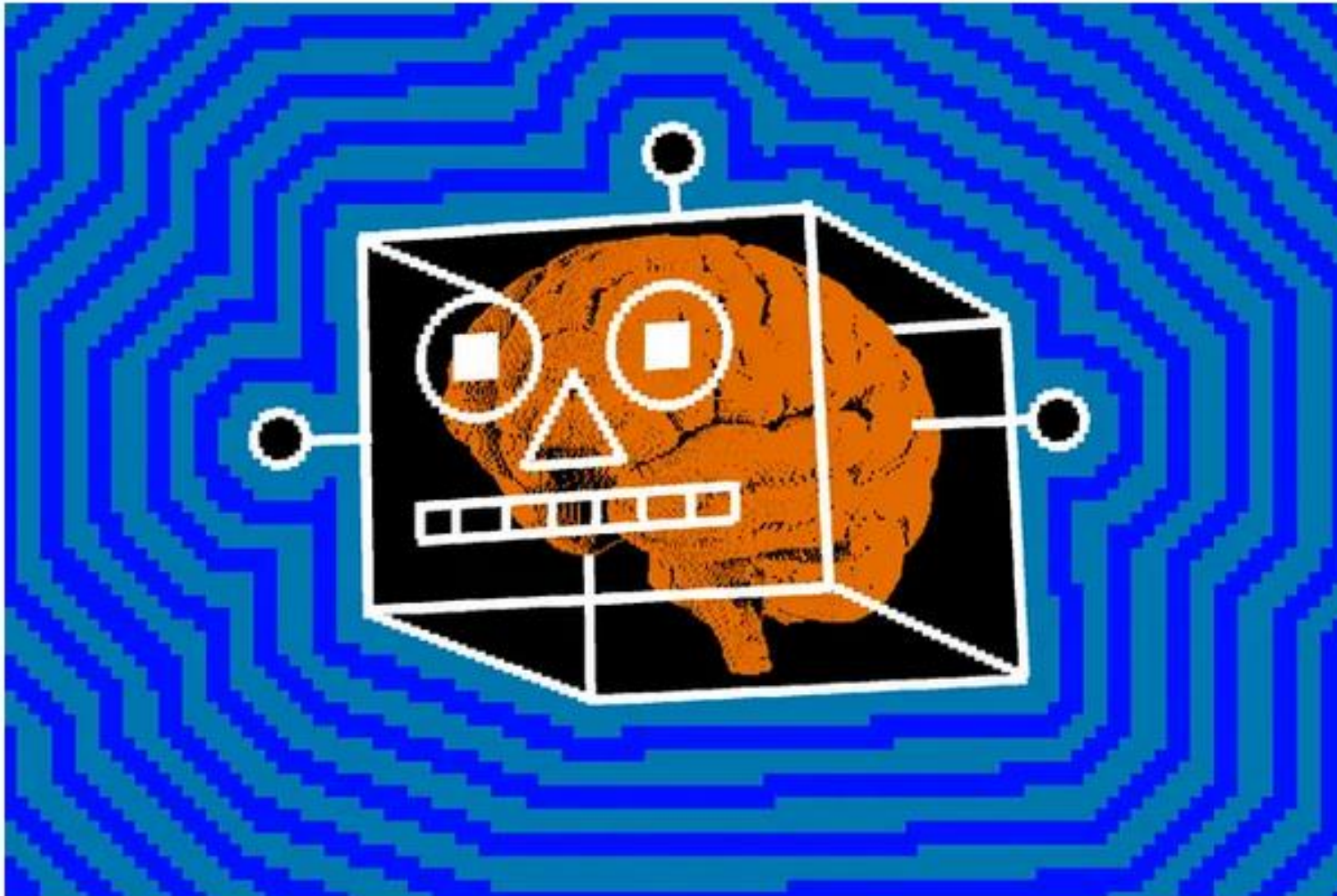
$$v = \sqrt{2gh}$$

The student incorrectly used the length of the slope L (80 m) in place of the height h in their final calculation. Let's correct the calculation using LaTeX for clarity.

The correct speed of the skier at the bottom of the hill, using the conservation of energy principle and taking into account the height of the hill, is approximately 28.01 m/s when rounded to two decimal places. [:-]

ARTIFICIAL INTELLIGENCE / TECH

Texas is replacing thousands of human exam graders with AI



The TEA expects to save between \$15 and \$20 million per year by using its new "automated scoring engine." Image: The Verge

/ Don't call the 'automated scoring engine' AI, though. They don't like that.

By [Jess Weatherbed](#), a news writer focused on creative industries, computing, and internet culture. Jess started her career at TechRadar, covering news and hardware reviews.

Apr 10, 2024, 4:47 PM GMT+1





You are welcome!

I am socially anxious. |



NBCNEWS.COM

Dartmouth researchers look to meld therapy apps with modern AI

Therabot, currently in its first clinical trial, uses generative AI trained on therapy scripts in an eff...

Generative AI in the Finance Function of the Future

AUGUST 22, 2023

By Michael Demyttenaere, Alexander Roos, Hardik Sheth, Marc Rodt, Matt Harris, Shervin Khodabandeh, Ronny Fehling, Daniel Martines, and Juliet Grabowski

READING TIME: 8 MIN

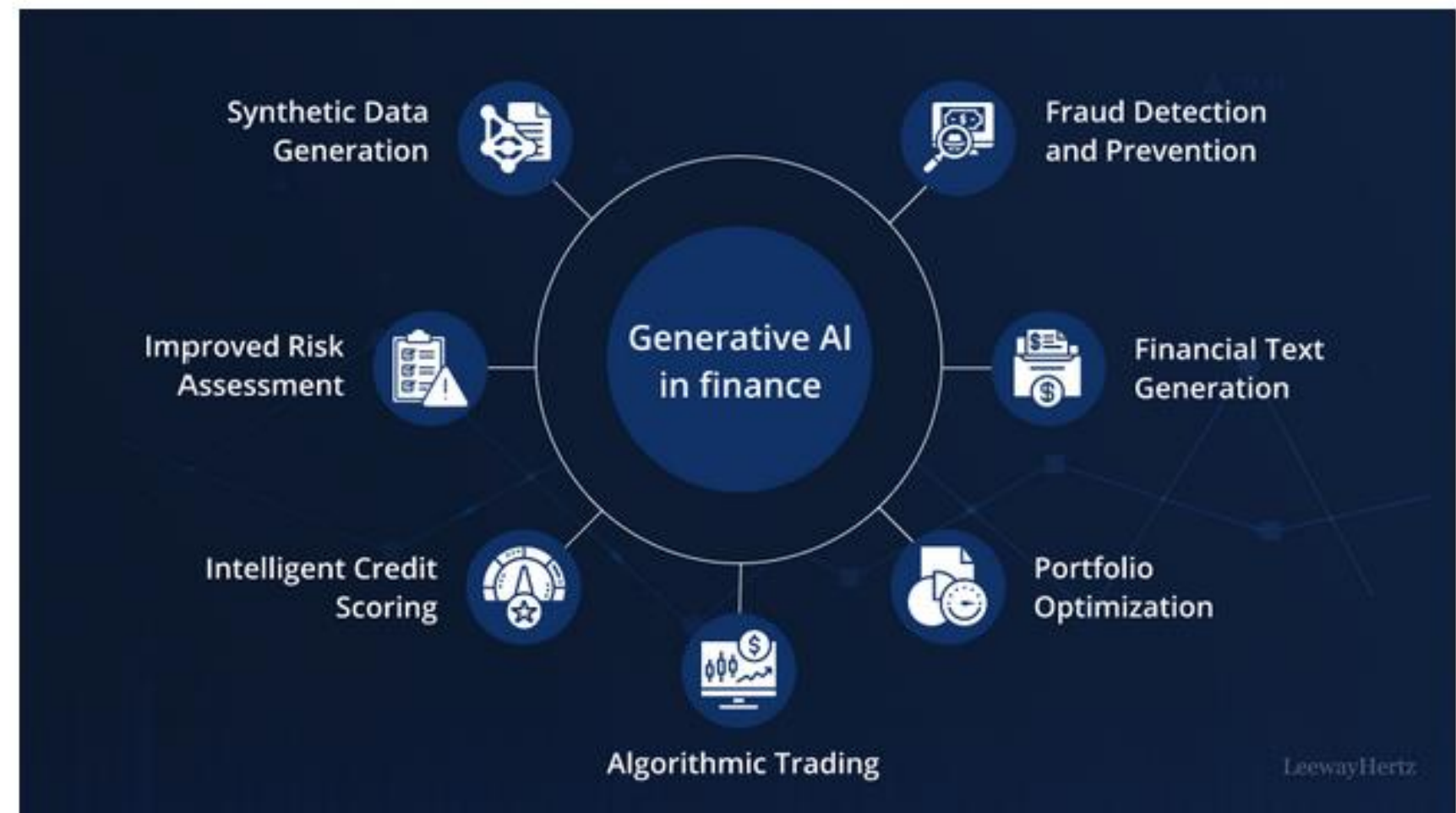
Key Takeaways

Now is the time for CFOs to learn about the applications of generative AI that will have the most impact and prepare to capitalize on emerging capabilities.

- Finance teams are currently using the technology to augment existing processes by creating text and conducting research.
- Looking ahead, generative AI “copilots” will work alongside finance professionals to transform core processes, reinvent business partnering, and mitigate risks.
- The adoption of generative AI in finance functions entails challenges, however, including accuracy and data security and privacy.

GENERATIVE AI IN FINANCE AND BANKING: THE CURRENT STATE AND FUTURE IMPLICATIONS

Talk to our consultant



AI fashion: computer-generated models look spookily like the real thing

- Major Japanese tech company DataGrid has created an AI capable of generating fake images of fashion models
- The technology used to create cats, faces, and Airbnb listings can transplant a person's facial features onto a computer version of them



<https://www.scmp.com/lifestyle/fashion-beauty/article/3009466/ai-fashion-computer-generated-models-look-spookily-real>



<https://thispersondoesnotexist.com/>



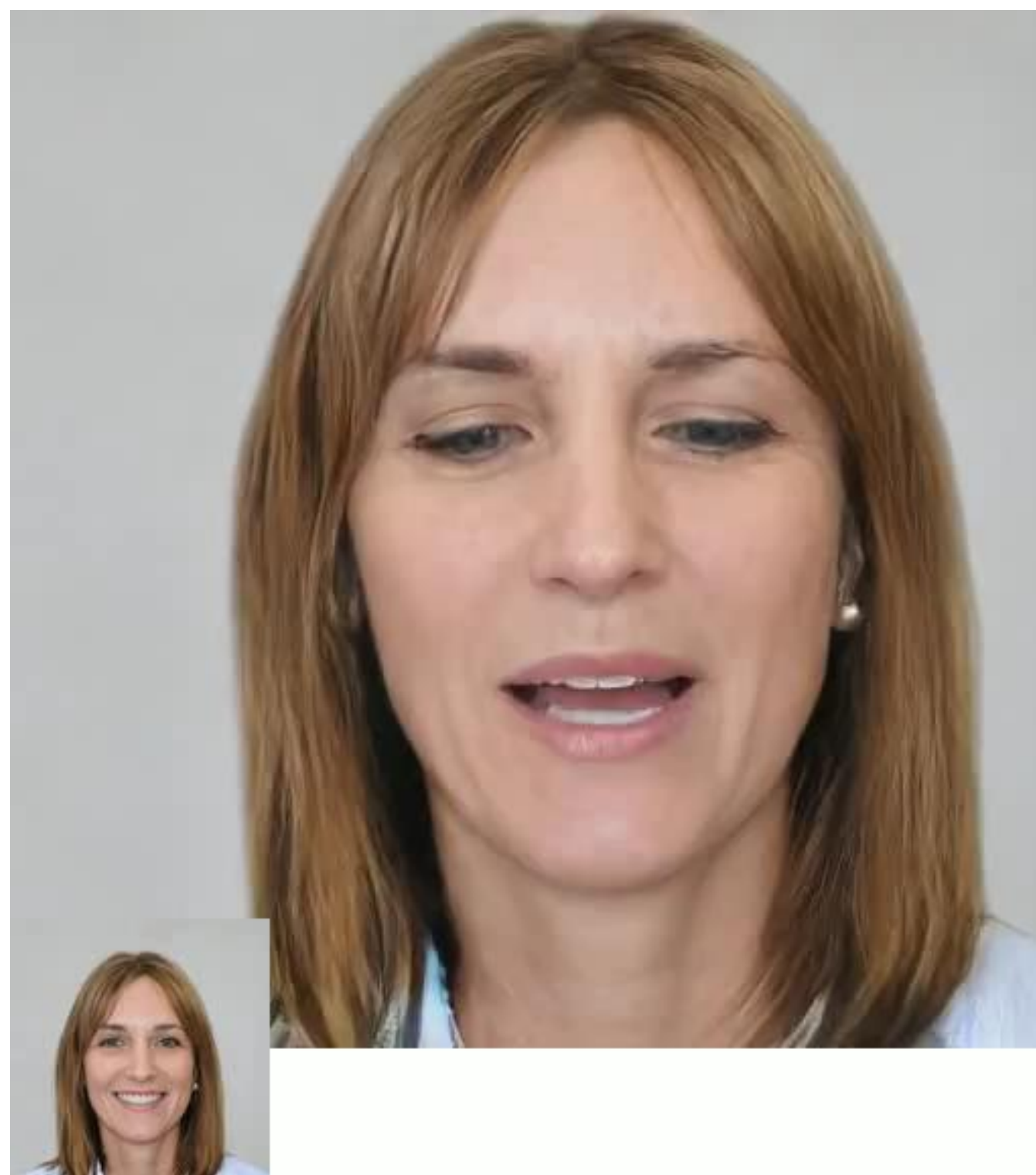
SoundStorm:

Efficient Parallel Audio Generation





Alba Renai, a primeira apresentadora espanhola criada por inteligência artificial



https://www.synthesia.io/free-ai-video-demo#OptimizedForSharing_v4



The 2nd
Annual
International

AI FILM FESTIVAL



[REQUEST TO ATTEND](#)

[FAQ](#)

[AIFF 2023 ↗](#)

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PRESENTING PARTNERS



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 runway



AIFF 2023 Premiere

“Do The Evolution”
by Ricardo Villavicencio



<https://twitter.com/paultrillo>





She's Running a Business, Writing a Book, and Getting a PhD—with ChatGPT -
Ep.11 Anne-Laure Le Cunff



Every

5,74 mil subscribers

Subscribed

122



Partilhar



<https://www.youtube.com/watch?v=SYtzwK6VoHU>

Inteligência Artificial Generativa



Disruptiva

Omnipresente

Transversal





What's next?

The background is a dark blue field filled with a complex network of glowing, thin blue lines that resemble neural connections or a data network. These lines are punctuated by numerous small, bright orange dots, some of which are slightly larger and more prominent than others, creating a sense of depth and activity.

smart agents
(powered by G-AI)

Generative AI and Multi-modal Agents - Capabilities

Multi-modal Data



- unstructured text
e.g. 10K, 10Q earnings reports



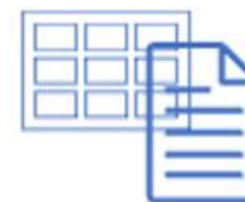
- structured tabular data
e.g. financial data



- audio recordings data
e.g. earnings calls



Contextual
question
answering



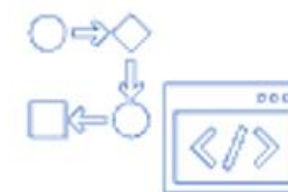
Text to SQL



Text
summarization



Data processing



Algorithm
solutions



Text generation

Individual or combined capabilities
depending on prompt questions.

A close-up, low-angle shot of a helicopter's instrument panel at night. The panel is filled with various analog gauges and dials, including an engine oil pressure gauge, torque gauge, airspeed indicator, and fuel gauges. A 'NO SMOKING' sign and a registration tag 'N406MR' are visible. The background shows a blurred cityscape with warm lights under a dark blue sky.

piloto automático vs co-piloto

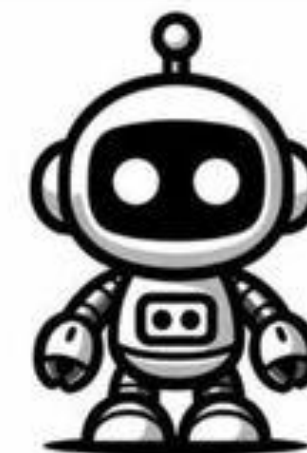
10

X

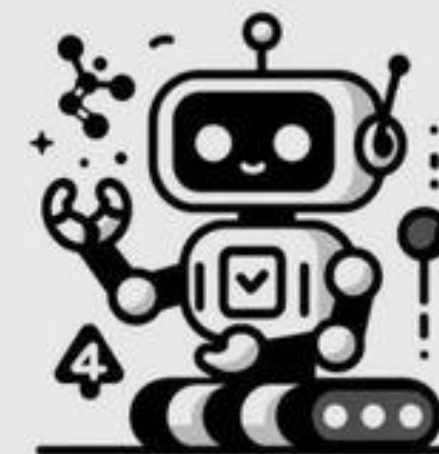
YOU

Onde se posicionam na vossa
relação com a Inteligência
Artificial Generativa?

YOU?



LEVEL 3:
AI AS A CONSULTANT



LEVEL 4:
AI AS A COLLABORATOR

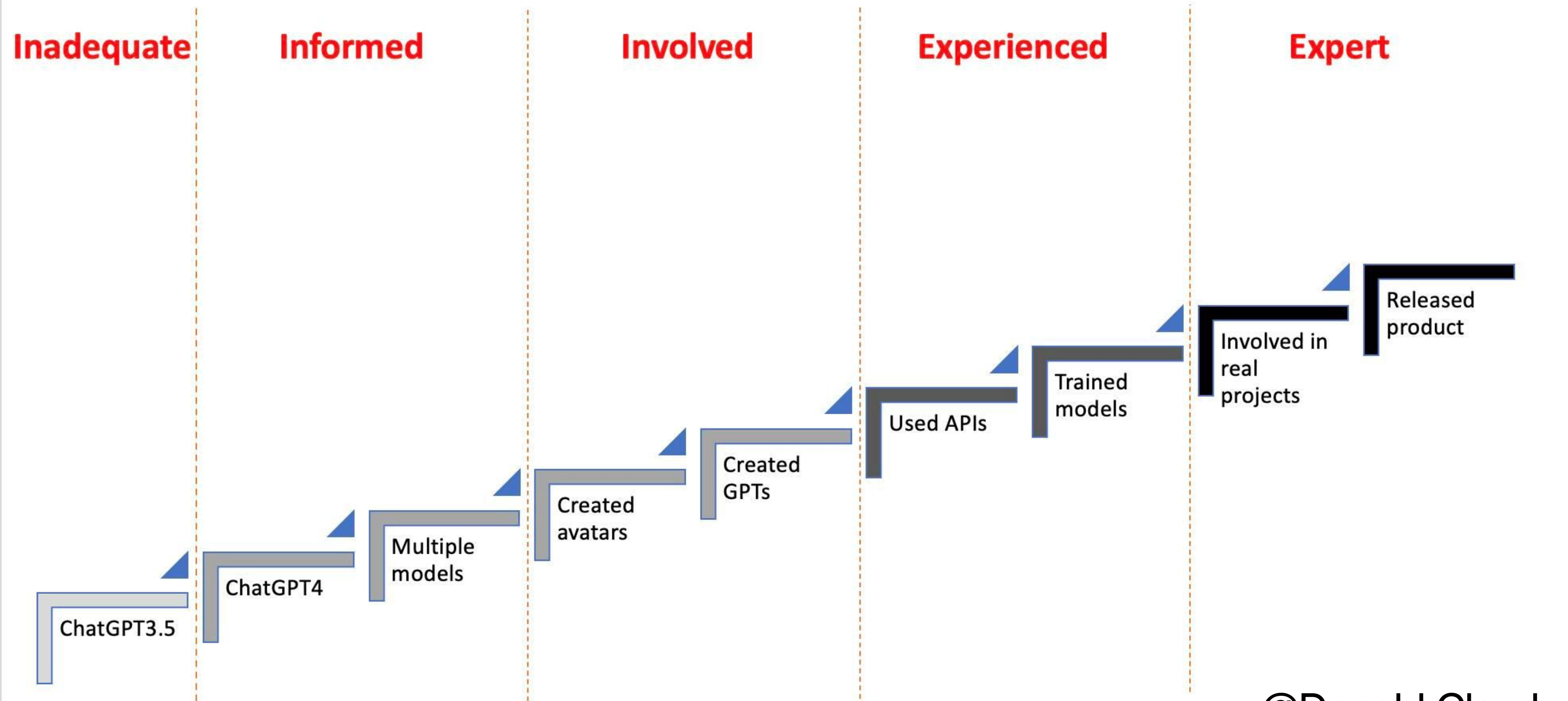


LEVEL 5:
AI AS AN EXPERT



LEVEL 6:
AI AS AN AGENT

Levels of expertise





Q/A