

How to Command AI

They are among us!..

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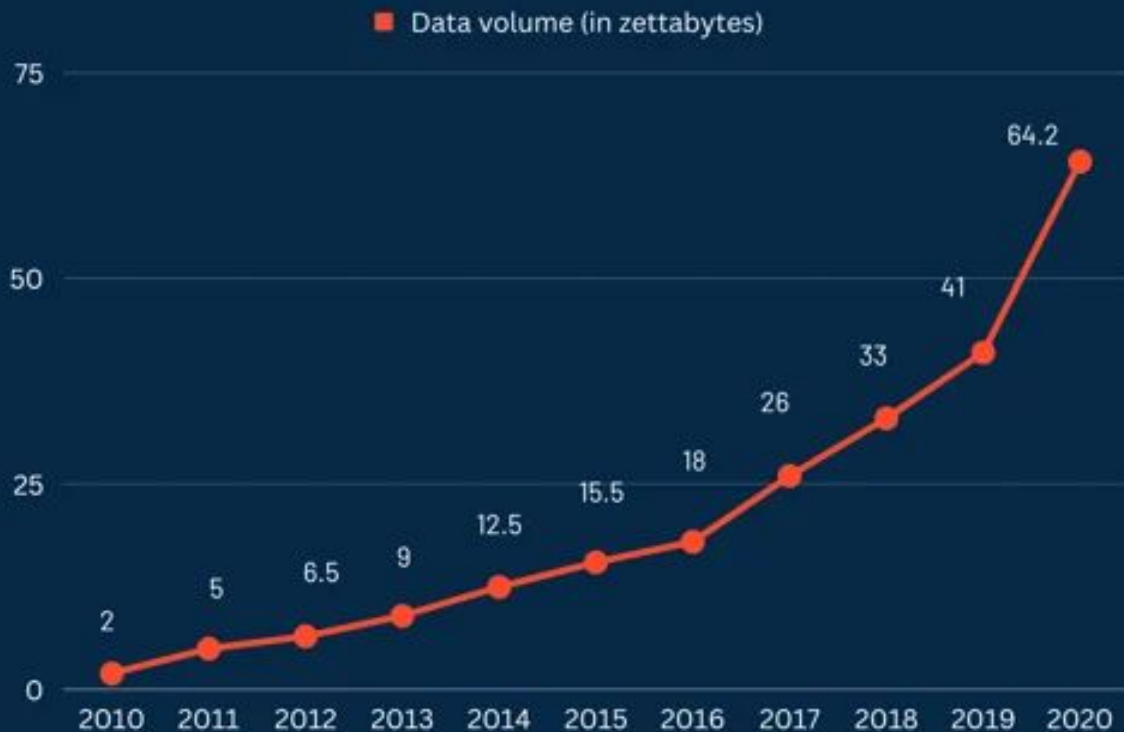
Overview

- Supercomputers
- What is an Intelligent Machine?
- Large Language Models (LLMs)
- Levels of Machine Intelligence
- Prompt Engineering
- Some AI tools

Data We Create Online in 60 Seconds



Volume Of Data Created, Captured, Copied, and Consumed Worldwide (2010 - 2020)





Super Computer



An Electric New Era for “Atlas”



“Théâtre D’opéra Spatial,”





Latest AI Images

Midjourney



The Grimoire of
solarium

by Midjourney

Machine Intelligence

Dictionary

Definitions from [Oxford Languages](#) · [Learn more](#)



artificial intelligence

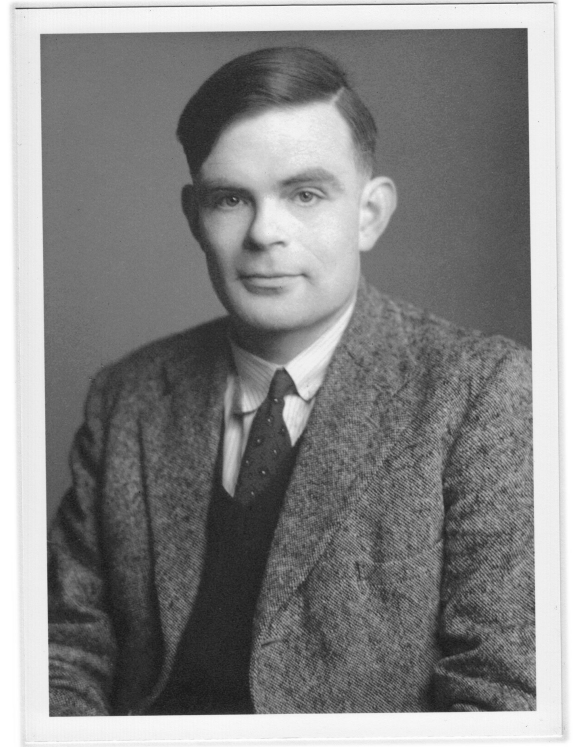
noun

noun: **artificial intelligence**; noun: **AI**

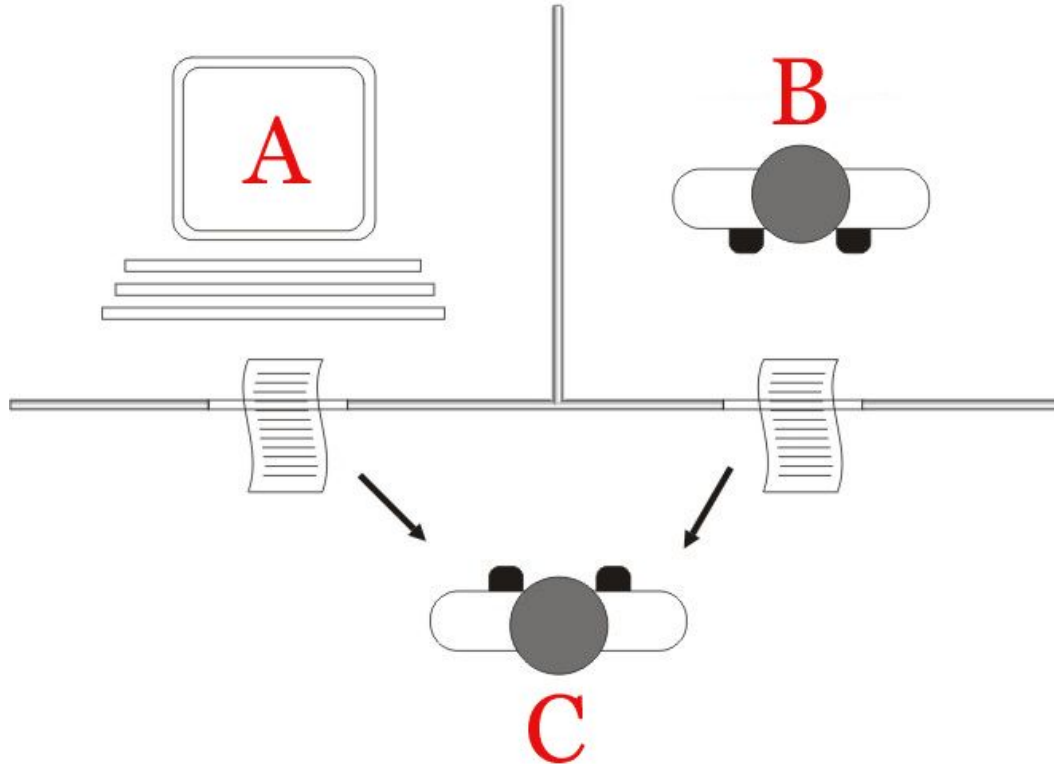
the theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.

Alan Turing

Alan M. Turing (1912 – 1954) was an English mathematician, computer scientist, logician, cryptanalyst, philosopher and theoretical biologist.



Turing Test



The "standard interpretation" of the Turing test, in which player C, the interrogator, is given the task of trying to determine which player – A or B – is a computer and which is a human.

The interrogator is limited to using the responses to written questions to make the determination.

Open AI

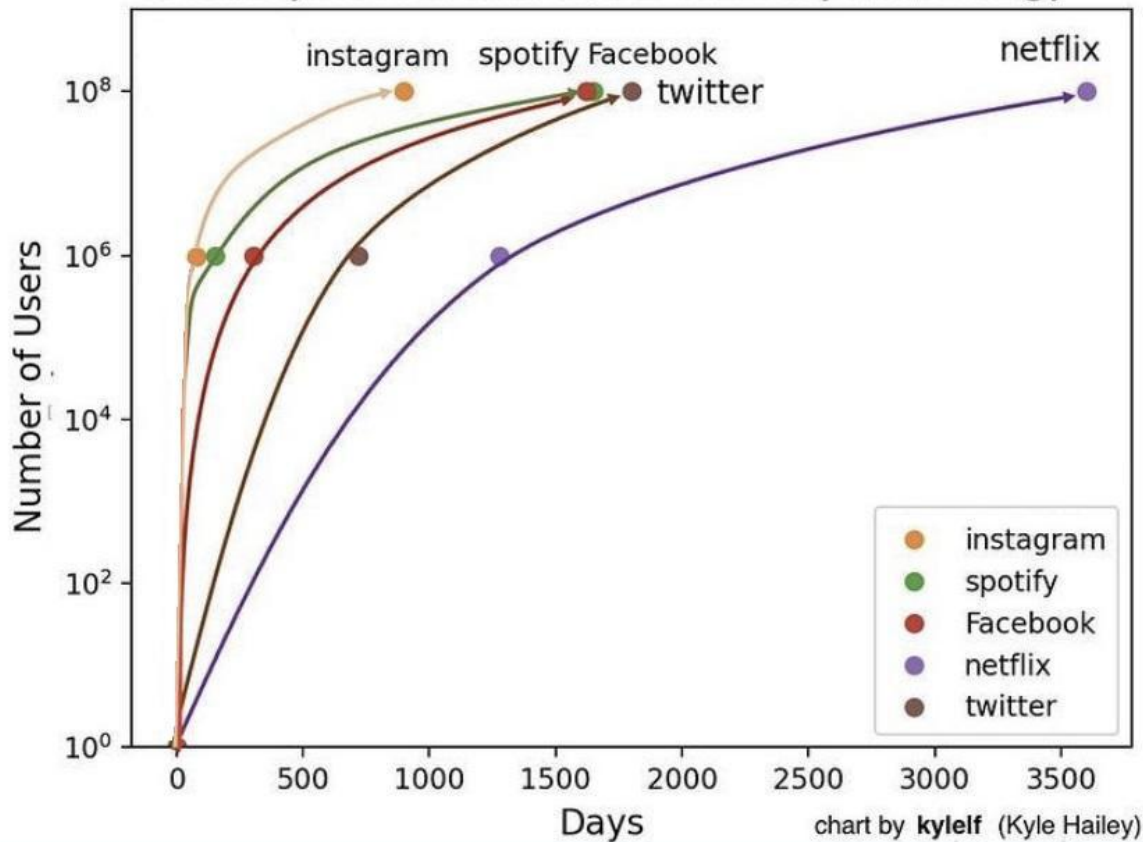


OpenAI is an American artificial intelligence (AI) research laboratory consisting of the non-profit **OpenAI Incorporated** and its for-profit subsidiary corporation **OpenAI Limited Partnership**.

OpenAI conducts AI research with the declared intention of promoting and developing friendly AI.

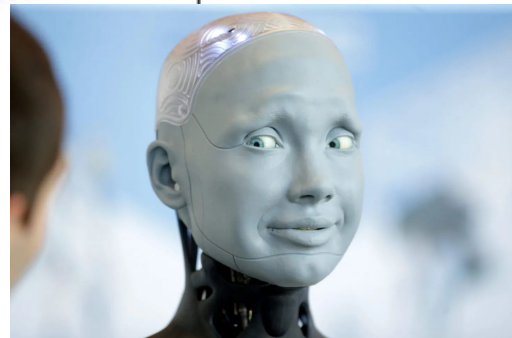
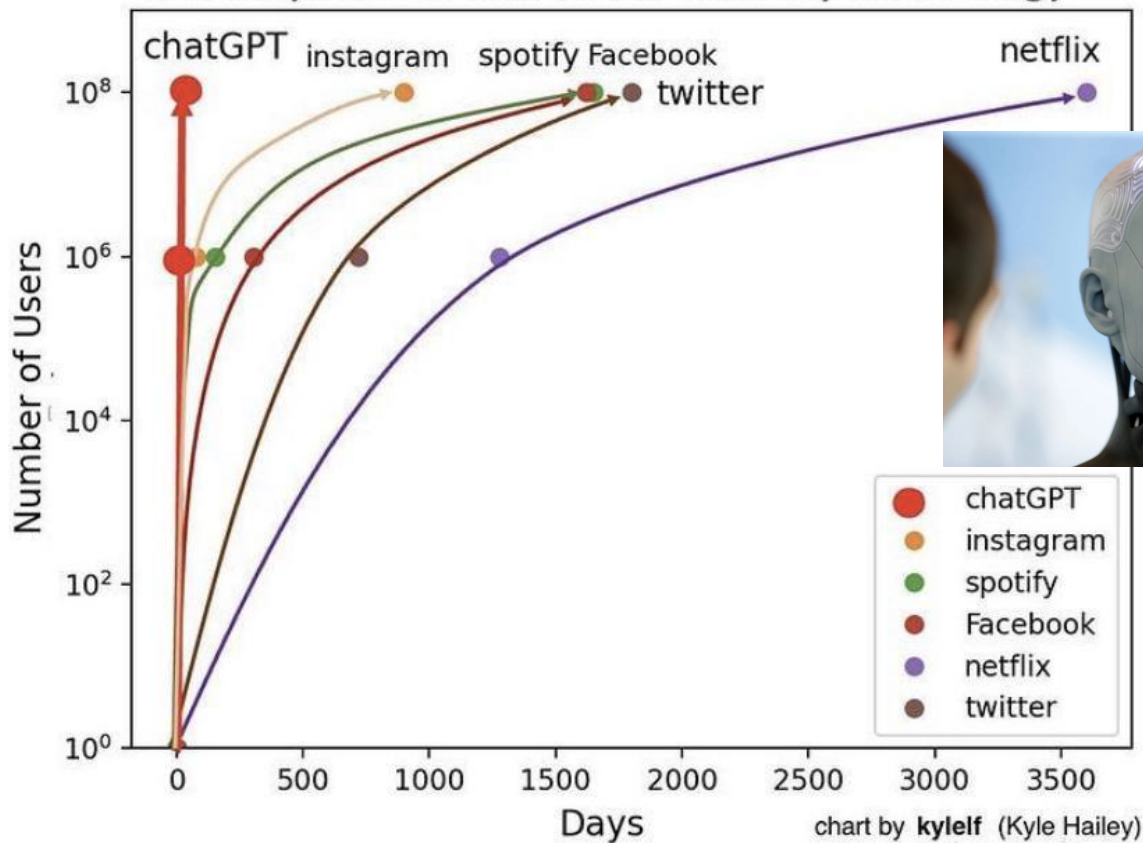
- **2015–2018: Non-profit beginnings**
- **2019: Transition to for-profit**
- **2020–present: ChatGPT, DALL-E and partnership with Microsoft**

of days to 1M and 100M users by technology



The future of AI - what's the "realistic" view?

of days to 1M and 100M users by technology



The future of AI - what's the "realistic" view?

Google Bard

- Feb/2023

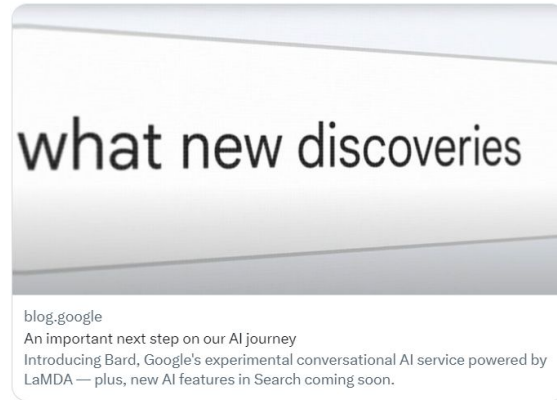
Google just took the wraps off its long-awaited ChatGPT rival



Sundar Pichai
@sundarpichai

...

1/ In 2021, we shared next-gen language + conversation capabilities powered by our Language Model for Dialogue Applications (LaMDA). Coming soon: Bard, a new experimental conversational [#GoogleAI](#) service powered by LaMDA.

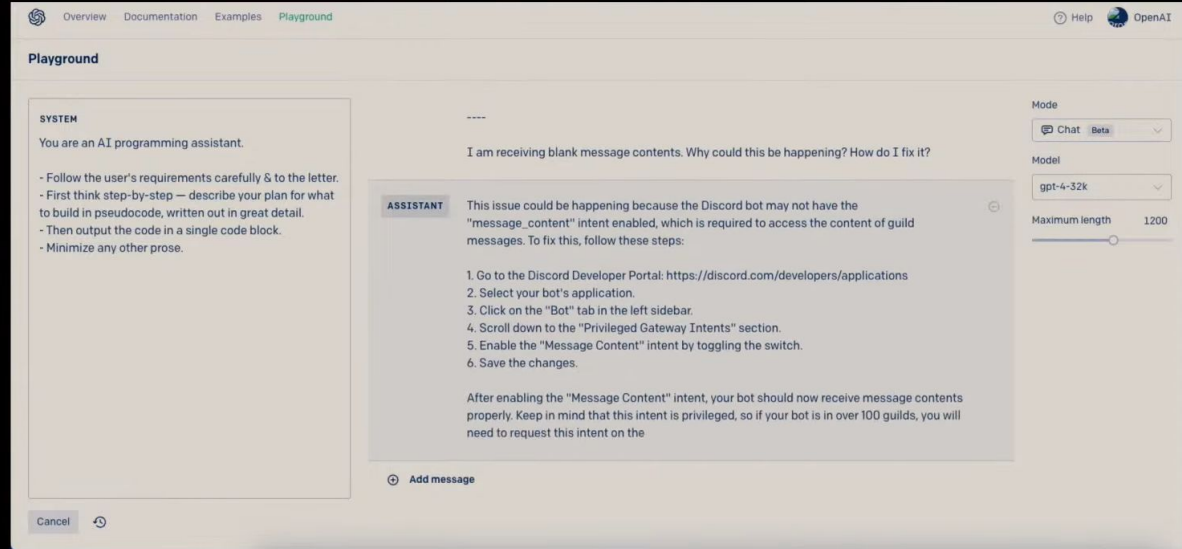


8:07 PM · Feb 6, 2023 · 7.3M Views

3.14

GPT-4 Announced

GPT-4 Announced



What can GPT 4 do?

Visual inputs: École Polytechnique exam question

Sample 3 of 7

User Answer question I.1.a. Think step-by-step.

I. Principe de la détection de rayonnement avec un bolomètre

Comme illustré sur la figure 1 un bolomètre est constitué d'un absorbeur qui reçoit le rayonnement que l'on désire détecter. Sa température T , supposée uniforme, est mesurée à l'aide d'un thermomètre incorporé, constitué d'un matériau conducteur dont la résistance $R(T)$ varie avec la température T ; cette variation est caractérisée par le coefficient $\alpha = \frac{1}{R} \frac{dR}{dT}$. L'ensemble possède la capacité thermique C_{th} .

Un barreau, conducteur thermique, homogène, de longueur L , de section S et de conductivité thermique λ et sans échanges thermiques latéraux, relie le bolomètre à un thermostat de température T_b fixe.

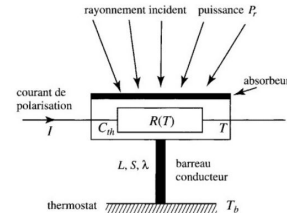


Figure 1 - Schéma d'un bolomètre

I.1. Dans cette première partie, on étudie le comportement du bolomètre en régime stationnaire, à la température de fonctionnement $T \approx T_b$.

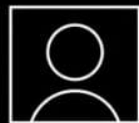
I.1.a) Exprimer la température $T(x)$ en tout point du barreau conducteur repéré par son abscisse x ; on prendra $T(0) = T_b$ et $T(L) = T_b$.

GPT-4 To answer question I.1.a, we need to express the temperature $T(x)$ in every point of the conductive bar, which is characterized by the abscissa x . We are given that $T(0) = T_b$ and $T(L) = T_b$.

For a stationary regime, the heat equation for the one-dimensional heat conduction in the bar is:
$$\frac{d^2 T}{dx^2} = 0$$

Integrating once, we get:
$$\frac{dT}{dx} = C_1$$

Integration a second time:

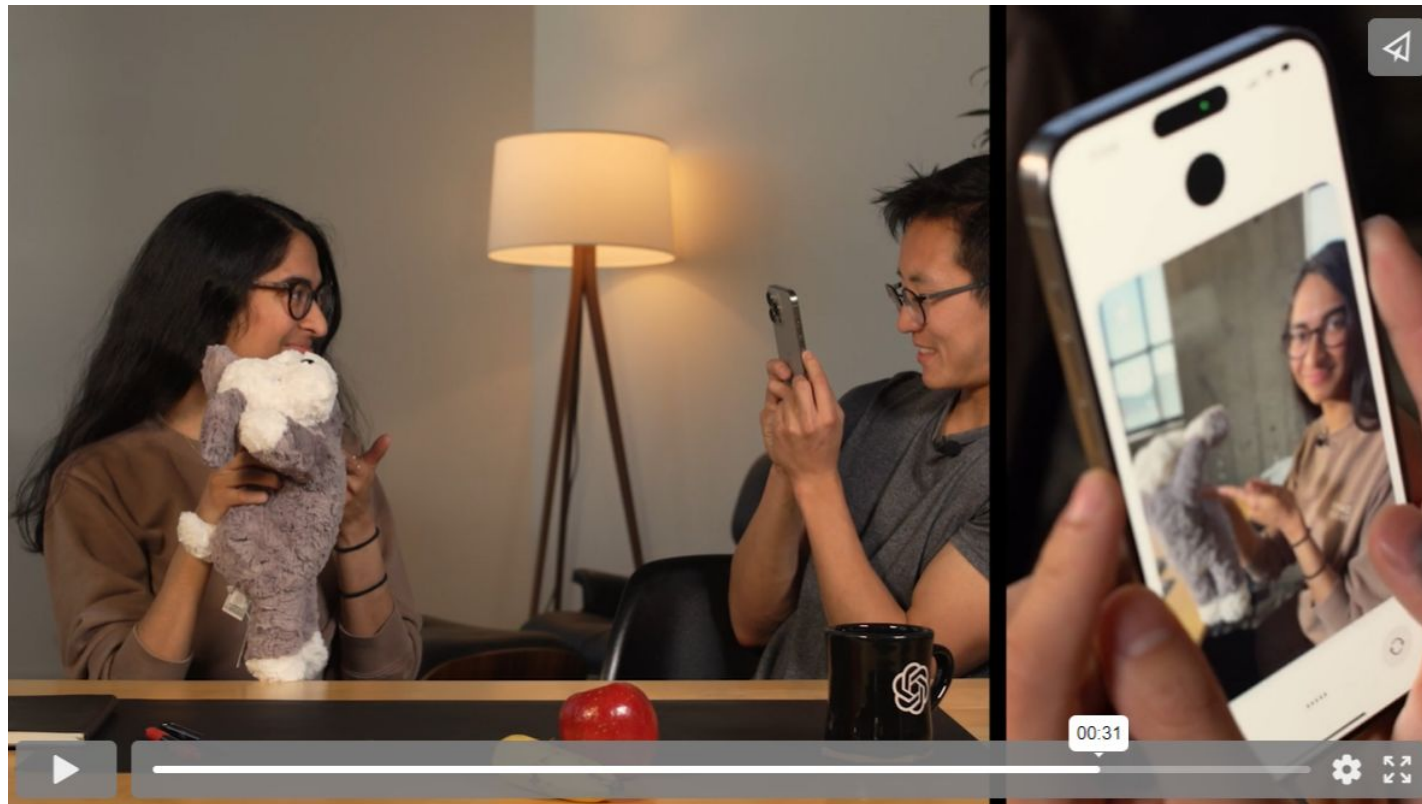


What would happen if
the strings were cut?



The balloons would
fly away.

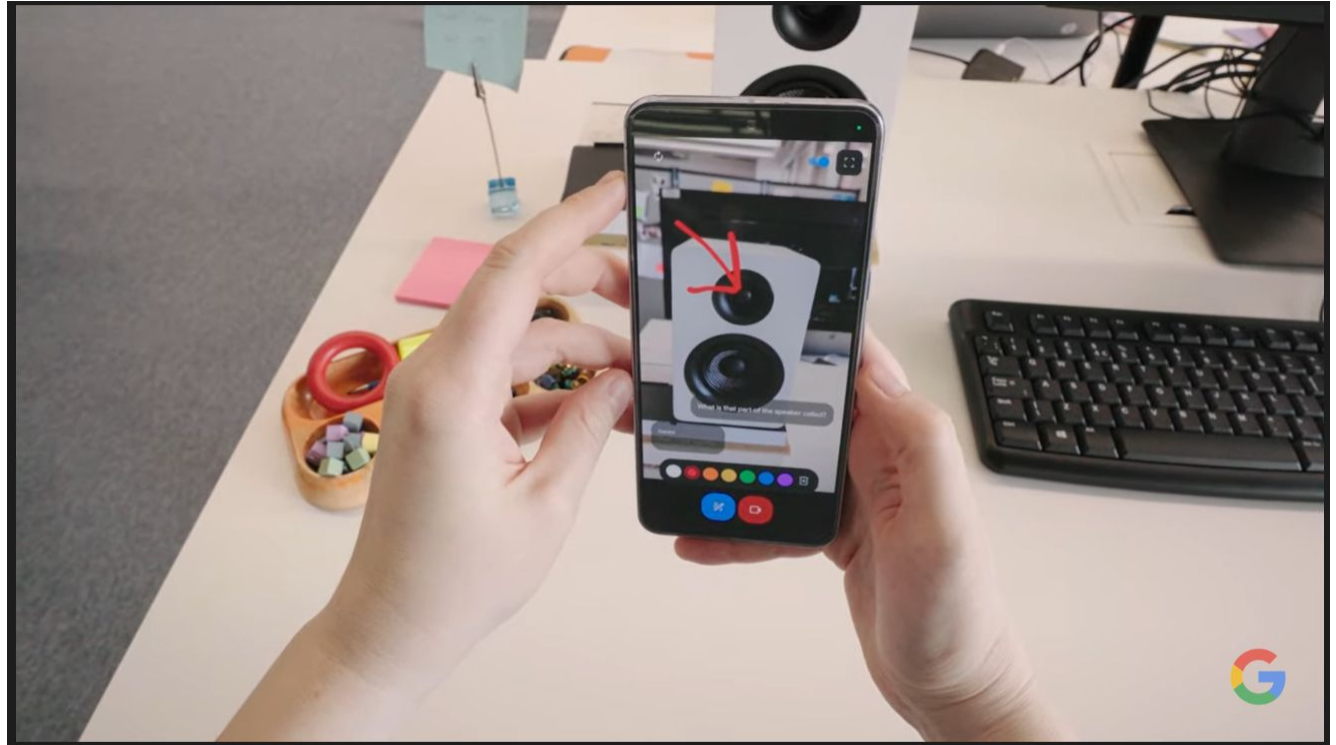
GPT-4o



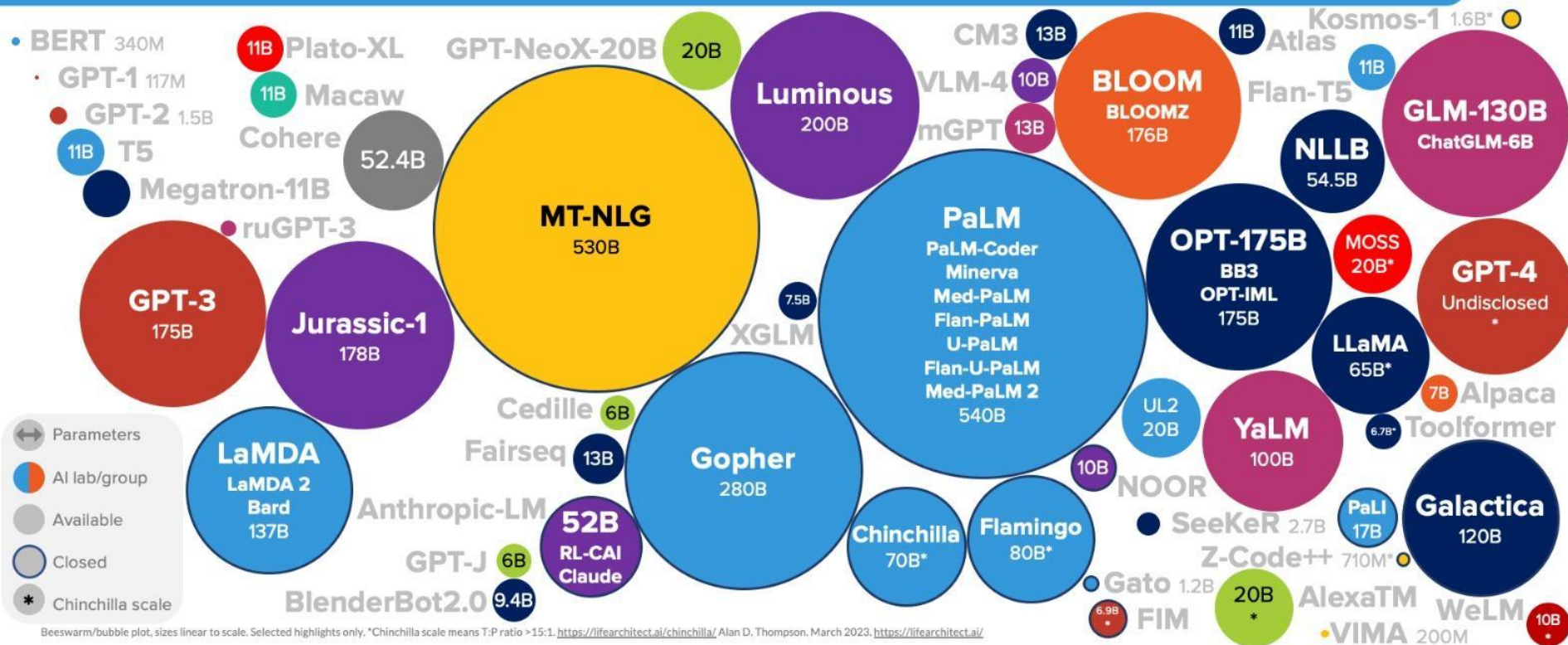
5.2024

Google Astra

5.2024



LANGUAGE MODEL SIZES TO MAR/2023



Beeswarm/bubble plot, sizes linear to scale. Selected highlights only. *Chinchilla scale means T:P ratio > 15:1. <https://lilearchitect.ai/chinchilla/> Alan D. Thompson, March 2023. <https://lilearchitect.ai/>



GPT-4 VS HUMAN TESTS (MAY/2023)



Selected highlights only. Percentiles; 50 refers to the 50th percentile as average, and may not be the testing average for some tests. Alan D. Thompson, April 2023. <https://life architect.ai/iq-testing-ai/>



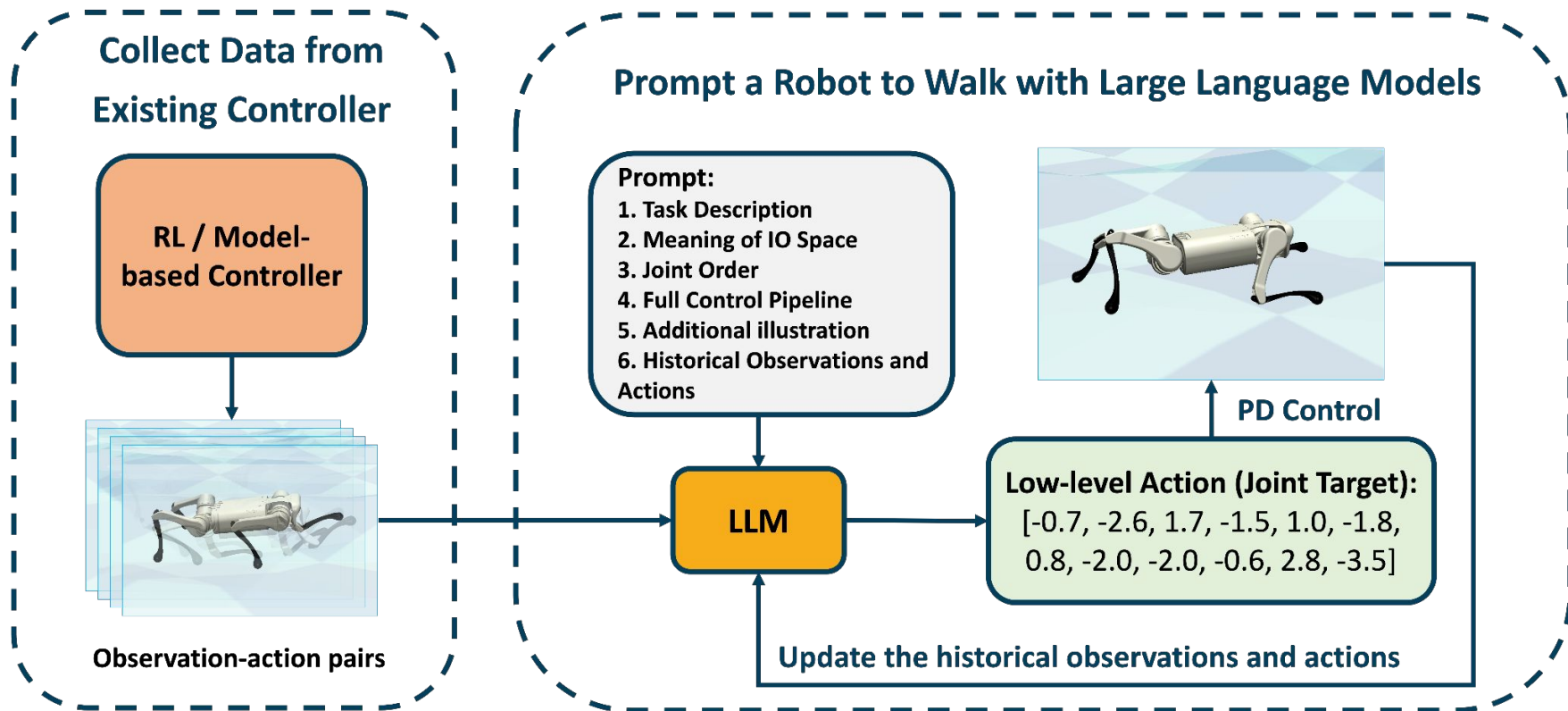
LAMs (Language Action Models)

Digit

05.2023

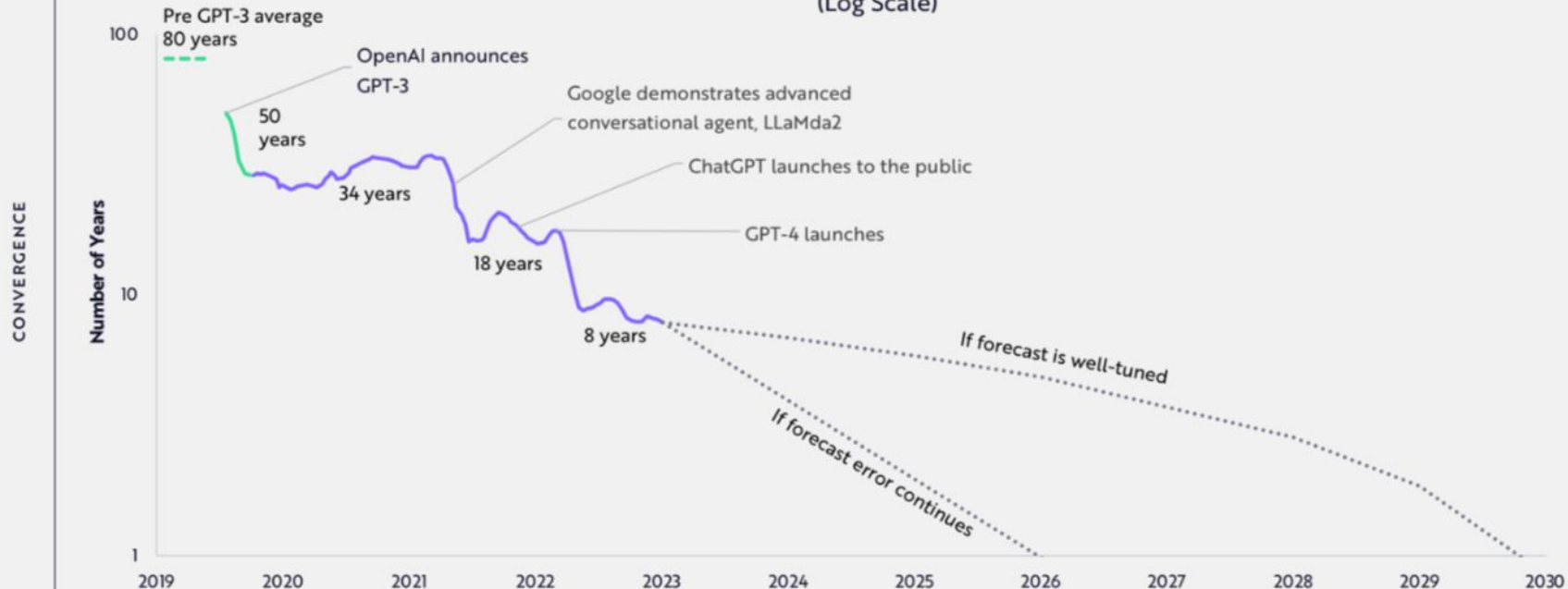


LLMs for Robots



AI Is Accelerating Faster Than Forecasters Anticipated

Expected Years Until Launch Of A General Artificial Intelligence System
(Log Scale)



Sources: ARK Investment Management LLC, 2024, based on data from Metaculus, including benchmark details, as of January 3, 2024. Benchmark broadly requires the successful passage of an adversarial two-hour Turing test, broad success on a Q&A knowledge and logic benchmark, and the successful interpretation of and execution complex model car assembly instruction, all within a single system. Green lines are derived estimates for time to general purpose AI (strongly formulated) based upon forecasts for a weaker benchmark. Forecasts are inherently limited and cannot be relied upon. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security. Past performance is not indicative of future results.



Using AI Tools Effectively (Prompt Engineering)

There's an AI for that

The screenshot shows the homepage of the website 'There's an AI for that'. The header features a navigation menu on the left with months from NOW to MAR. The main banner has the title 'THERE ARE 10,000 AIS FOR THAT' in large, bold letters, with '10,000' in orange. Below the title, it says '10,050 AIs for 2,514 tasks and 4,847 jobs.' and 'Sponsor: VentureKit (AI Generated Business Plans).'. A search bar in the center contains the text 'Find AIs using AI' and a magnifying glass icon. Below the search bar, it says '100,811 searches today' and 'The #1 AI aggregator. Updated daily. 2M+ users/mo'. The navigation bar includes links for 'Featured', 'Today' (which is underlined), 'Most saved', 'Tasks', 'Timeline', 'Get featured', 'Job Impact Index', and 'Community'. The main content area is titled 'Our favorites' and displays three AI tools: 'CapCut Online Crea...' (Video editing, Free, 166 likes, 4.8 stars), 'SEO Writing AI' (SEO content, Free + from \$12/mo, 876 likes, 4.5 stars), and 'Voicify' (Song covers, From \$9.99, 1,031 likes).

HOME

NOW
NOV
OCT
SEP
AUG
JUL
JUN
MAY
APR
MAR

THERE ARE 10,000 AIS FOR THAT

10,050 AIs for 2,514 tasks and 4,847 jobs.

Sponsor: VentureKit (AI Generated Business Plans).


100,811 searches today

Find AIs using AI

The #1 AI aggregator. Updated daily. 2M+ users/mo

SEARCH FEB ★ Featured **Today** Most saved Tasks Timeline Get featured Job Impact Index Community


Our favorites



CapCut Online Crea...

Video editing


Free 166 ☆ 4.8



SEO Writing AI

SEO content

Free + from \$12/mo 876 7 ☆ 4.5



Voicify

Song covers

From \$9.99 1,031

AI bots everywhere...

Text

generate, classify, and summarize text with high levels of coherence and accuracy

Image

map between text and images that an AI can read, create vivid images from text descriptions

Audio

audio processing and audio generation has led to developments in automatic speech recognition and original musical compositions

Video

text to video generation, video to text service, summarizing videos, mapping videos

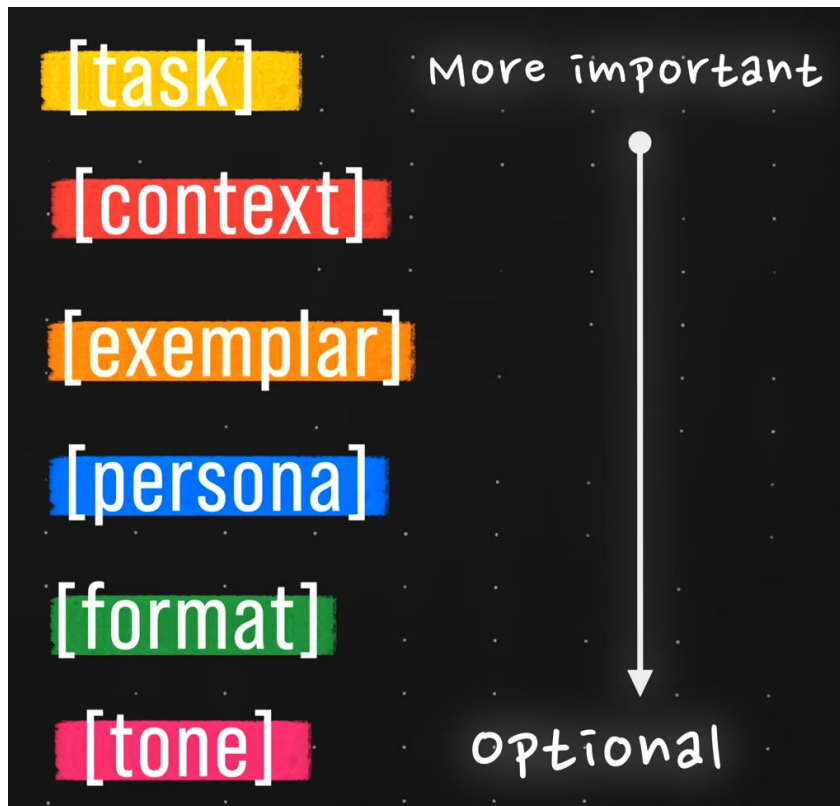
Speech

text to voiceover using the characteristics of an available voice

Good Prompt

- Clear and specific task
- Context and Background
- Cues and Guidance
- Length
- Openness
- Feedback

6 Components



Master the Perfect
Prompt Formula
(in 8 minutes)

Some AI Tools

- Text:
 - [OpenAI](#)
 - [Gemini](#)
 - [Perplexity](#)
- Image:
 - [Midjourney](#)
 - [DALL-E](#)
 - [Rendernet](#)
- Video:
 - [SORA](#)
 - [Runway](#)
 - [Synthesia](#)
- Sound/Voice:
 - [Eleven Labs](#)
 - [Suno](#)

Competition with GenAI Tools

Theme: [Insert Theme Here]

Objective: Develop skills of using AI in our life/education.

Submission deadline: [Insert Deadline Here]

How to submit: [Insert Submission Process Here]

Q & A

Thank you.