AI in Danish companies and what's next

Trifork Vision AI
24.10.24

Dansk Industri

@henrikfabrin

Who am I?

Henrik Fabrin

Experienced AI and tech entrepreneur

- **12 years as founder & leader** in the tech & AI industry
- **Companies**: 1 exit, 1 bootstrapped, 1 failed
- **Open Source**: Nordic BERT language model collection
- **Advisor**: Venture funds & enterprises on AI
- **Now**: Head of AI at DI

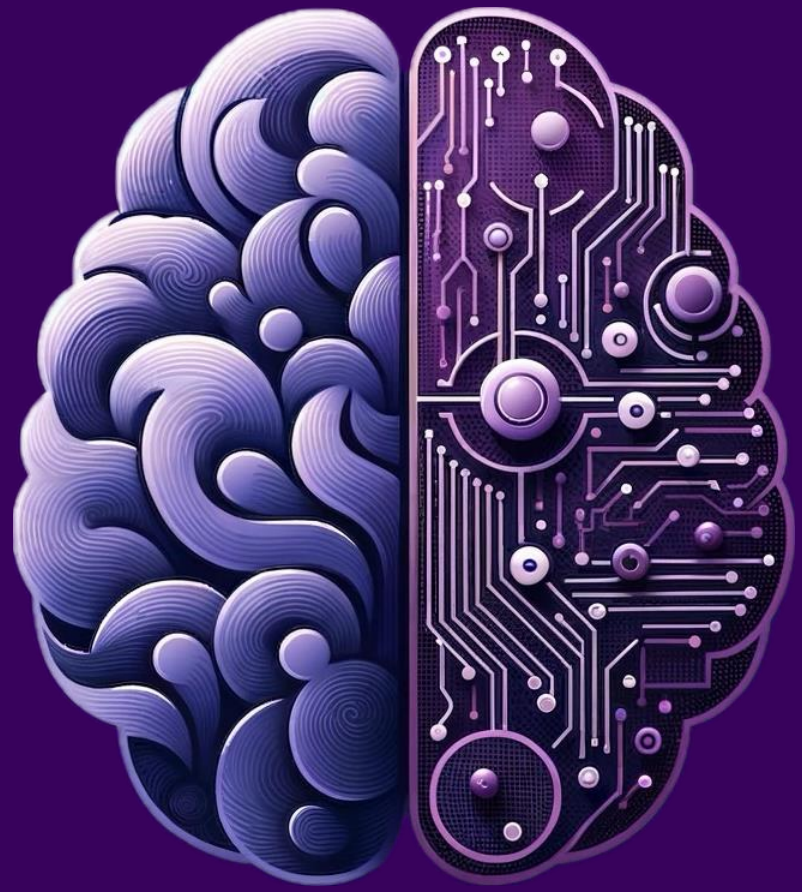
hefa@di.dk | linkedin/henrikfabrin

What I believe

1. The cost of (artificial) intelligence goes to zero
2. AIs will assist us, and AIs will do the work for us
3. Talking to AIs will feel as natural as talking with humans
4. Businesses will innovate, rise and fall much faster

Today’s focus

- Industry adoption
- What’s holding us back
- AI industry trends
- Final notes



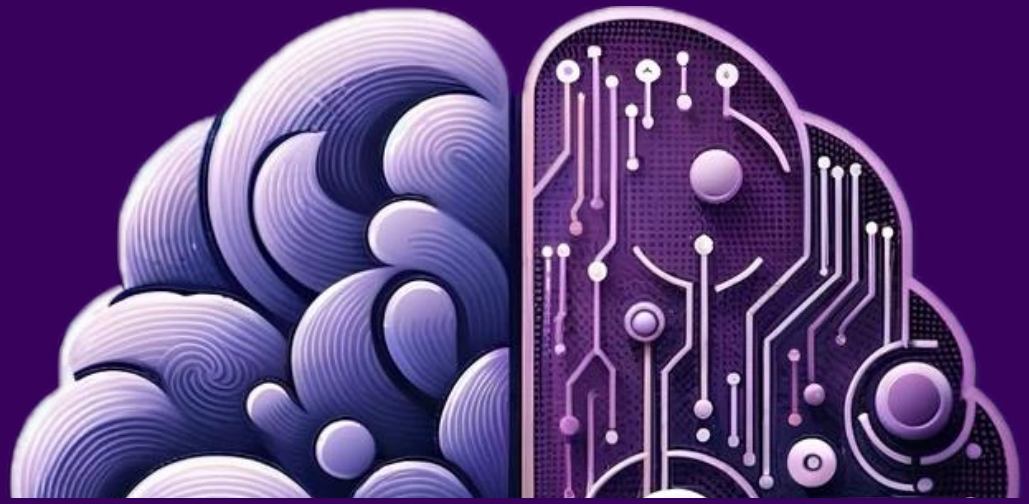
Show of hands

100%

AI

is now for everyone.

First, we digitalized everything



then we trained AI on it all

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All our combined knowledge

at our finger tips

to work on your

specific problem

Text

Text

Images

Text

Images

Audio

Text

Images

Audio

Video

Images

Audio

Video

Code

Audio

Video

Code

Task completion

Video

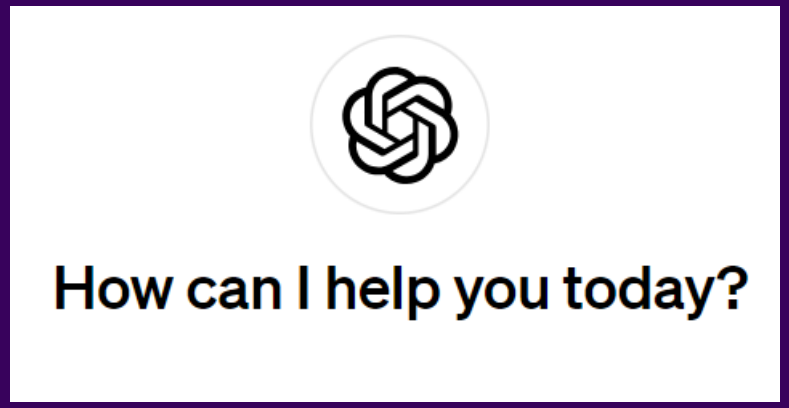
Code

Task completion

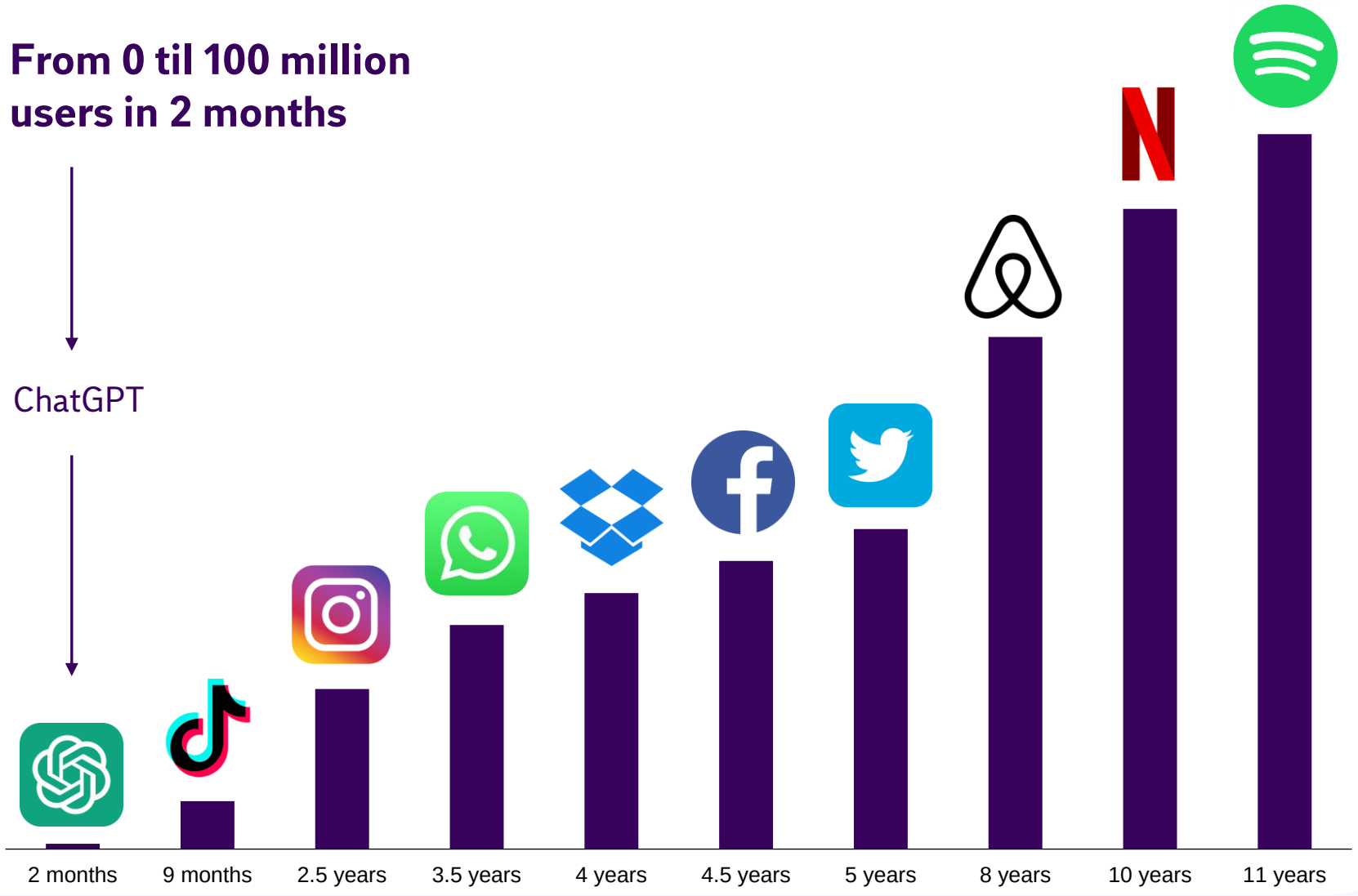
Physical world

Much easier to use

AI Chat



Fastest product adoption ever



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When 100% use AI

but only 15% has an AI strategy

When the barrier to AI adoption

When the barrier to AI adoption collapses

What does it all mean?

Black & White

~~Black & White~~

Job 1: Survive AI

Job 2: Win with AI

Status & expectations

The state of AI adoption in Denmark

Data from the latest reports & analysis DI has been involved in.

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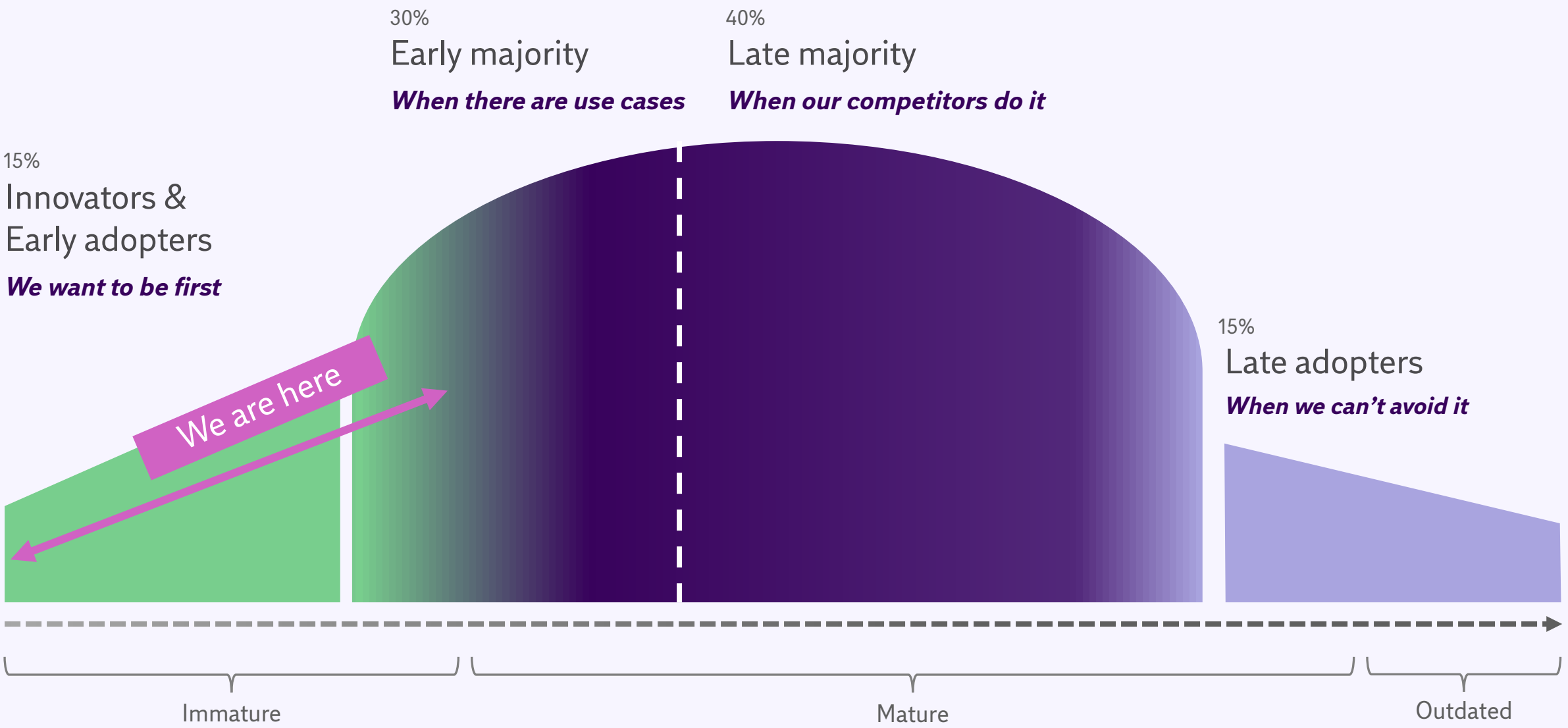
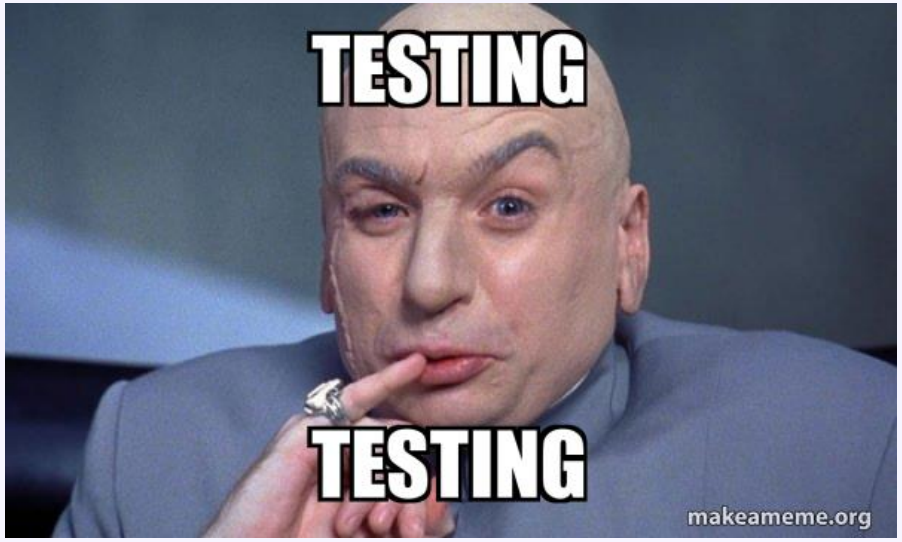
Adoption curve

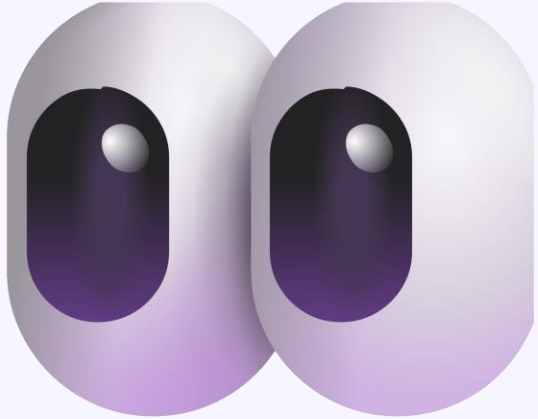


Experimentation

Innovators & Early adopters

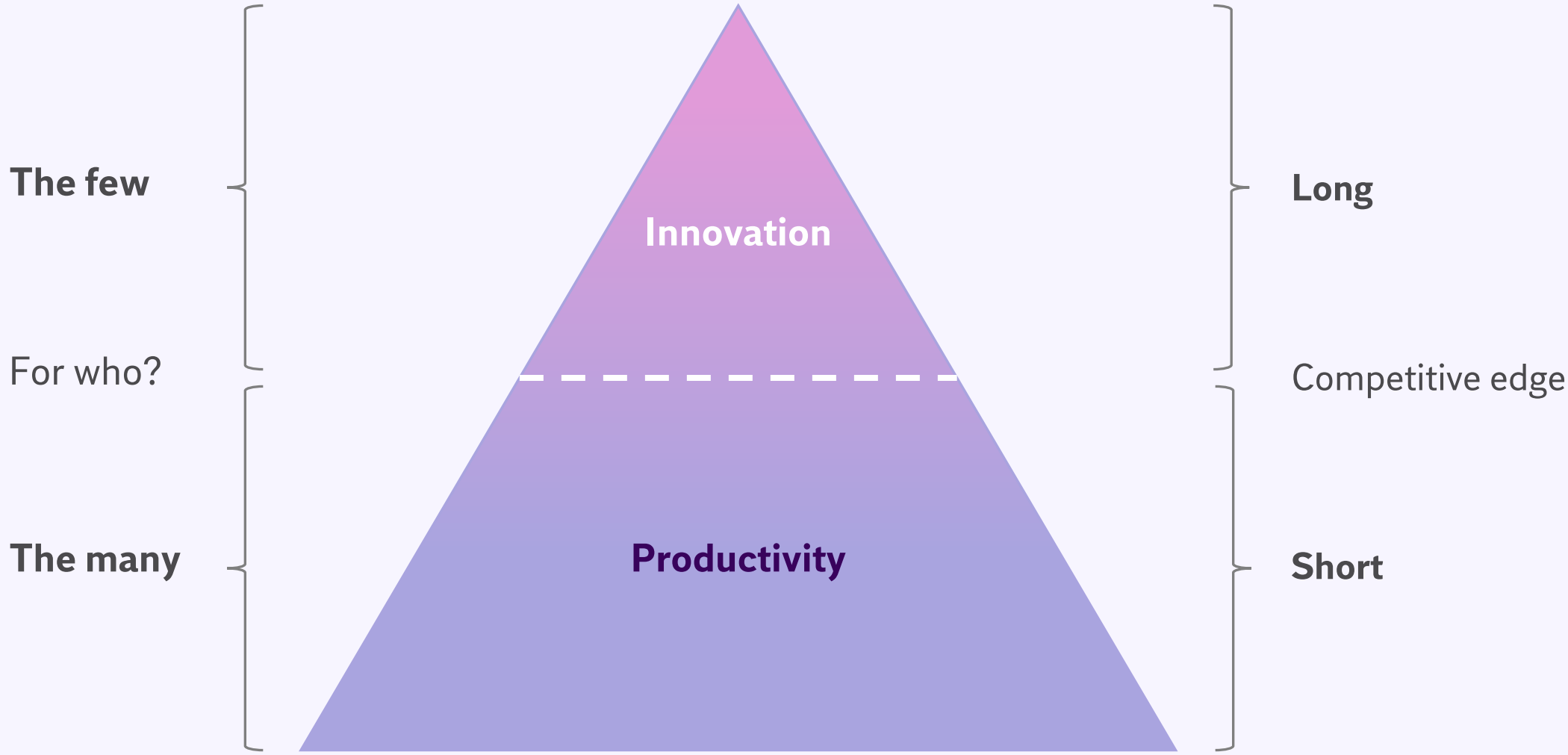


The rest of the market



”As soon as we can see the business case”

Two types of gains



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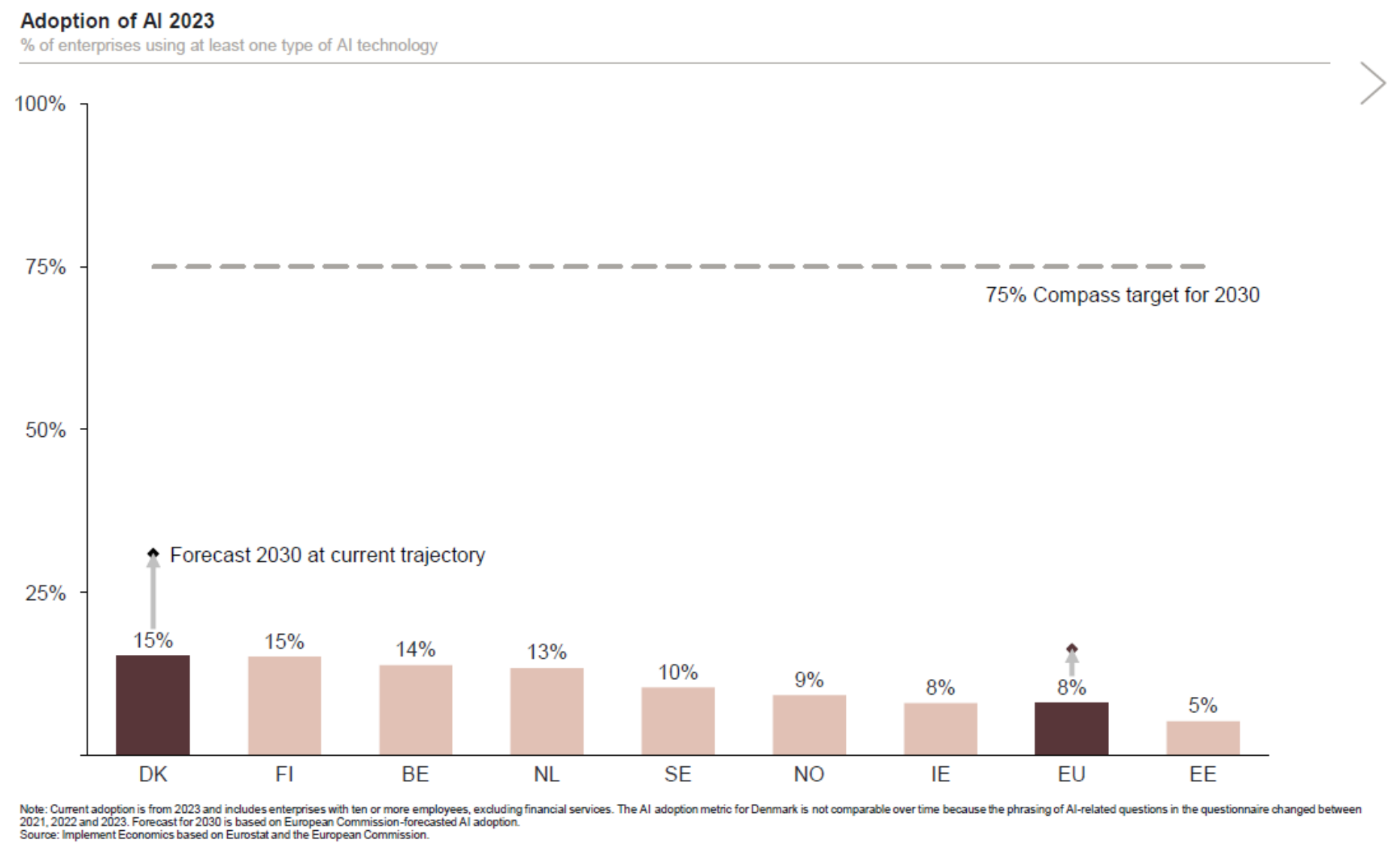
Denmark leads the EU on AI adoption



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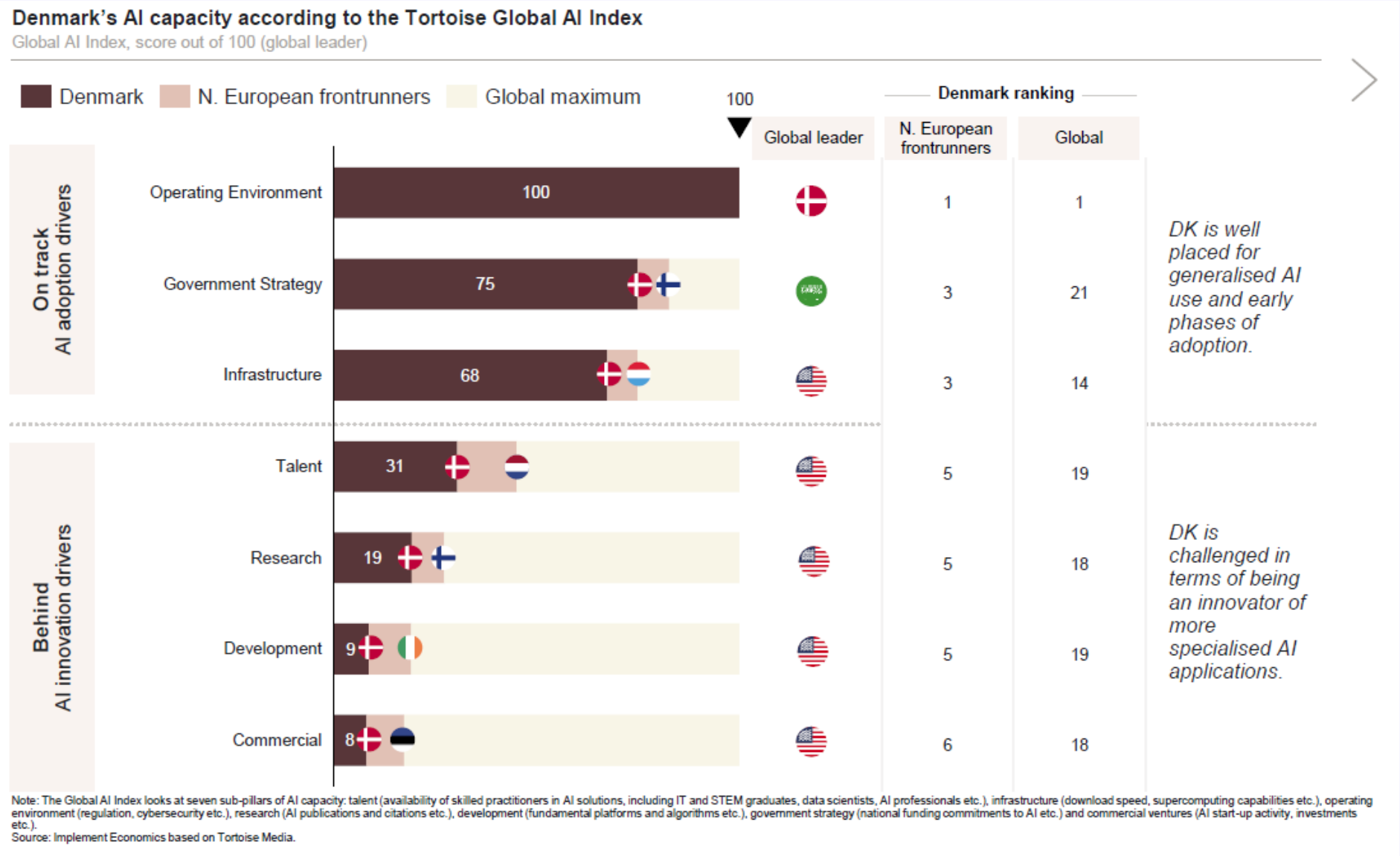
But is heading for a superuser role, not a lead innovator



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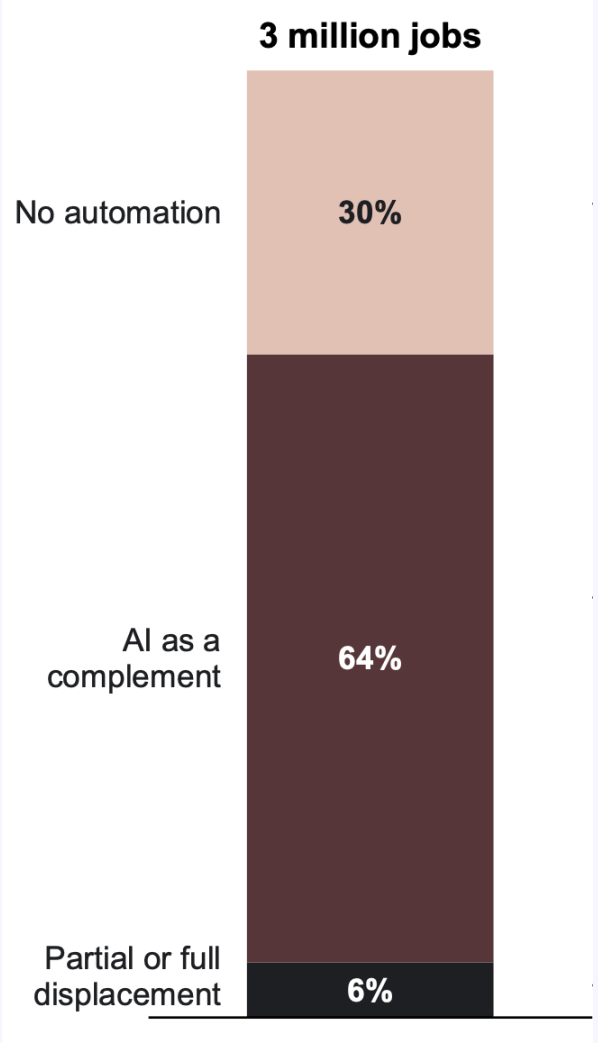
Denmark Launches Leading Sovereign AI Supercomputer to Solve Scientific Challenges With Social Impact

Share of Danish jobs impacted by AI



-> 0.9 M jobs

-> 1.9 M jobs

-> 0.2 M jobs

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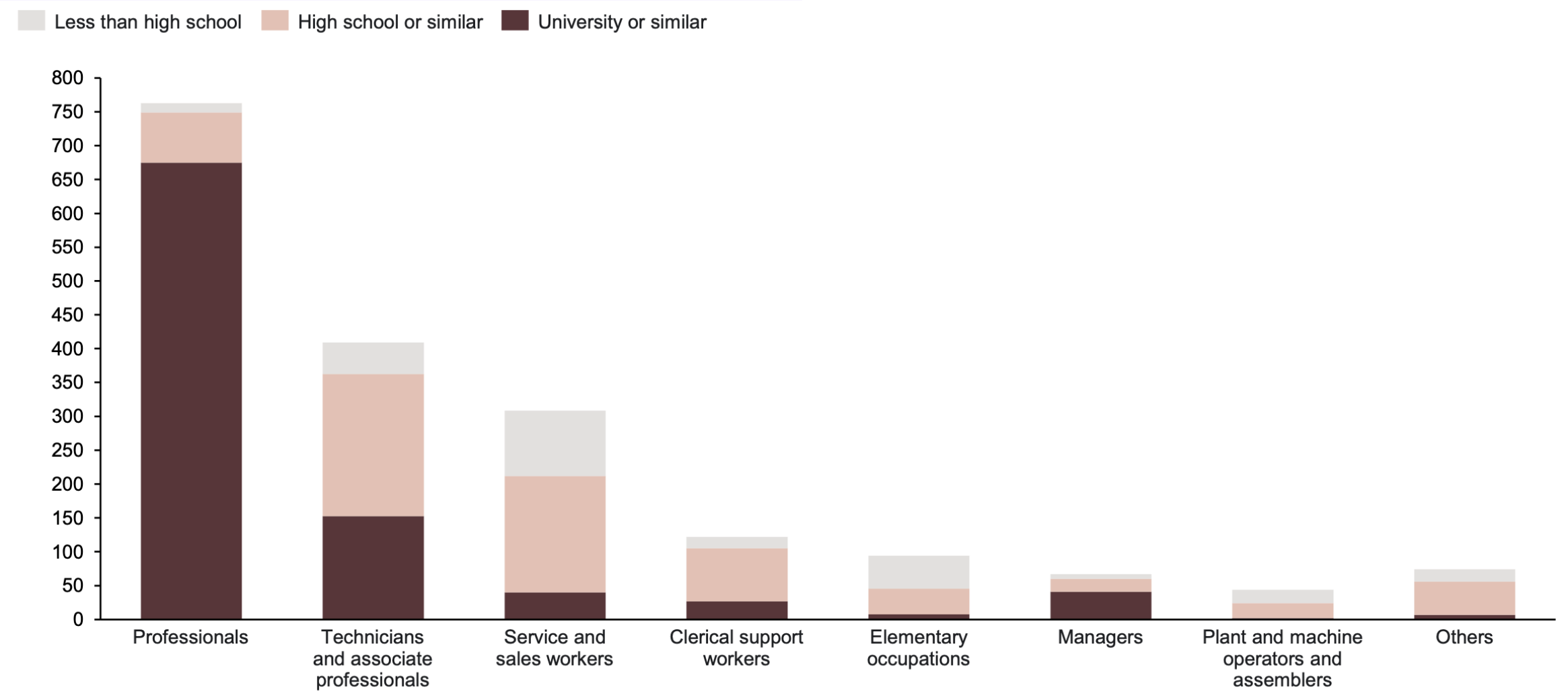
Job types impacted by AI



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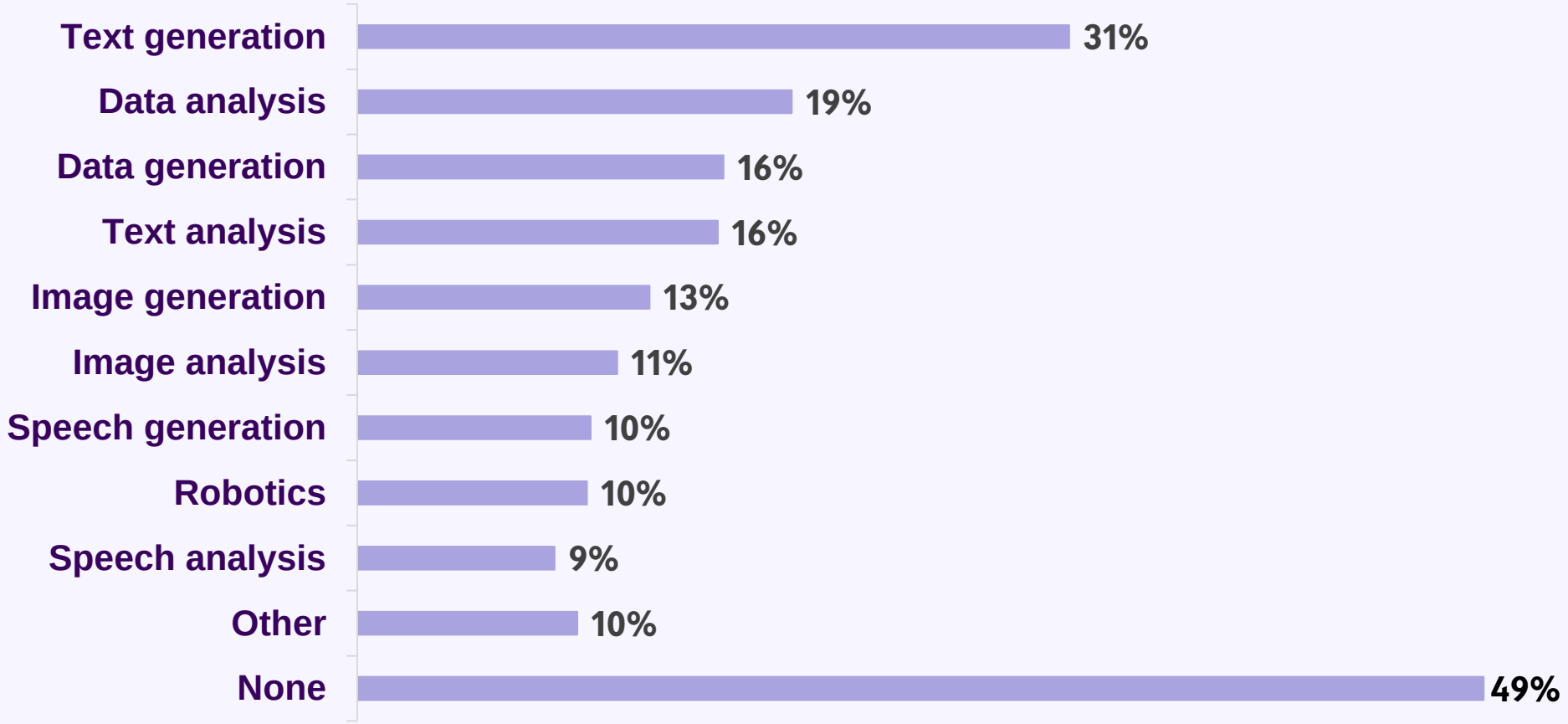
What we are actively using AI for at work



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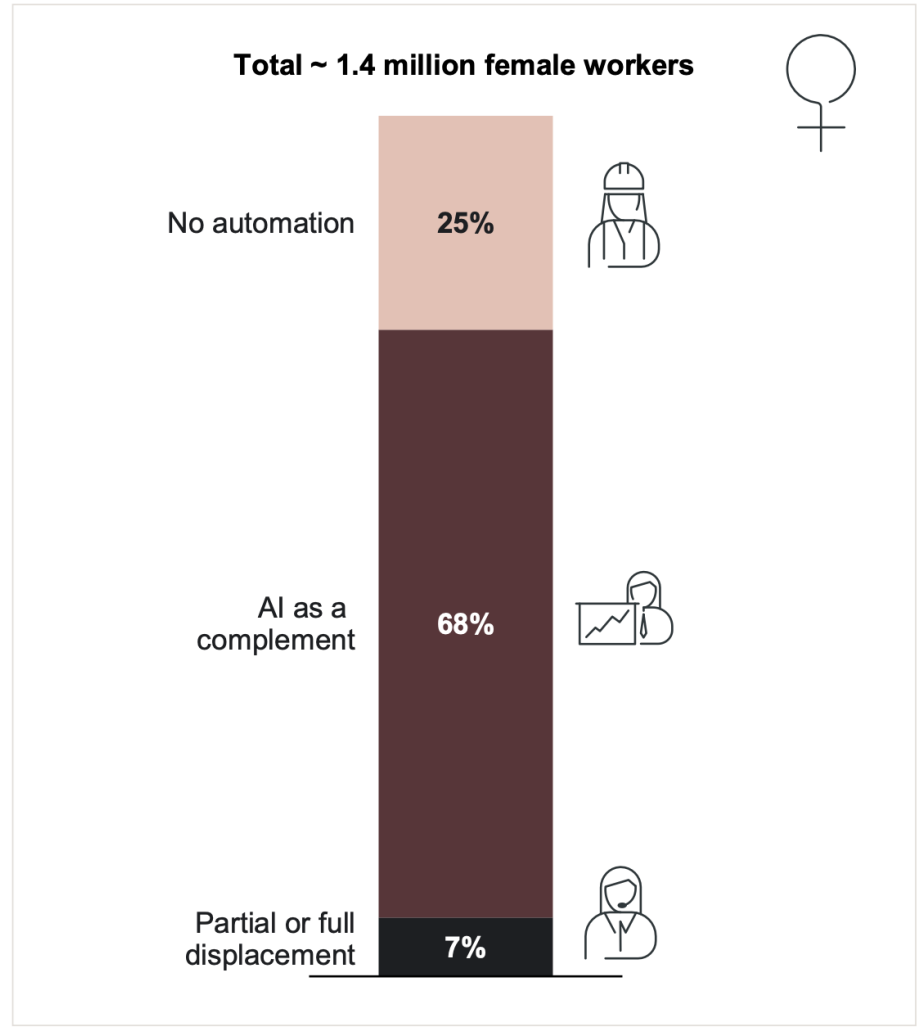
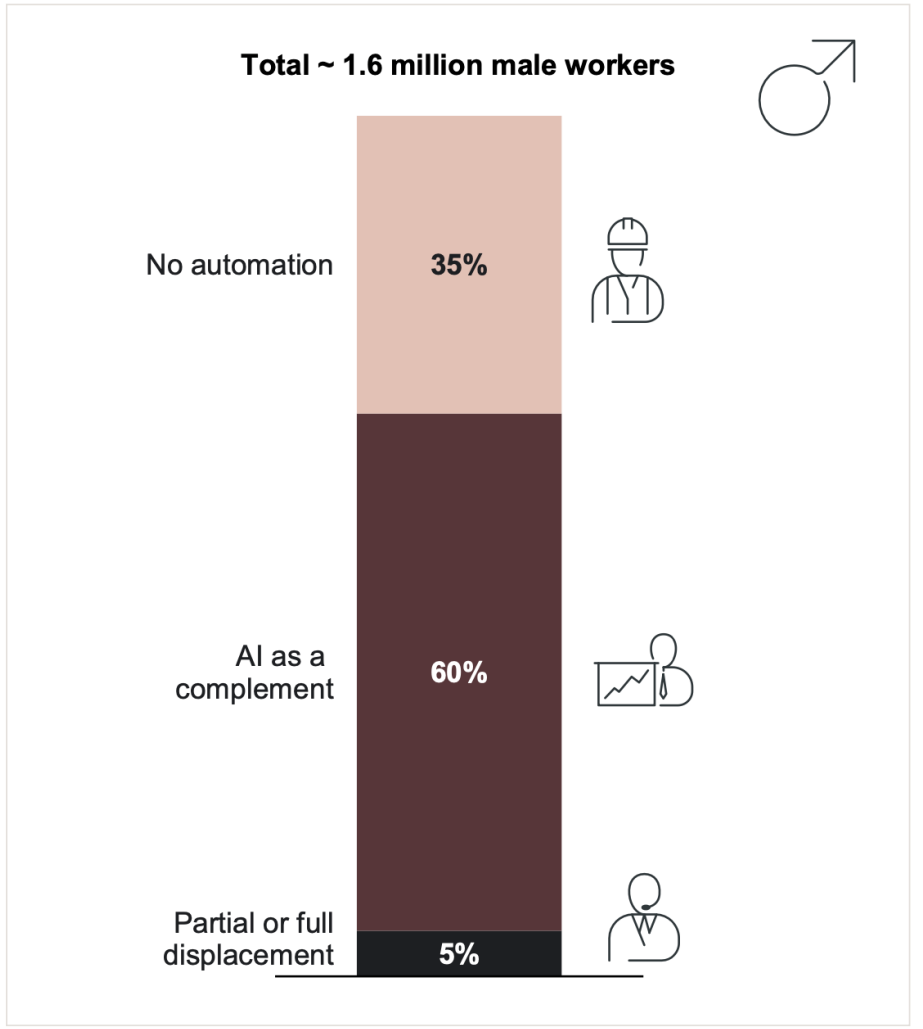
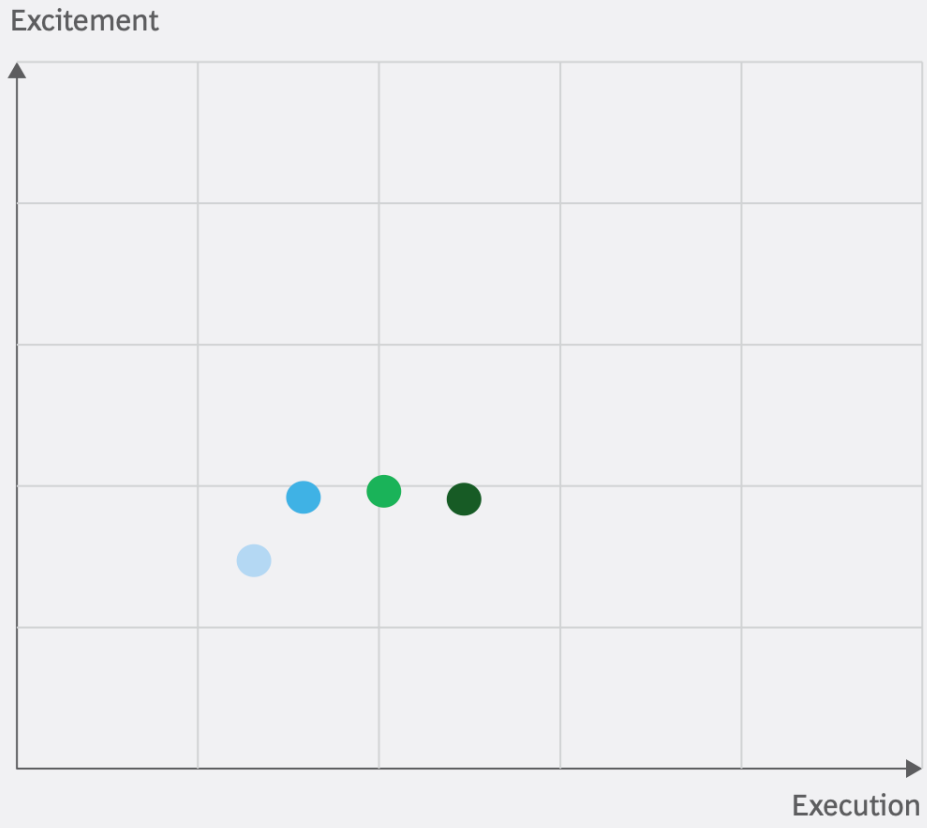
Gen AI is impacting genders differently



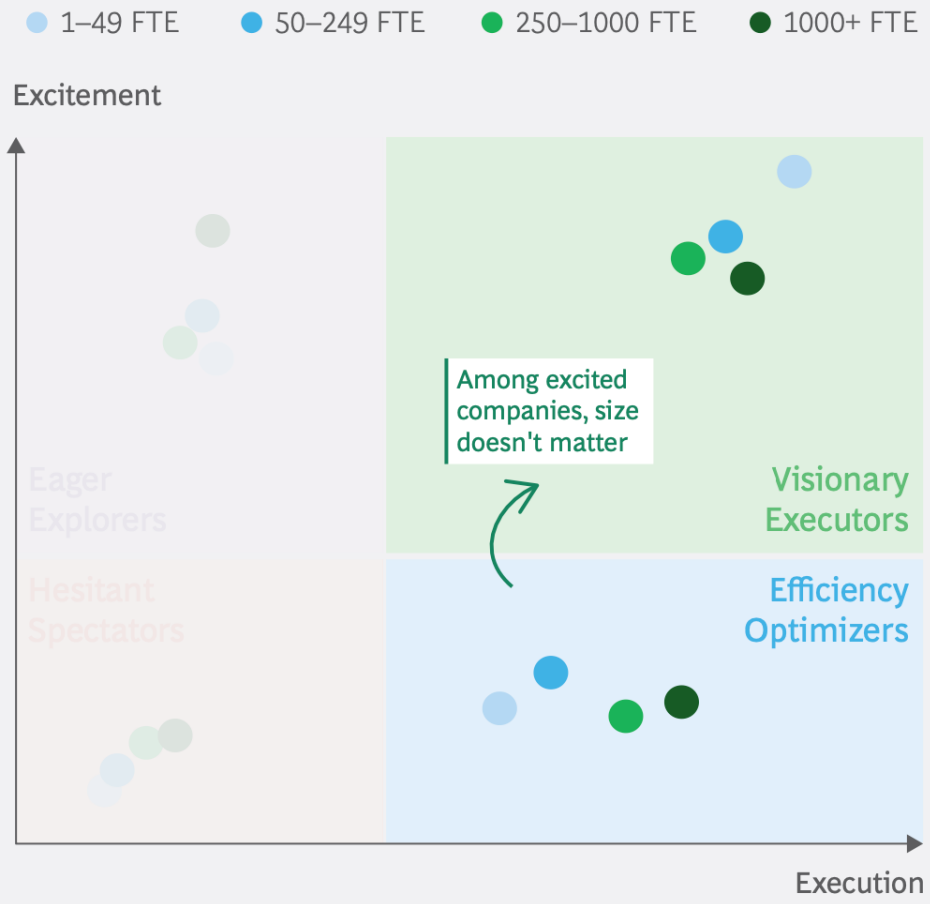


Excitement separates the leaders and lackers

Average excitement and execution scoring
by company size



Average excitement and execution scoring
per cluster and company size



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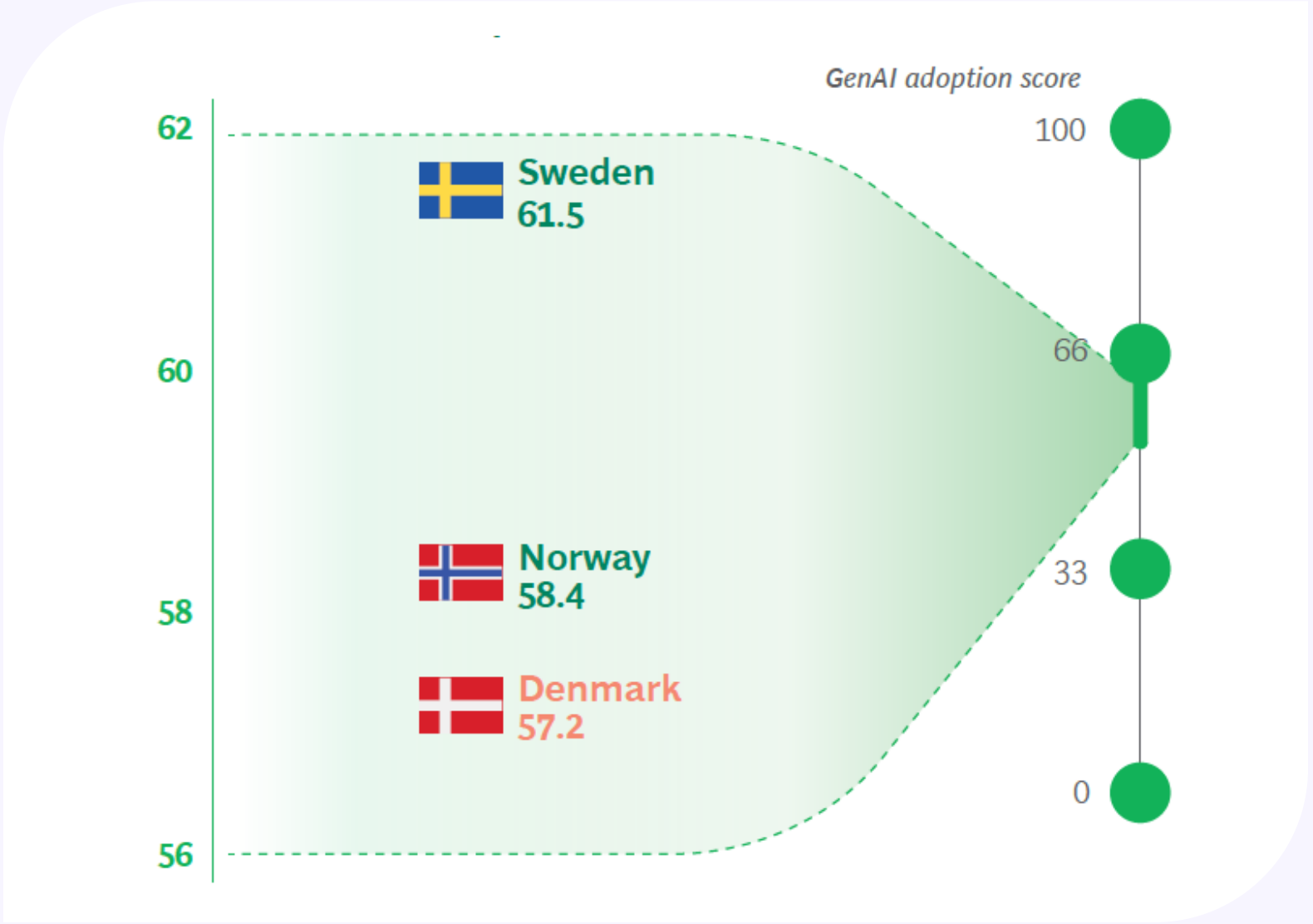
Adoption in comparison



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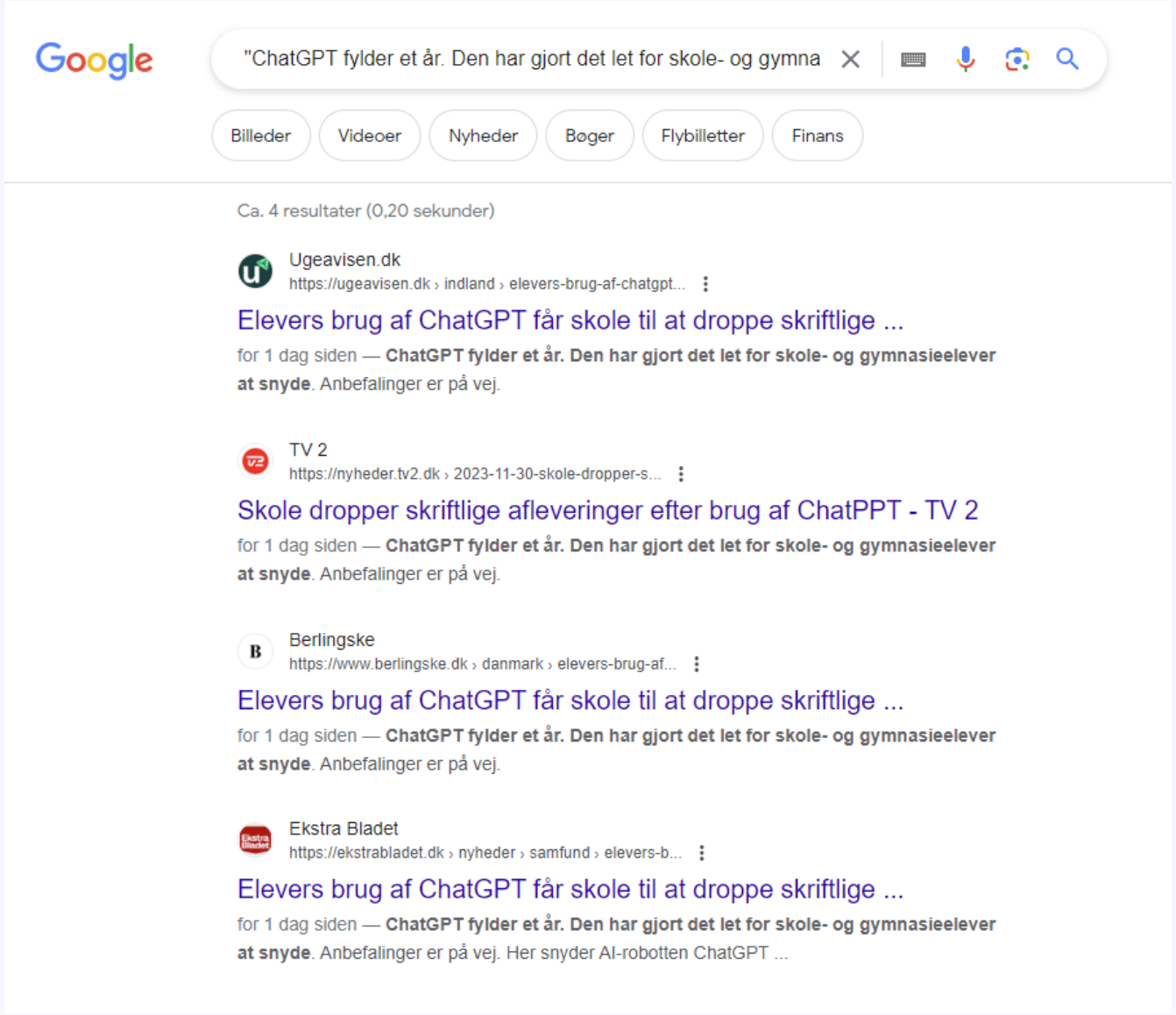
The Danish population are knowingly using AI

33%

33% of Danes answered **yes to having used an AI** such as ChatGPT in 2023.

Algoritmer, Data og Demokrati (2023)

Is it smart or cheating?



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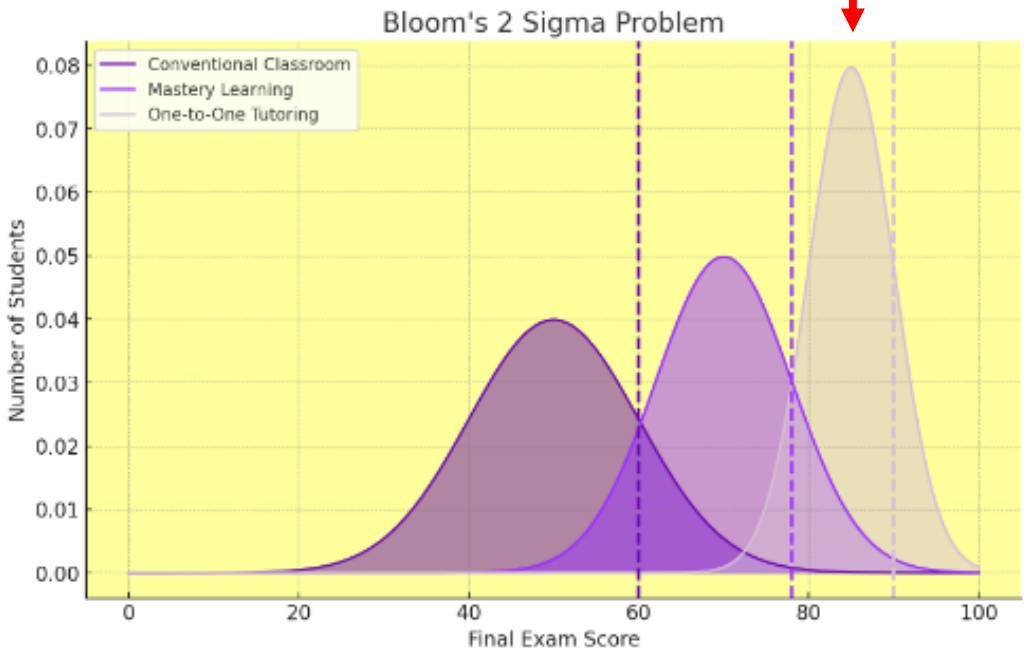
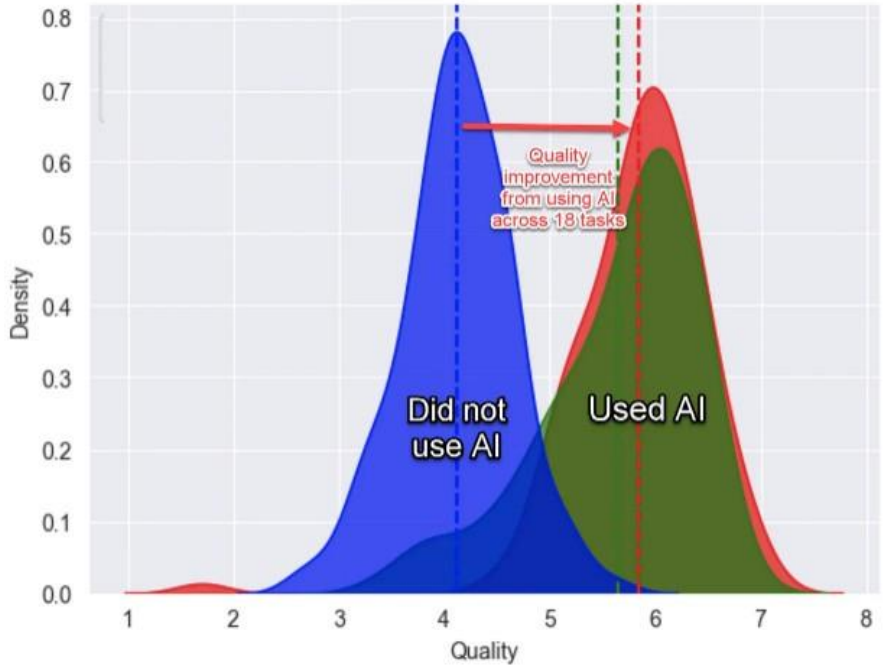
Faster and with higher quality

Class room teaching vs 1:1 tutorship



Benefits using gen AI



Distribution of output quality across all the tasks. The blue group did not use AI, the green and red groups used AI, the red group got some additional training on how to use AI.

DI gen AI study from March 2024

58% say they're completing tasks faster

30% think the quality is better

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A corporate demand for AI-skills

35 pct of Nordic organisations
demand specific digital competences from their employees today.
For example **the ability to evaluate when, and how to best use AI.**

Skills & competences

In two years companies expect from the employees....

1. Usage skills
can use relevant bacis software

2. Analytical skills
can assess technology for potentials and risks

3. Explorative skills
stays up to date and experiments with the latest technology

Companies expect three profile types in their organisation...

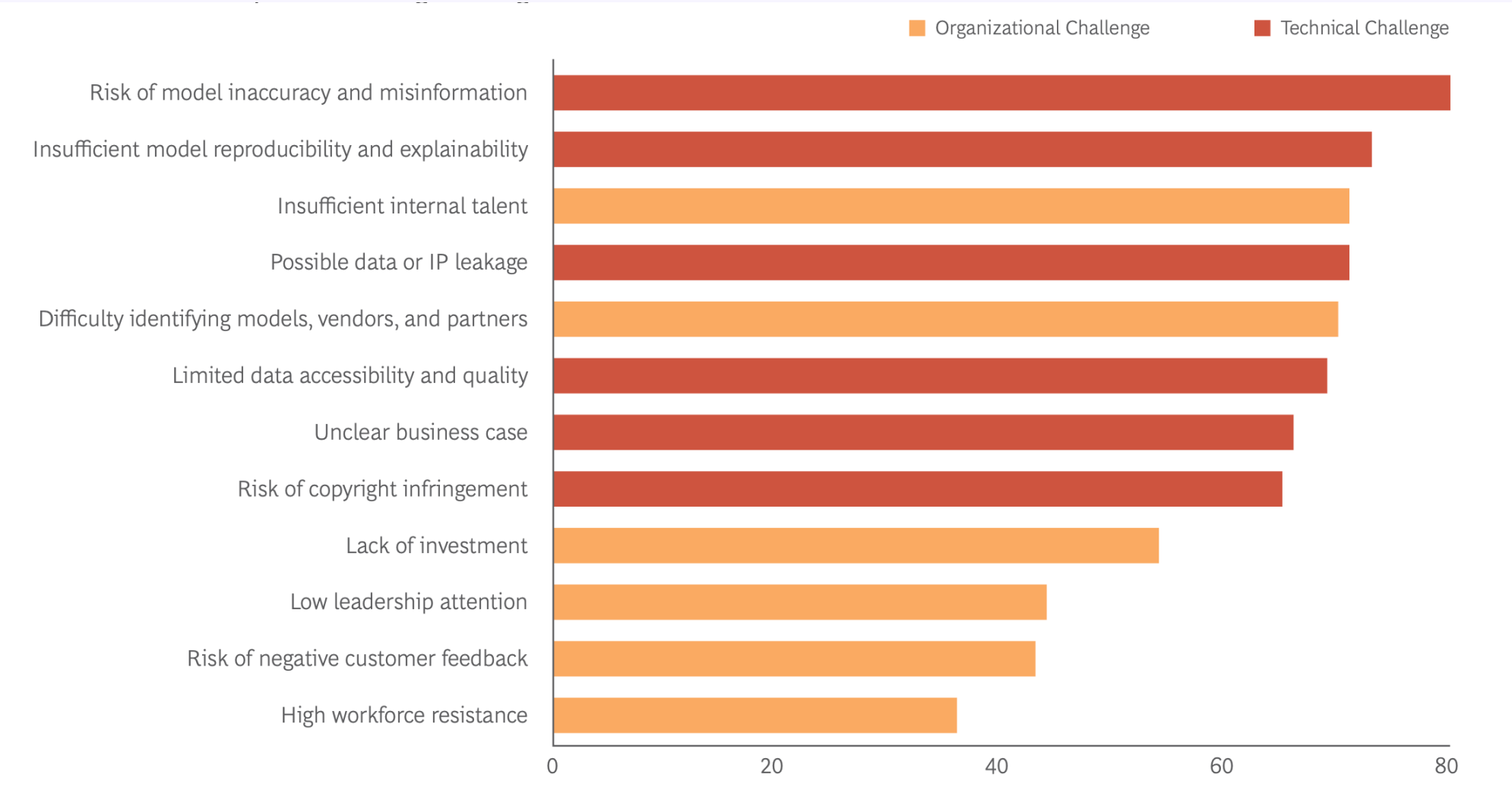
1. Digital Generalist
knows how to use basic software

2. Digital Integrator
combines technologies and challenges business models

3. Digital Specialist
designs, codes and runs digital products.

What is holding Danish companies back

Concerns and challenges



Barriers

- boiled down

1. Status quo
2. Lack of knowledge of AI
3. Unclear use cases
4. Lack of leadership attention

A Danish corporate paradox

Untapped opportunity

- ✓ 13% have no plans for gen AI
- ✓ 52% are piloting gen AI efforts

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Source: BCG, "Denmark's GENAI Paradox: From Lagging to Leading", March 2024.

The unlikely
Frontrunners
- examples from the industry

Productivity: TN Værktøjsslibning

Værktøjsslibning

Founded by Torben Nielsen in 1987

Leading supplier of specialist tools

AI is used for

- 4x faster employee onboarding
- Synergies across orders

The effect

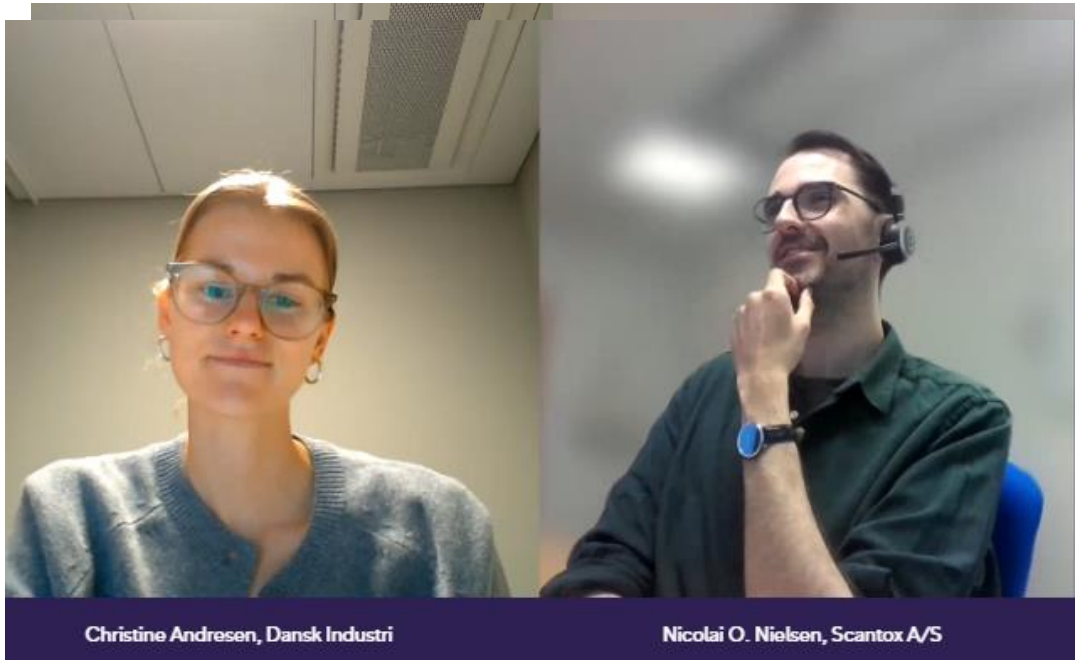
✓ Competivite advantages

✓ Reduced production costs

✓ Knowledge sharing across the organisation

From text generation tool to vital assistant

- **Scantox is a leading contract research company**
- **HQ in Ejby with 120 employees**

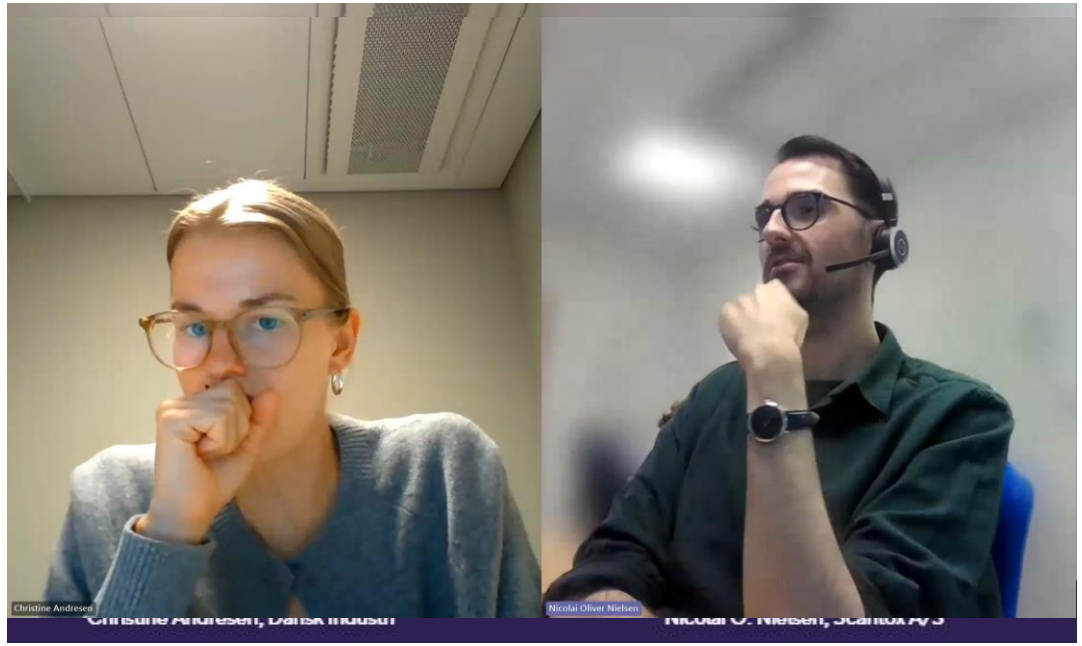


From text generation tool to vital assistant

Results

- ✓ Scantox saves 1-2M DKK a year in consultancy fees.
- ✓ Employees complete tasks faster, with improved quality and are more happy.

scantox



18.17

Opslag fra Jens

Jens
7 t. ·

Så blev det tid til tidlig pinseferie - ikke mere gips og fermacell støv indtil tirsdag i næste uge.
Vejret kunne være bedre men det skal ikke ødelægge strandkattens og mit gode humør.
God pinse når I når så vidt.

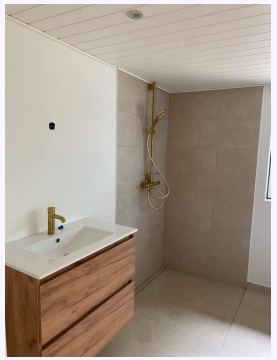
Aase Fabrin og 119 andre 45 kommentarer

Synes godt om Kommenter

Productivity: Project documentation

Gmail

1. Upload photos



2. Edit AI-generated text

Project Doc Helper

Projekttitel: Renovering af badeværelse

Dato for dokumentation: [Indsæt dato]

Beskrivelse af 'Før' stadie:
Billedet viser et badeværelse i begyndelsen af en renoveringsproces. Væggene er forberedt til flisearbejde med gråt spartel, og installationer til el og VVS er fremført, men endnu ikke tilkoblet. Gulvet er belagt med hvide fliser, og loftet er åbent med synlige træbjælker. Vinduet sikrer godt dagslys, men rummet er endnu spartansk uden inventar.

Beskrivelse af 'Efter' stadie:
På det efterfølgende billede præsenteres badeværelset efter færdiggørelsen. Væggene er beklædt med beige fliser, og et hvidt, panelet loft komplementerer det moderne look. En bruseinstallation med gyldne detaljer er nu monteret, og et træmøbel med en indbygget håndvask og gylden vandhane fuldender indretningen. Det færdige arbejde fremstår rent og uden synlige værktøjer eller materialer.

Aflevering af projektet:
Projektet er afsluttet i overensstemmelse med de aftalte specifikationer og kvalitetsstandarder. Alle installationer er udført korrekt og funktionelt testet. Badeværelset er klar til brug og overleveres hermed til bygherren.

Vedlagte filer:

- IMG_0249.JPG (Før renovering)
- IMG_0248.JPG (Efter renovering)

Message Project Doc Helper...

3. Send email

Gmail

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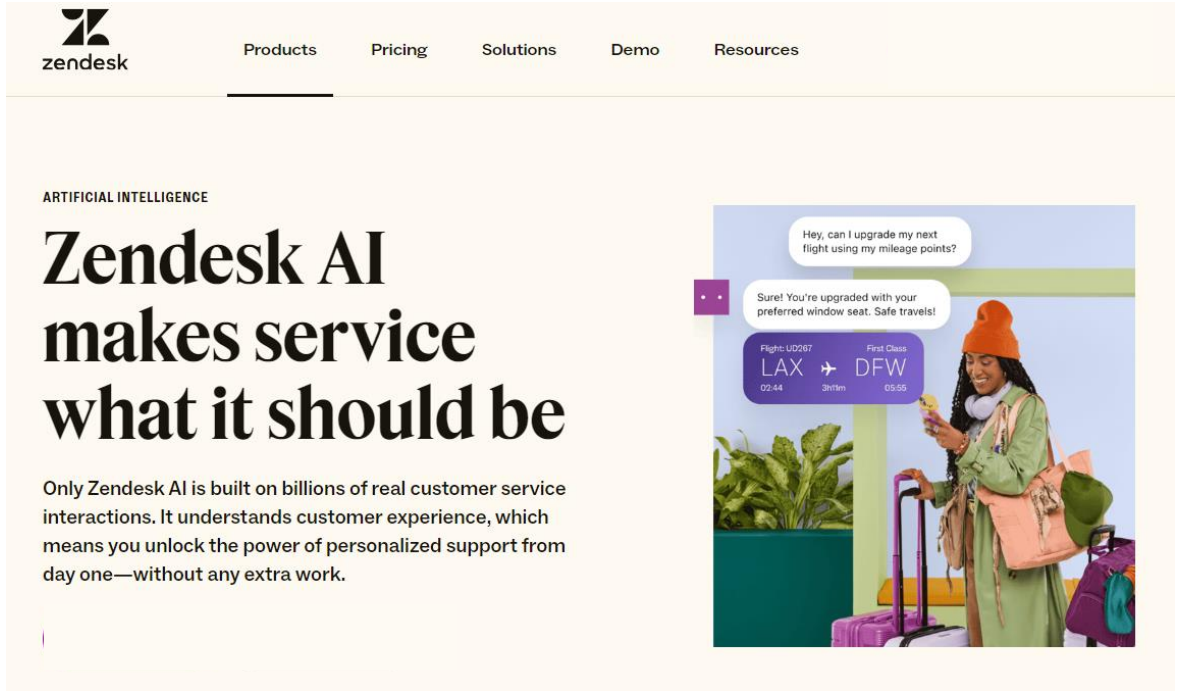
New business models: Zendesk



Founded in 2007 by four Danes.

Support platform, +100.000 customers.

Before AI

- Business model based on licenses (SaaS)
- More employees -> more licenses = more revenue
- Zendesk is a tool to do your job

With AI

- ✓ SaaS business model under pressure
- ✓ Zendesk AI does the job -> fewer licenses
- ✓ New business model: Value based

Salesforce follows fast

FORTUNE

TECH · A.I.

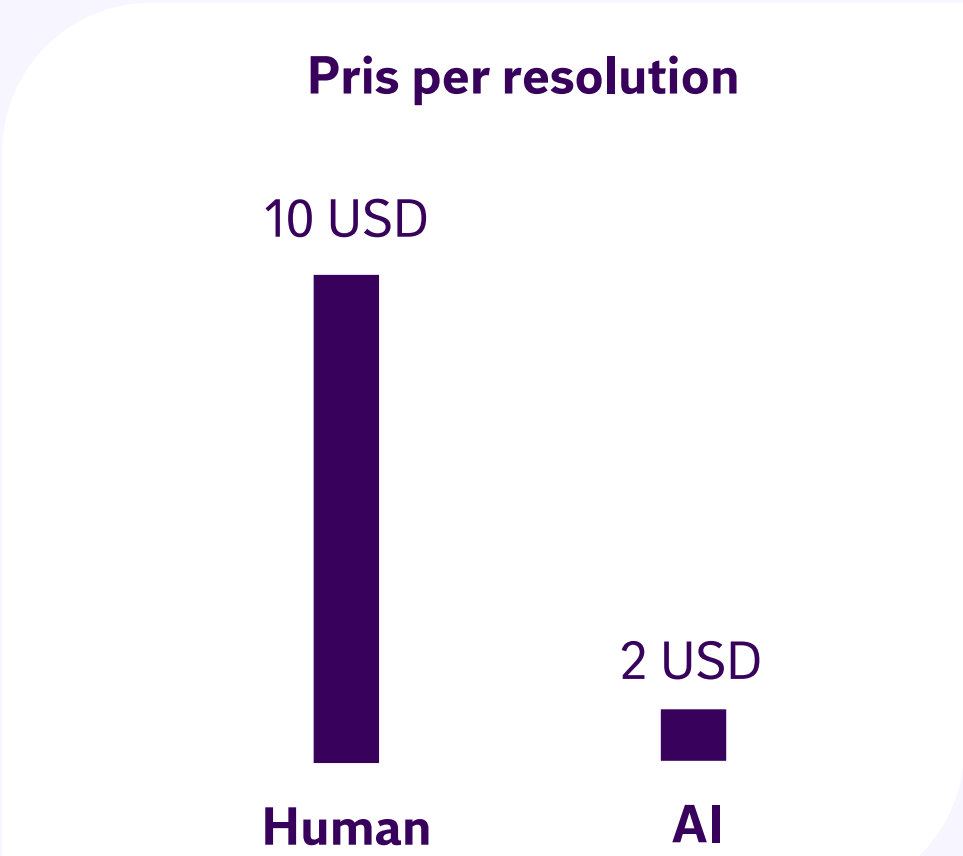
Exclusive: Marc Benioff has declared a 'hard pivot' to autonomous AI agents. Will it be enough for Salesforce to thrive in the generative AI era?

BY SHARON GOLDMAN
September 5, 2024 at 7:28 PM GMT+2

Marc Benioff, CEO of Salesforce
STEFAN WERMUTH—BLOOMBERG/GETTY IMAGES

Outcome based business model

Example: Customer support



Outcome based business model has huge implications

For example

- Risk/reward
- Pricing (SaaS vs RaaS)
- Revenue predictability
- Enterprise valuations

New business models: Data as a Service

23 min siden | af Josefine Nygård Hummelmose

Samfund

Financial Times' artikler skal træne ChatGPT

Artikler fra den britiske avis Financial Times skal i fremtiden bruges til at træne chatbotten ChatGPT. På den måde skal ChatGPT på sigt kunne besvare brugerspørgsmål med information fra Financial Times' artikler og linke til avisens hjemmeside. Også den franske avis Le Monde samt tyske Axel Springer Group har indgået lignende aftaler med selskabet bag ChatGPT, OpenAI.

REUTERS

Exclusive: Reddit in AI content licensing deal with Google

By **Anna Tong, Echo Wang** and **Martin Coulter**

February 22, 2024 5:10 AM GMT+1 · Updated 2 months ago

Reddit logo is seen in this illustration taken November 7, 2022. REUTERS/Dado Ruvic/Illustration/File Photo *Purchase Licensing Rights*

SAN FRANCISCO, Feb 21 (Reuters) - Social media platform Reddit has struck a deal with Google (GOOGL.O) to make its content available for training the search engine giant's artificial intelligence models, three people familiar with the matter said.

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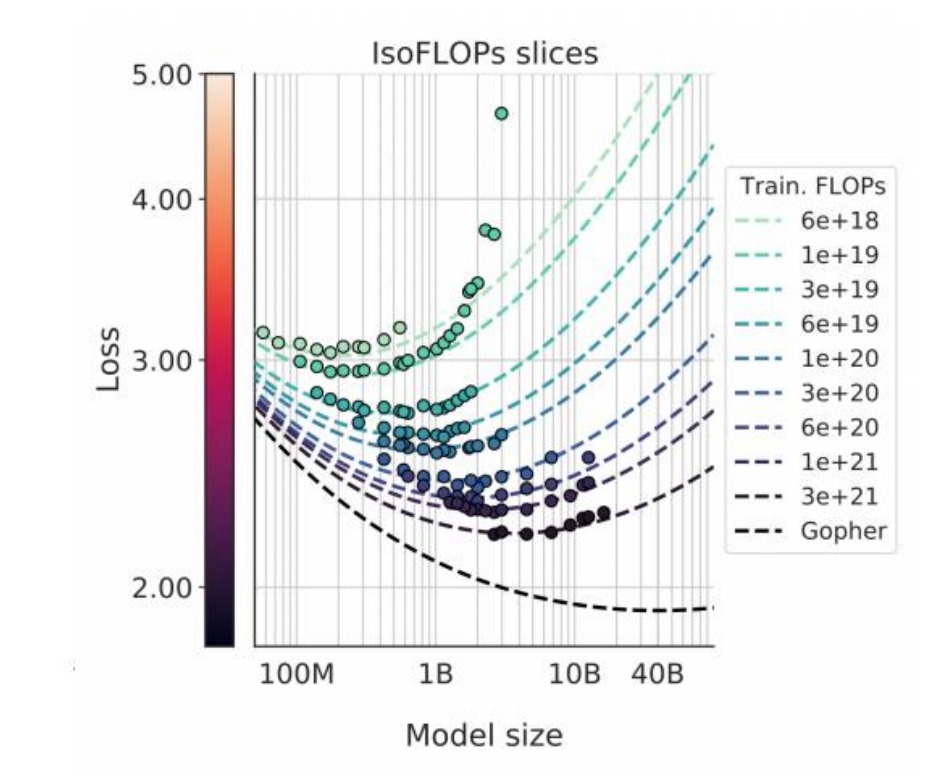
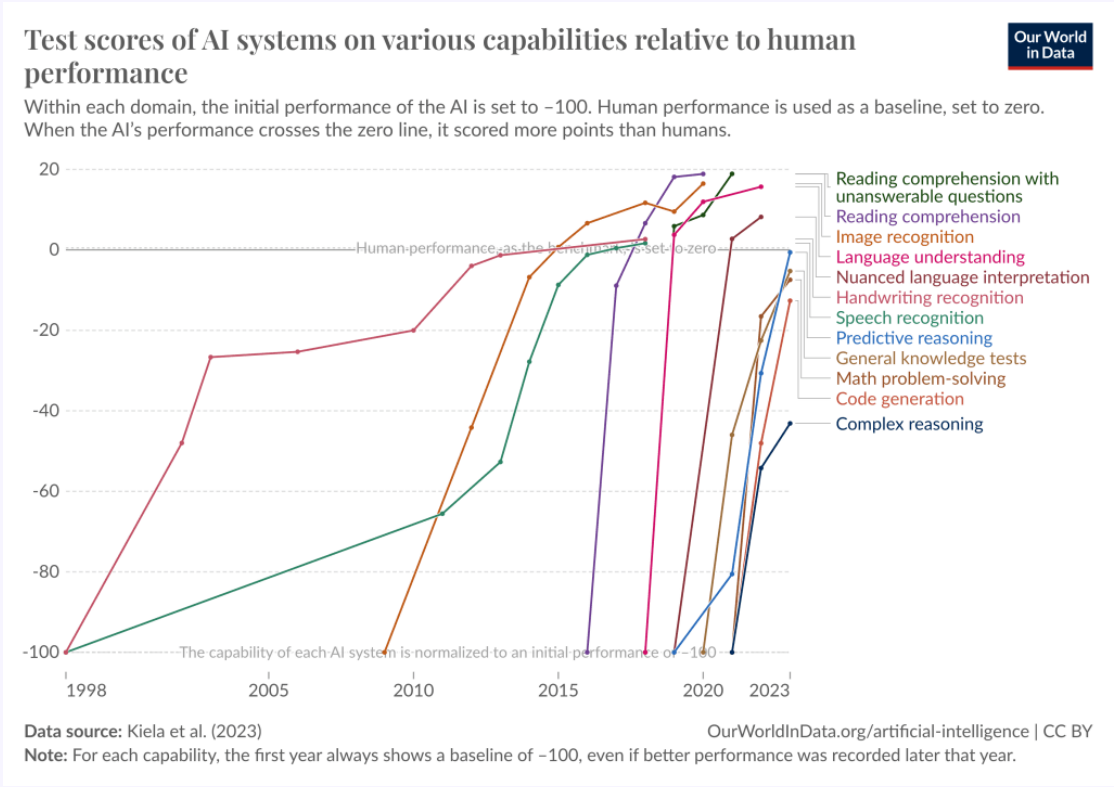
The next 6-12-n months?

Infrastructure

Size continue to matter for performance





OpenAI Meta Google Microsoft MISTRAL AI_ Apple

...consensus is we will have expert AIs across most domains.

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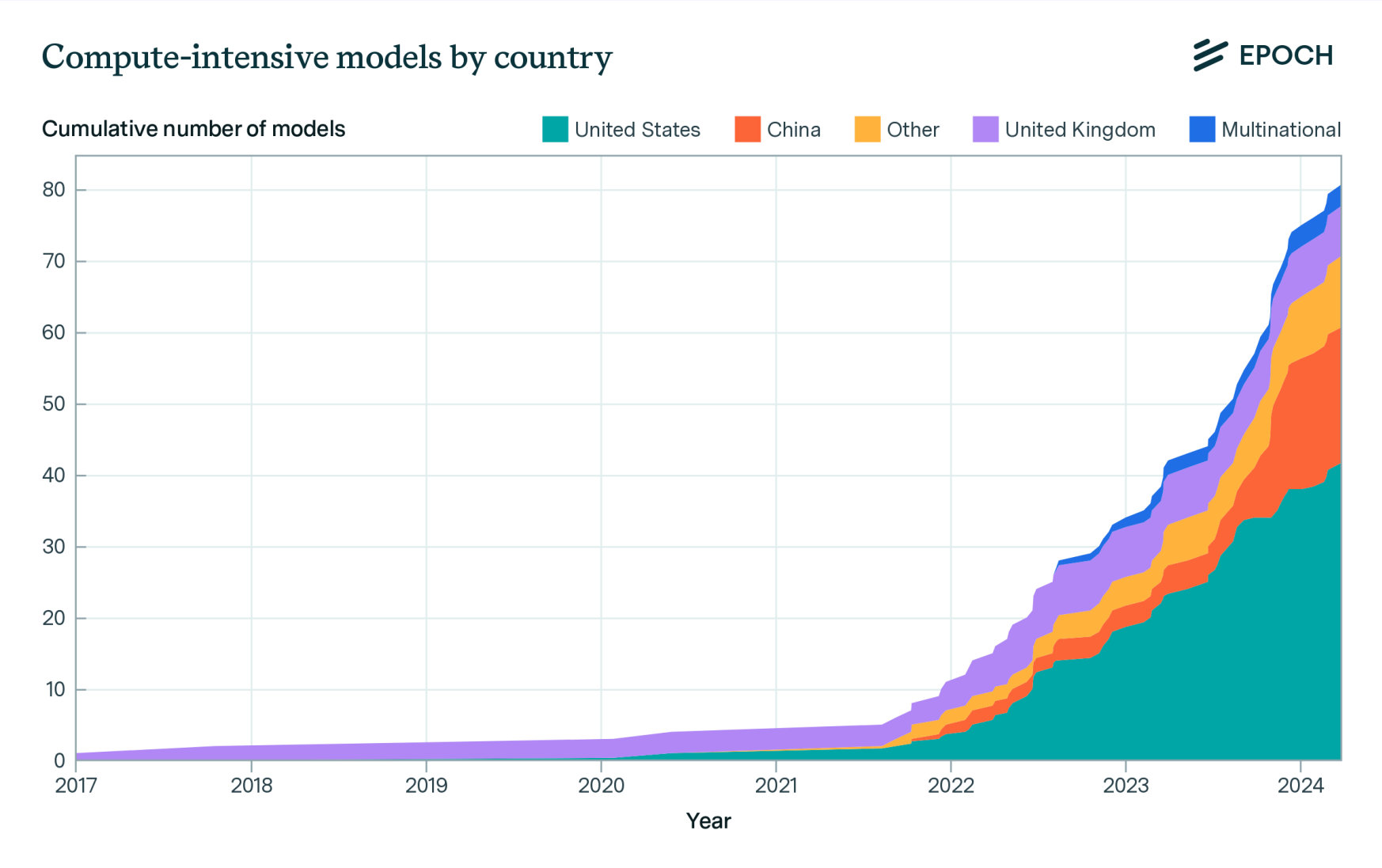
The US and China are leading the race



EPOC: "Compute-intensive" = models trained using over 10^23 floating-point operations (FLOP).

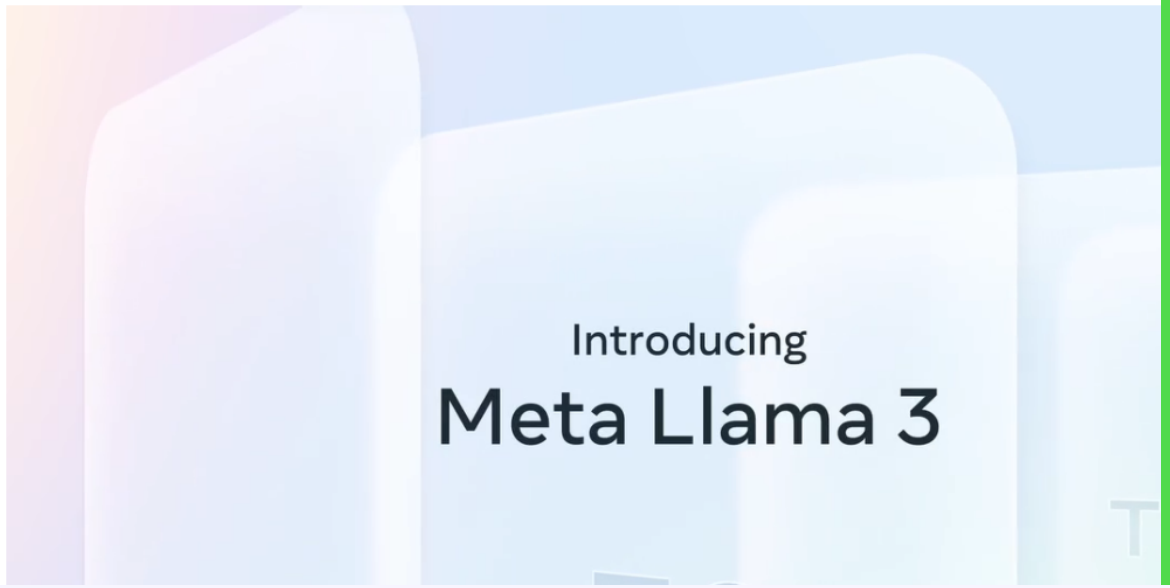
The open-source vs closed-source battle continues

Meta | Our approach | Research | Meta AI | Meta Llama | Blog

Large Language Model

Introducing Meta Llama 3: The most capable openly available LLM to date

April 18, 2024



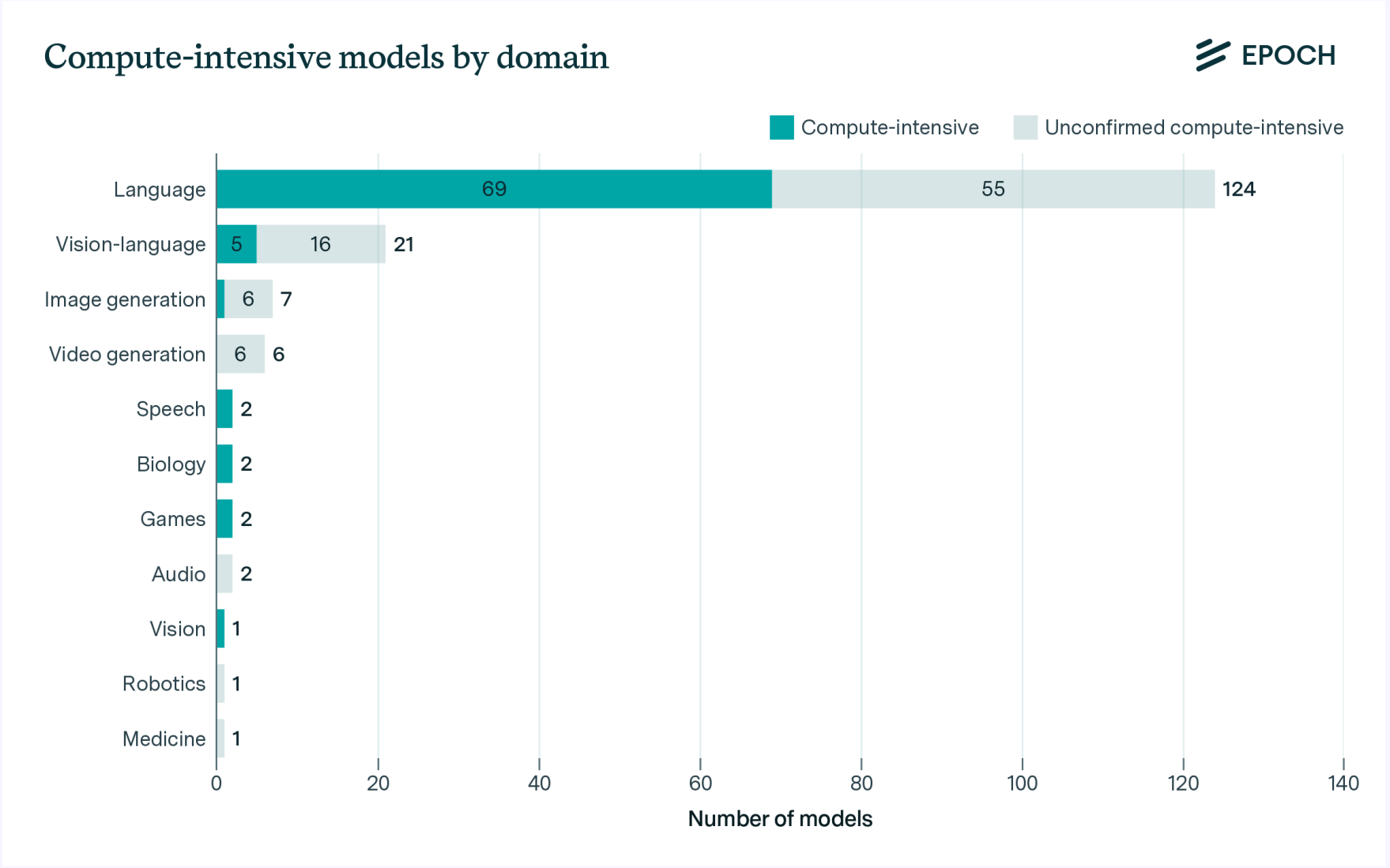
OpenAI | Research | API | ChatGPT | Safety | Company

Pricing

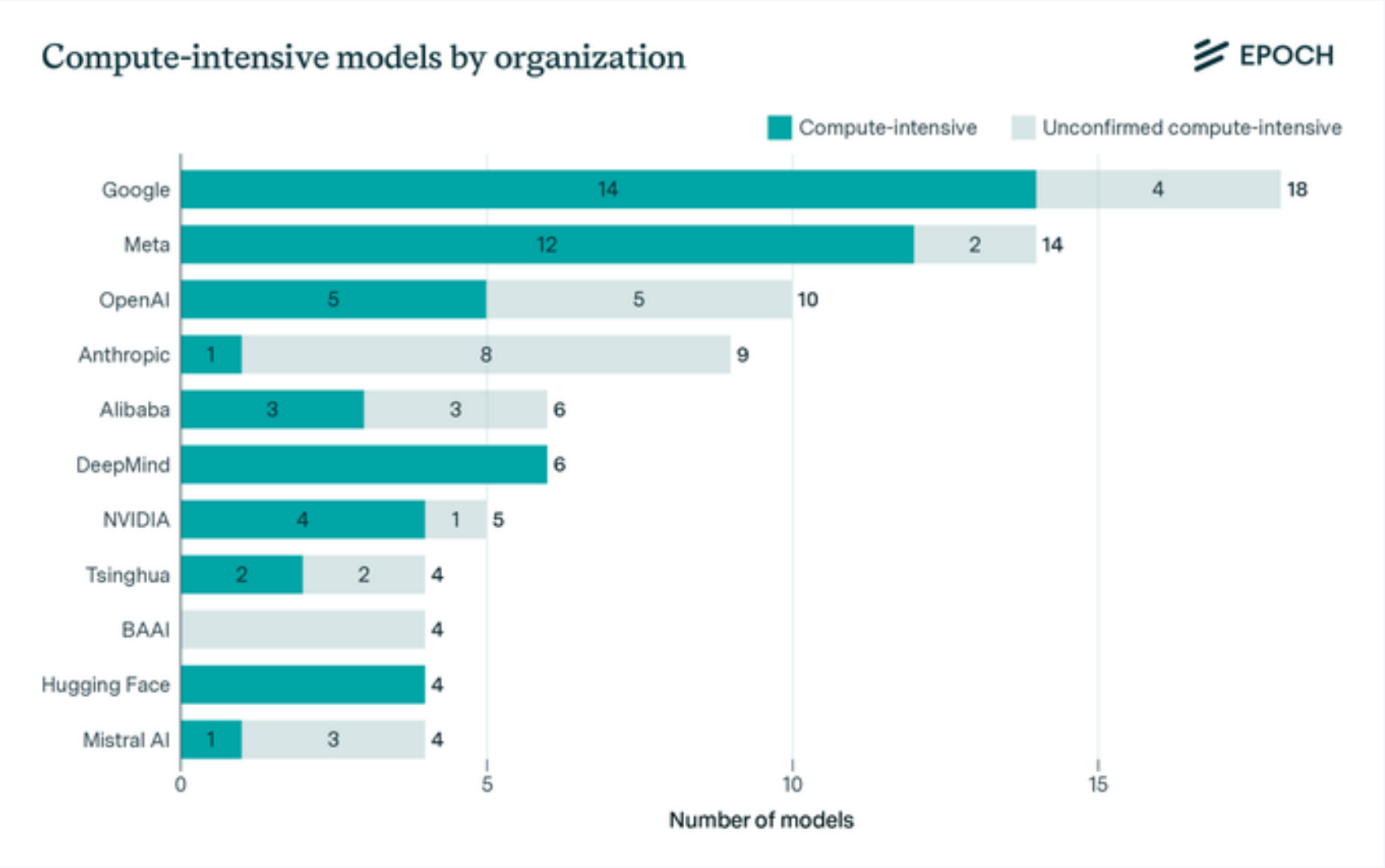
Simple and flexible. Only pay for what you use.

Contact sales | Learn more ↓

Language models are the most common



Google, Meta, OpenAI and Anthropic

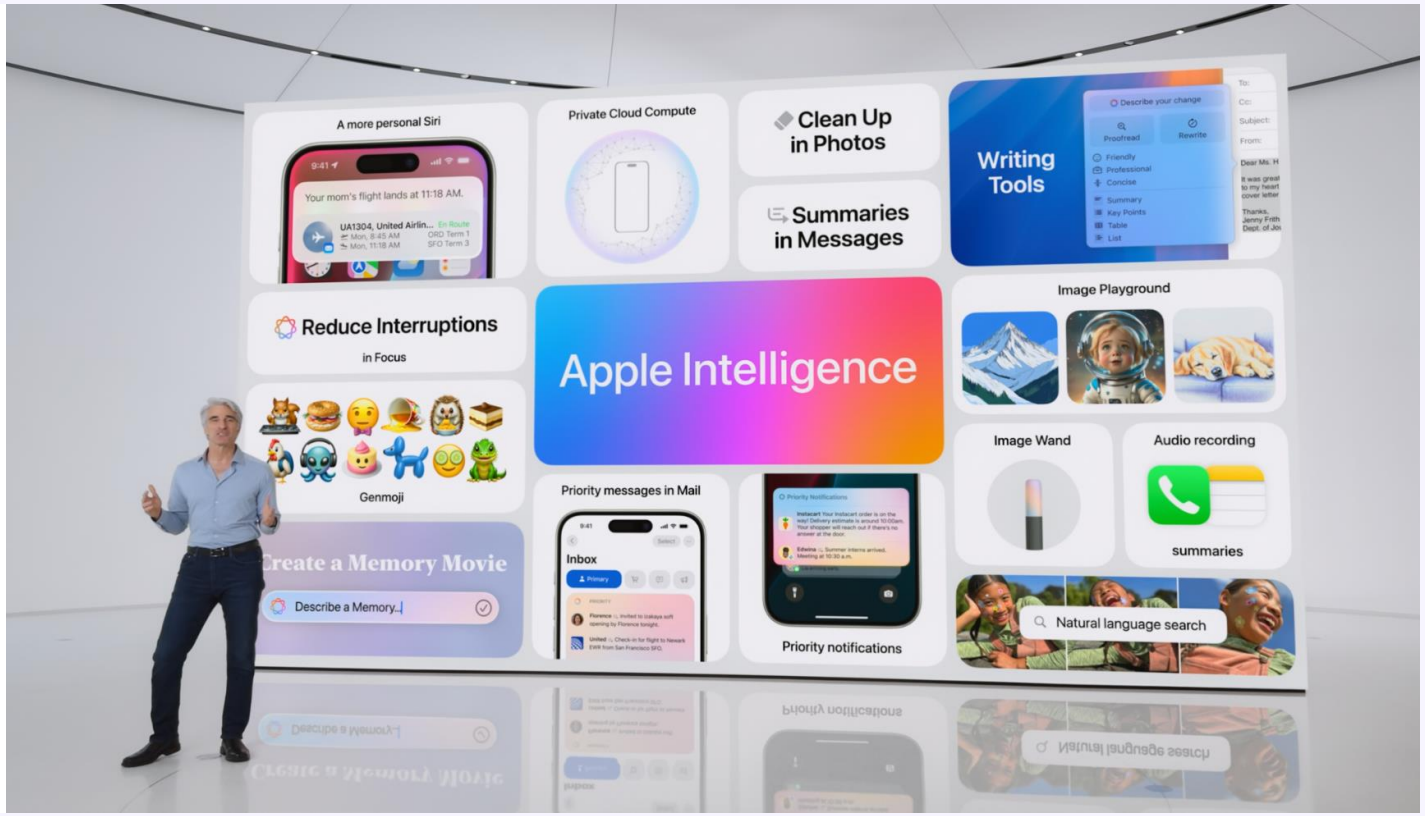


+ Nvidia and Apple

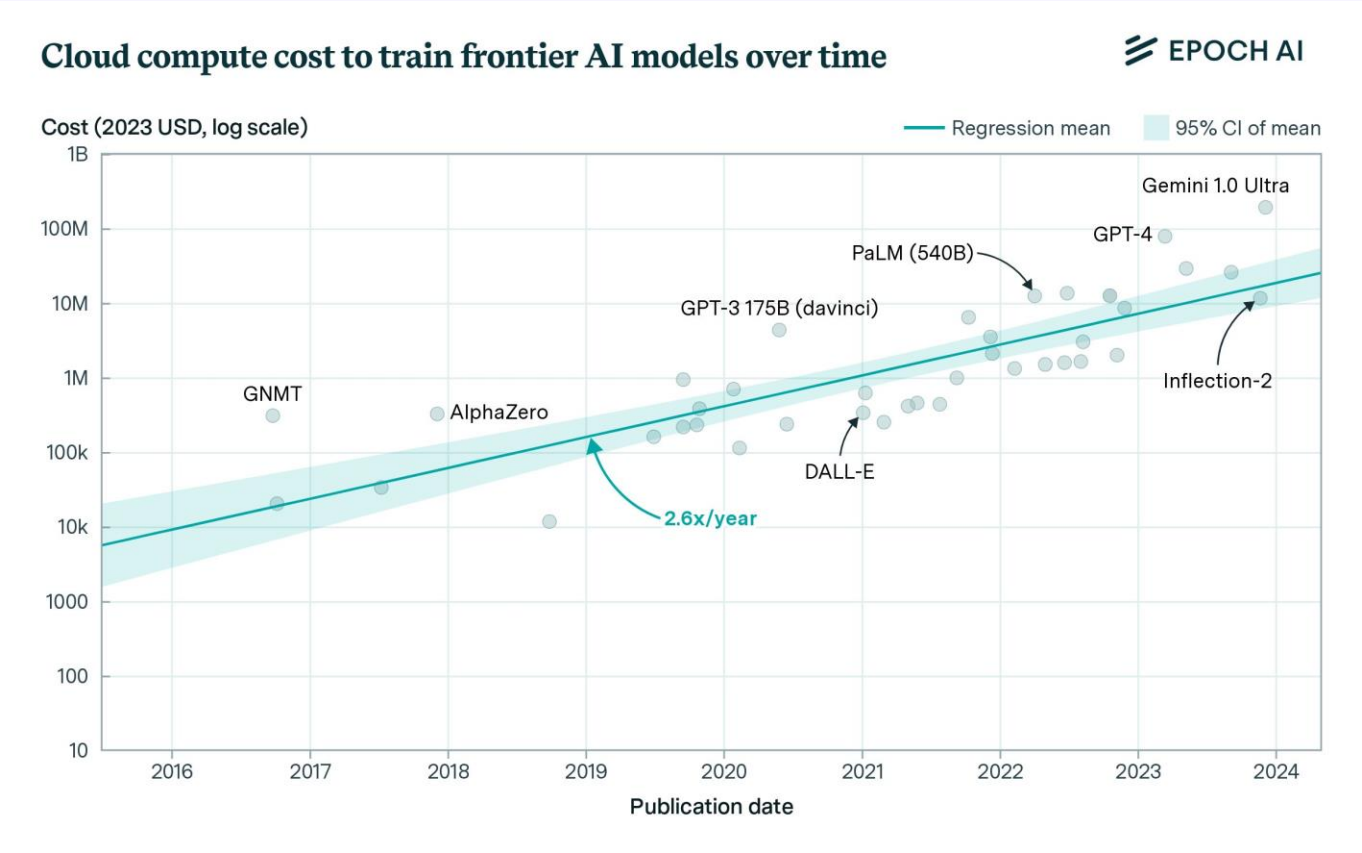
NVIDIA Releases Digital Human Microservices, Paving Way for Future of Generative AI Avatars

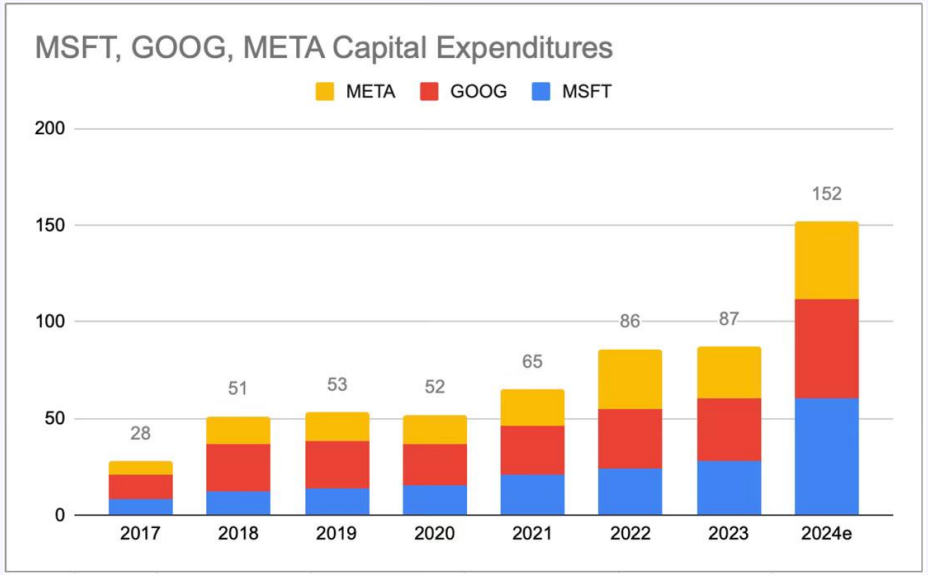
NVIDIA ACE Now Generally Available for Cloud, in Early Access for RTX AI PCs, in Use by Companies Across Customer Service, Gaming and Healthcare, Including Dell Technologies, ServiceNow, Aww Inc., Inventec, Perfect World Games

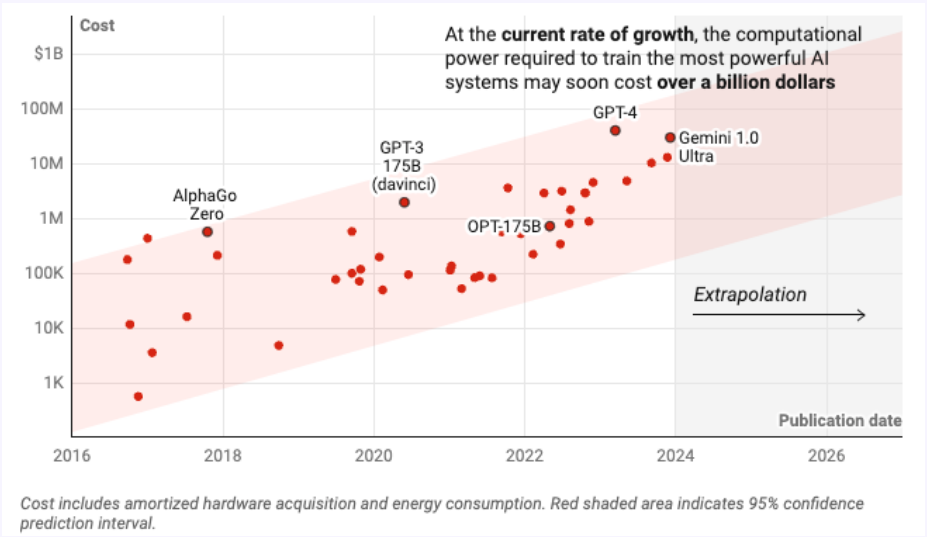
June 2, 2024



Massive investments in training







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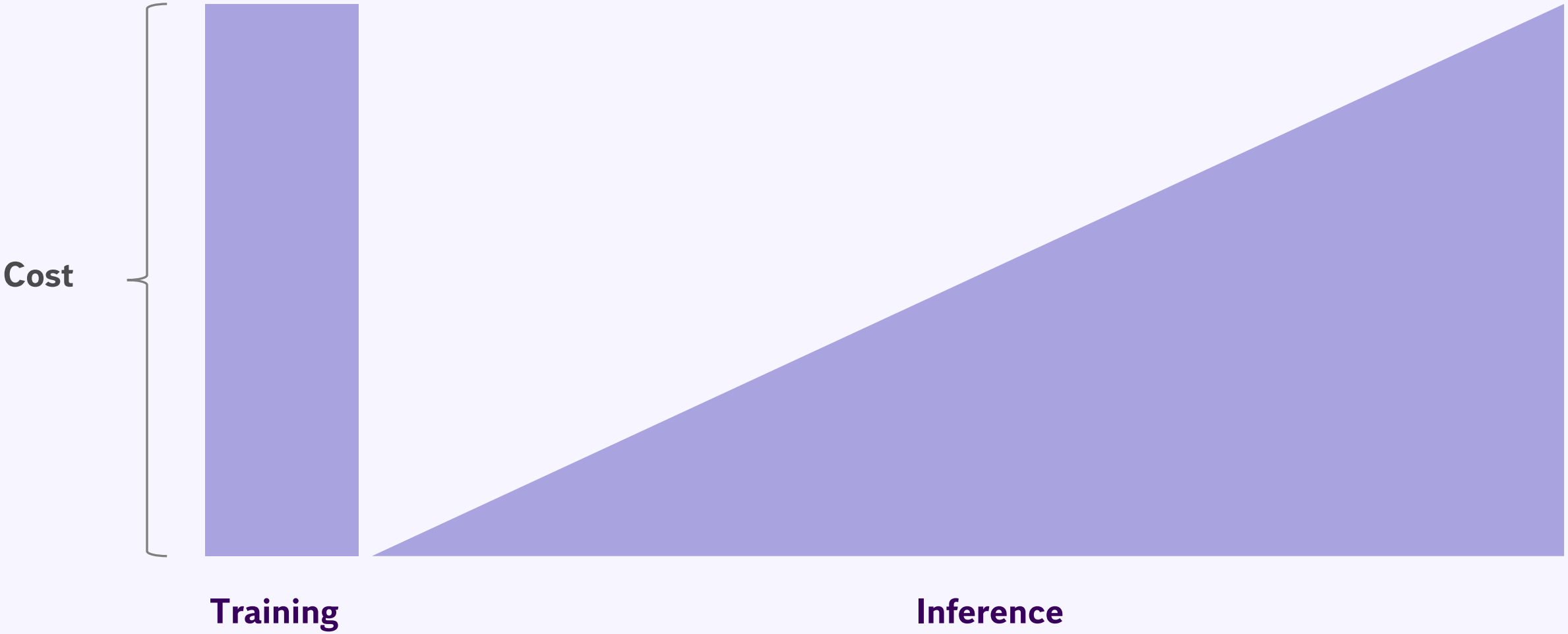
Inference is already a larger long-term cost



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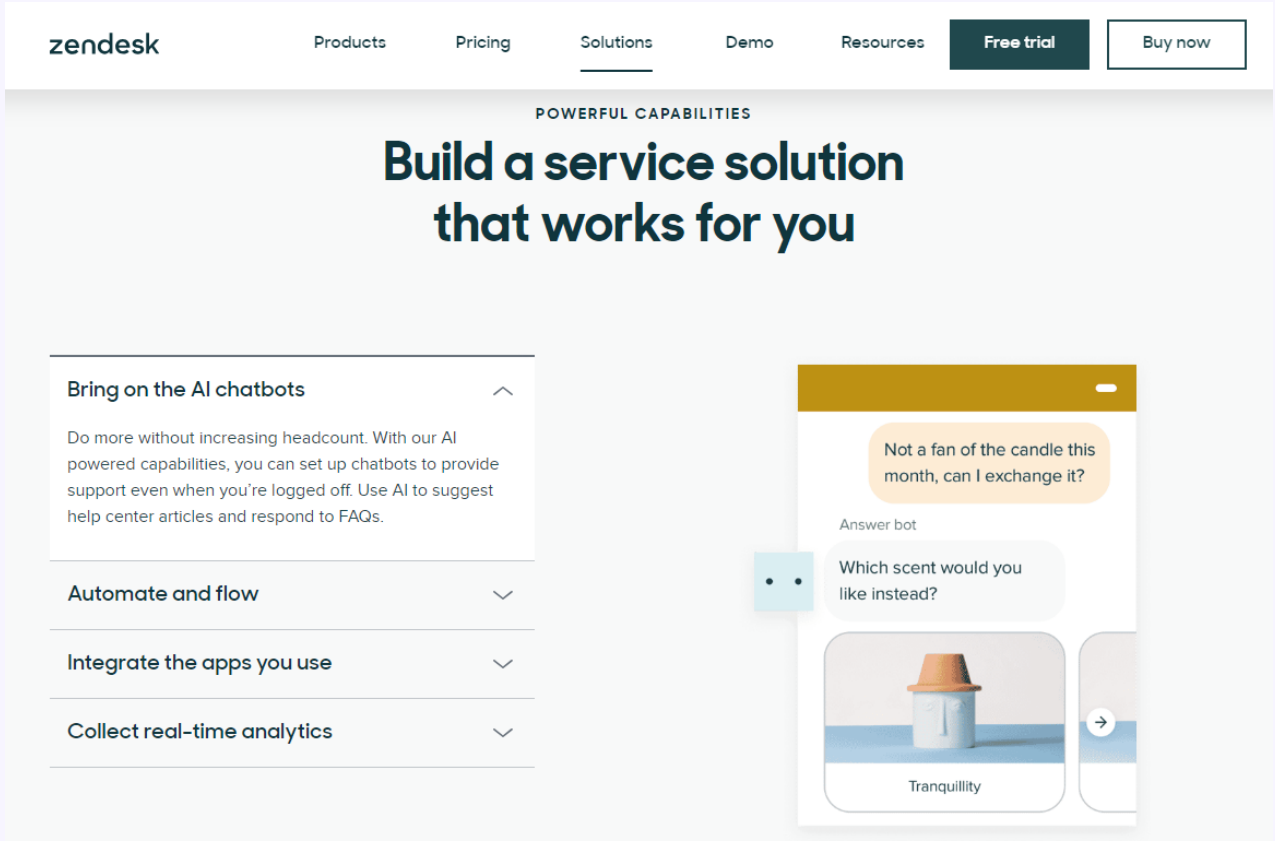
Inference cost is absorbed by venture capital and users



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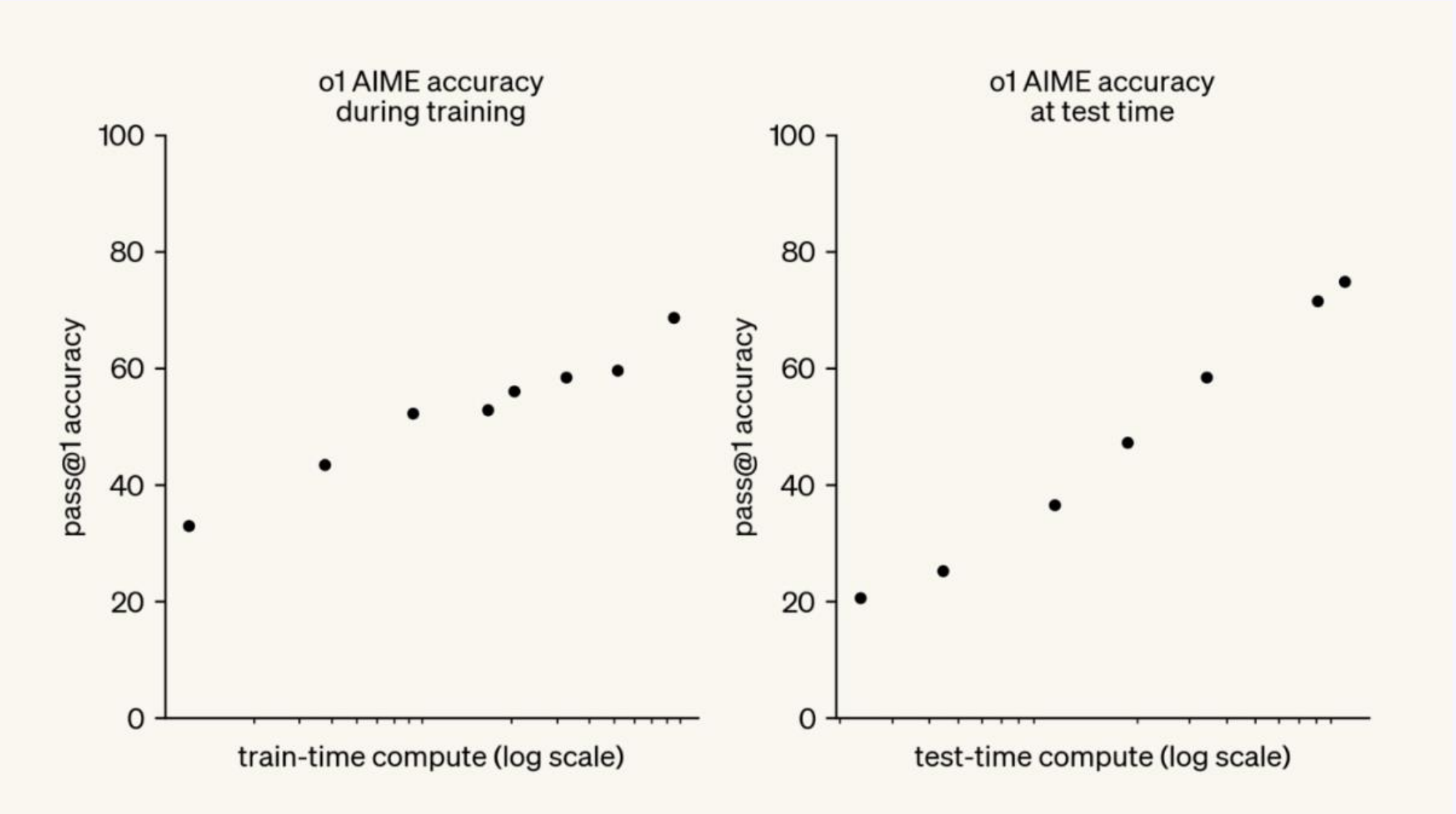
But inference might be the next leap forward



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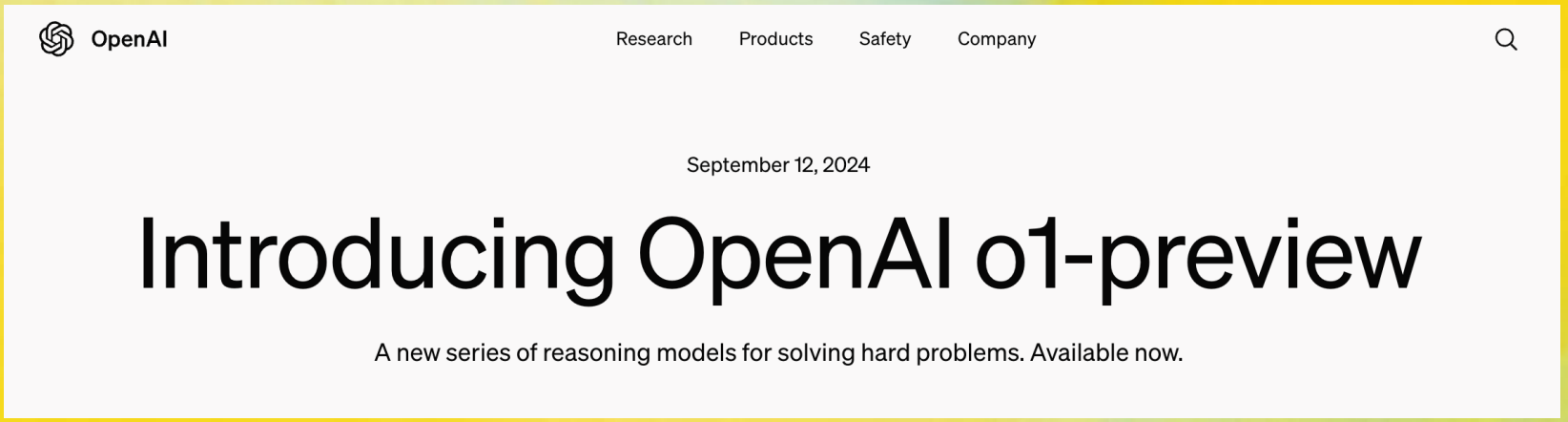
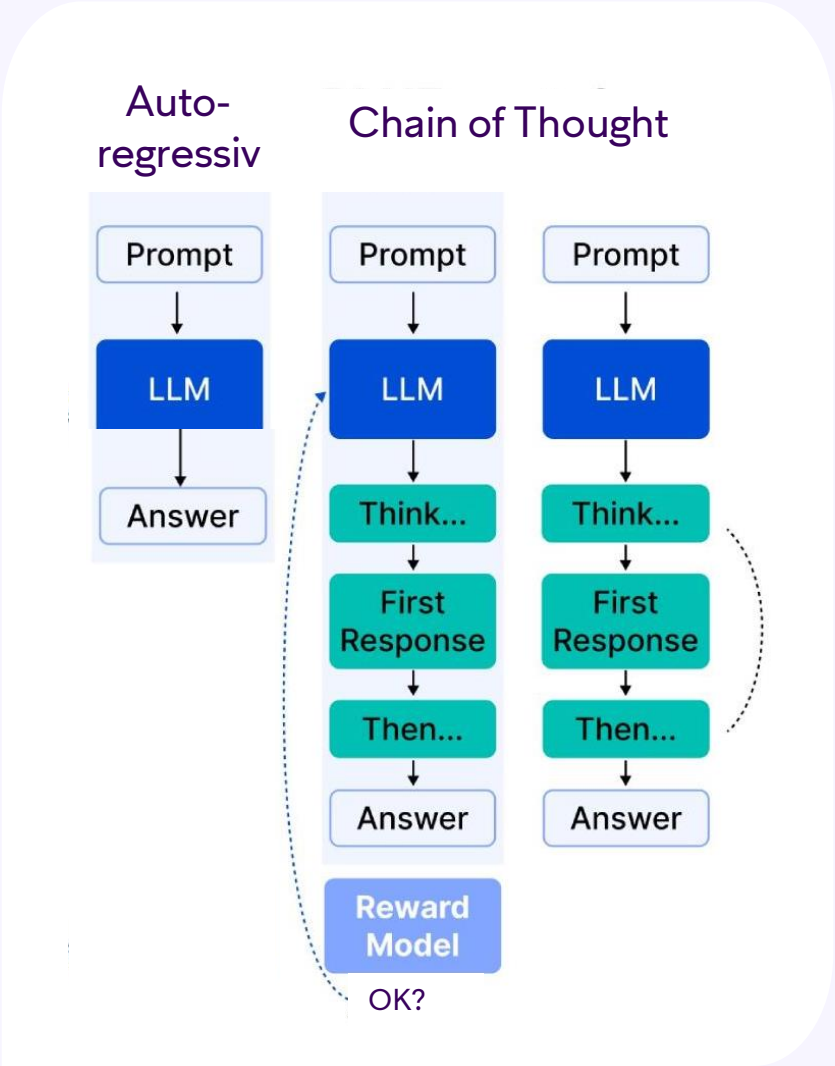
OpenAI's o1 marks a shift

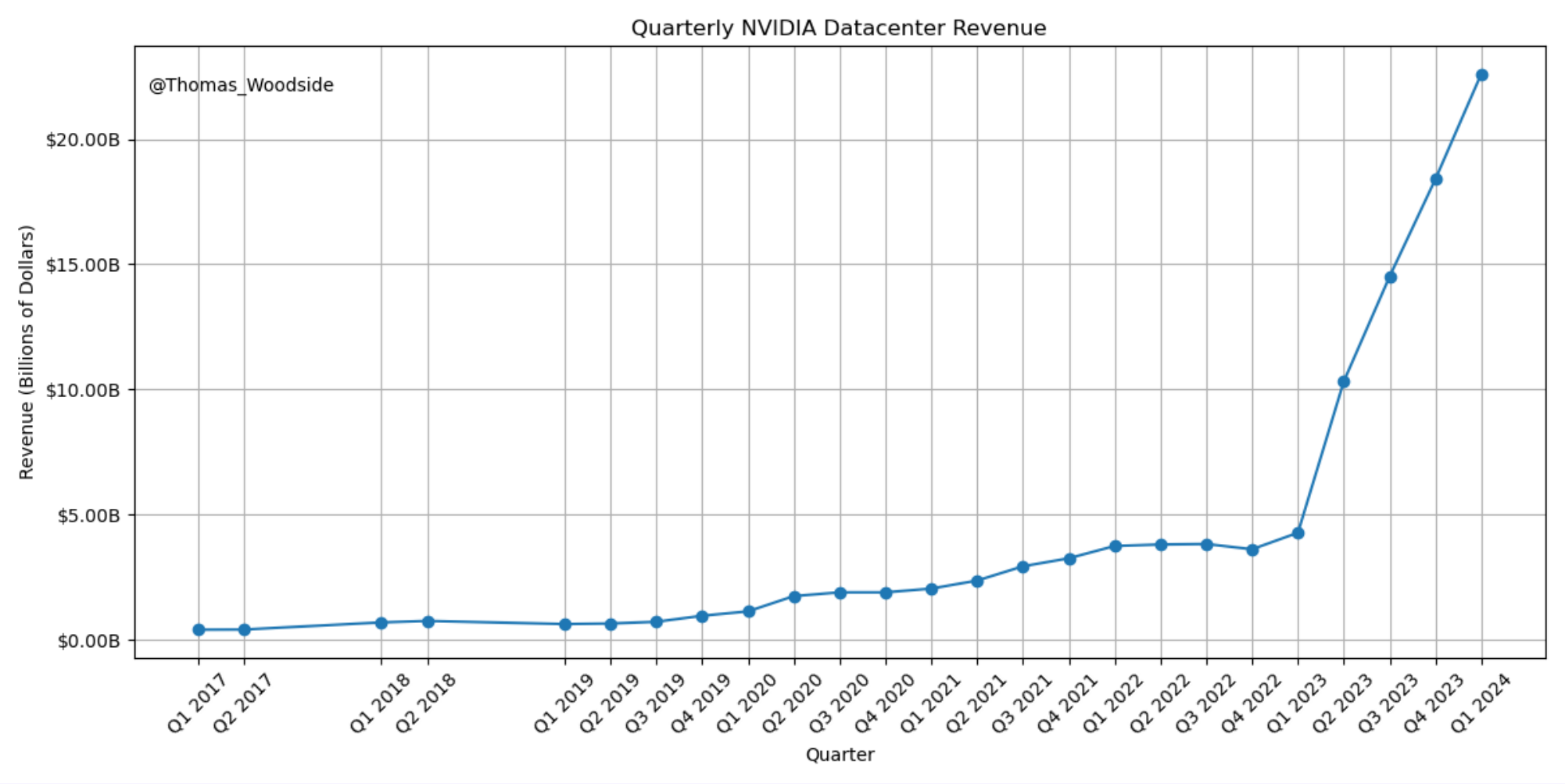


The difference between traditional LLMs and o1



”Like if the great coworker now spend more time thinking before answering”

AI is the main growth engine for cloud and data centers



Access to chips, data and energy are the bottlenecks

FT FINANCIAL TIMES

APRIL 29, 2024

Financial Times announces strategic partnership with OpenAI

ENERGY TRANSITION

Google joins Big Tech's move into nuclear power

Published Oct 22, 2024 · Updated Oct 22, 2024

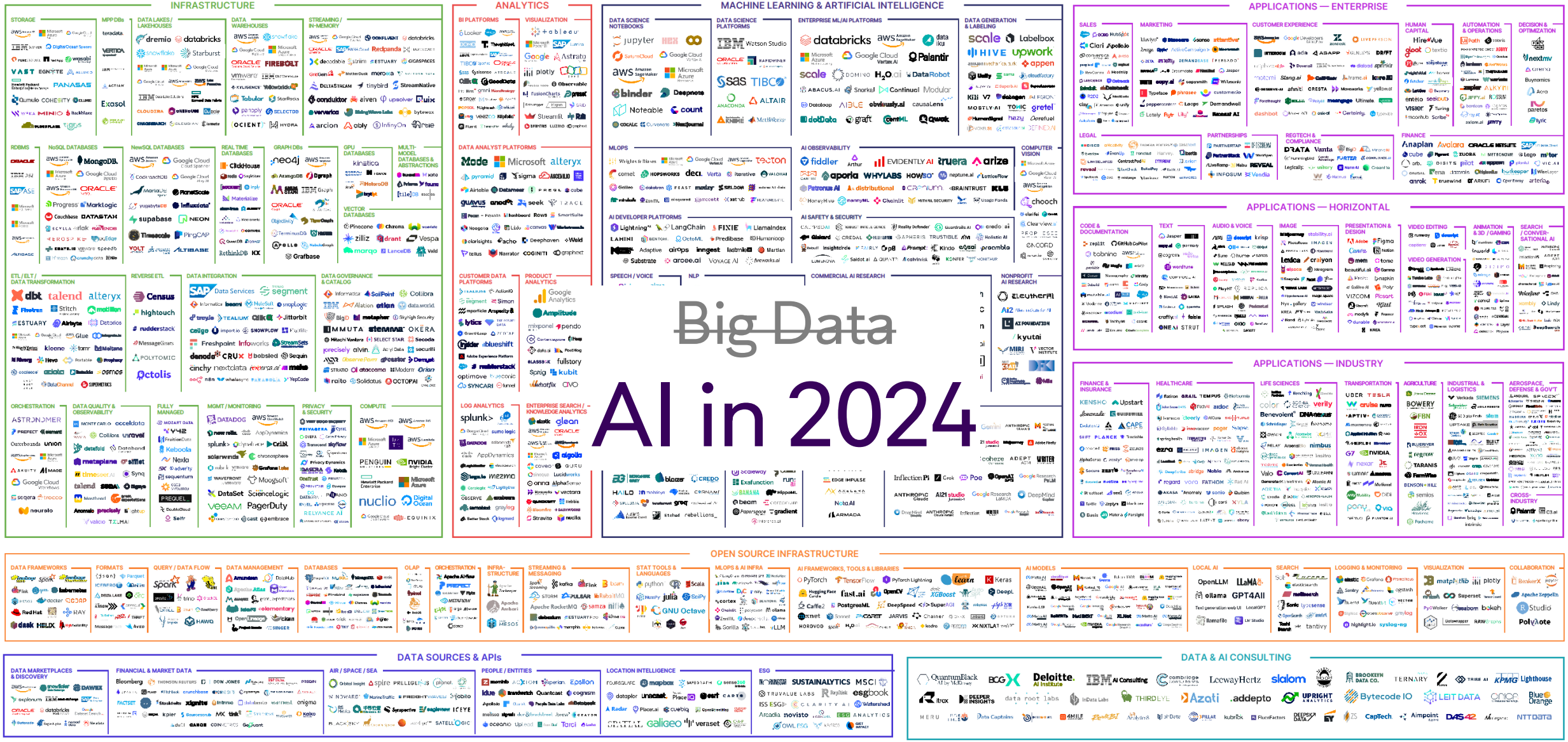
Application layer

~~AI~~ Big Data in 2012

THE 2024 MAD (MACHINE LEARNING, ARTIFICIAL INTELLIGENCE & DATA) LANDSCAPE

~~Big Data~~

AI in 2024

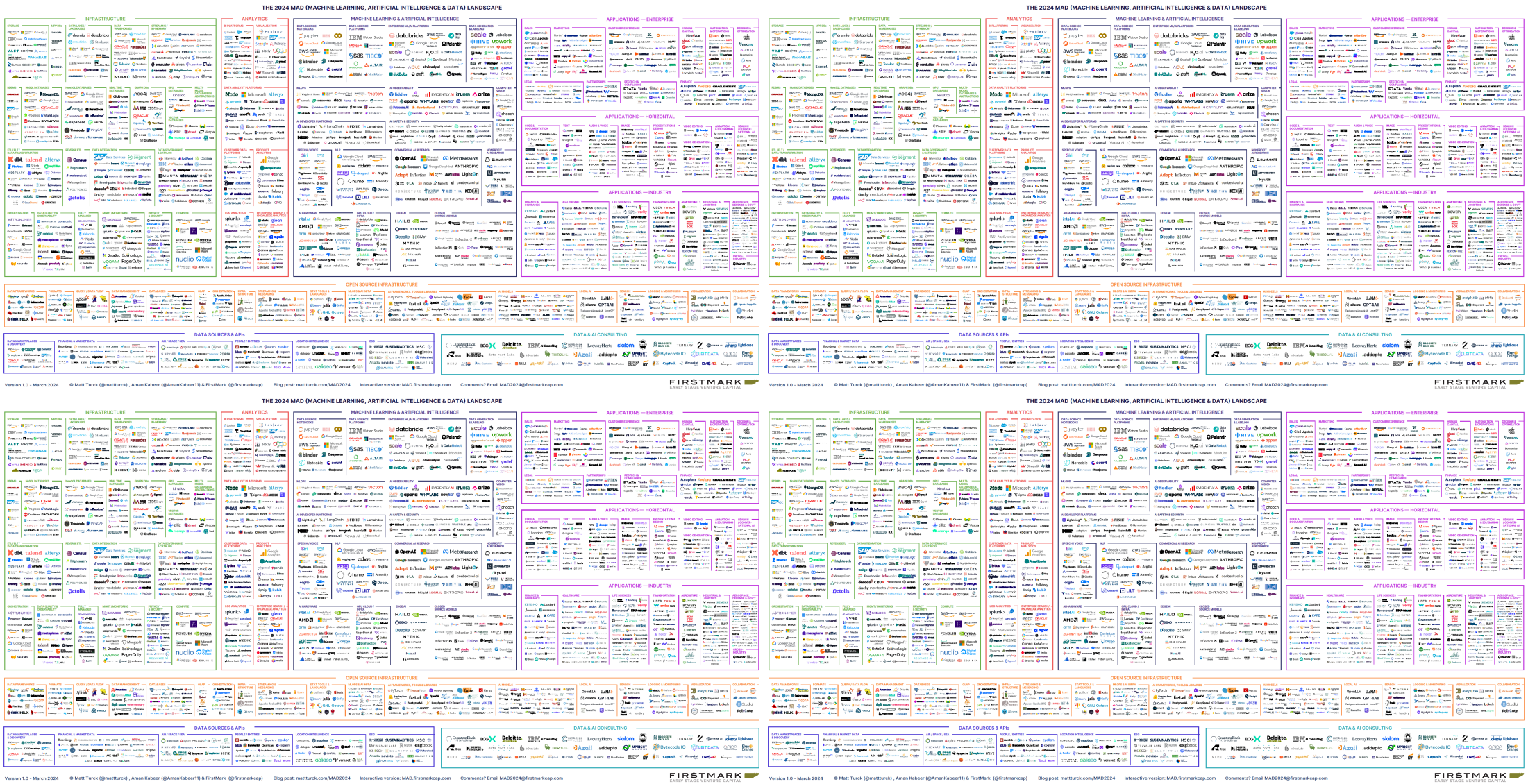


Source: Full Steam Ahead: The 2024 MAD (Machine Learning, AI & Data) Landscape – Matt Turck

FIRSTMARK
EARLY STAGE VENTURE CAPITAL

@henrikfabrin

The # of AI applications will continue to grow



THE 2024 MAD (MACHINE LEARNING, ARTIFICIAL INTELLIGENCE & DATA) LANDSCAPE

THE 2024 MAD (MACHINE LEARNING, ARTIFICIAL INTELLIGENCE & DATA) LANDSCAPE

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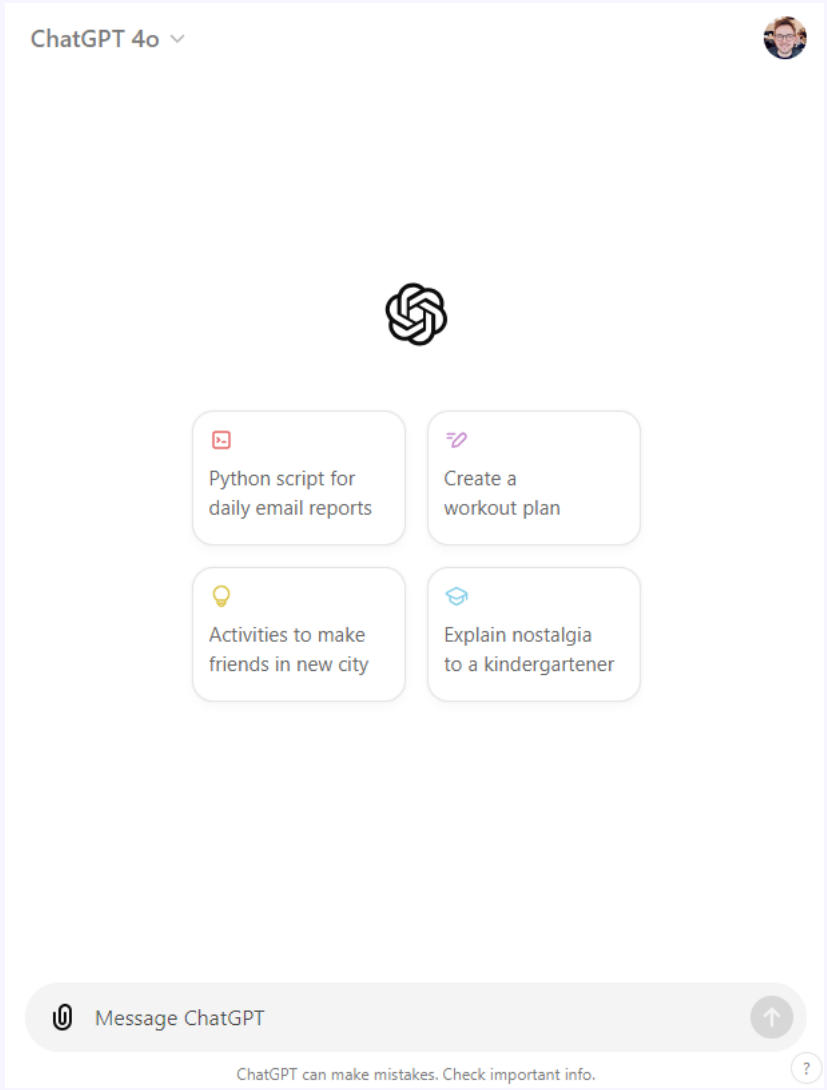
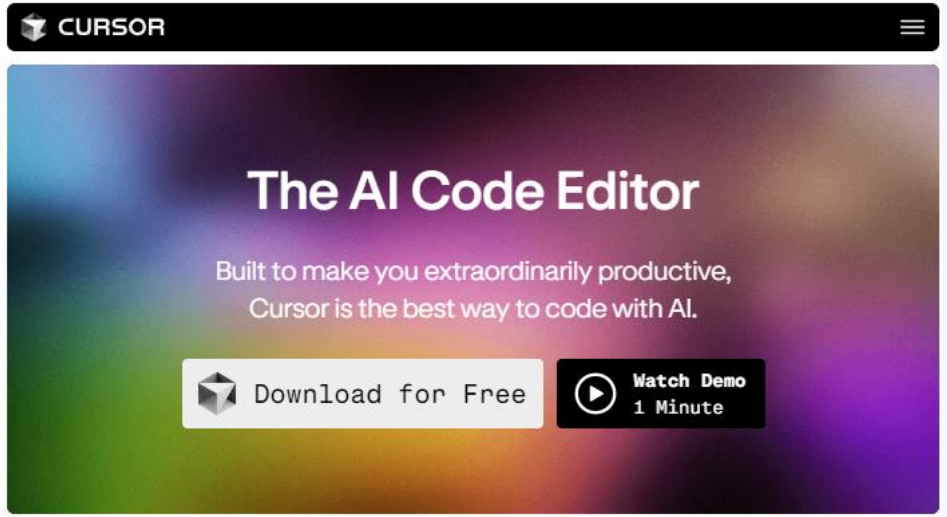
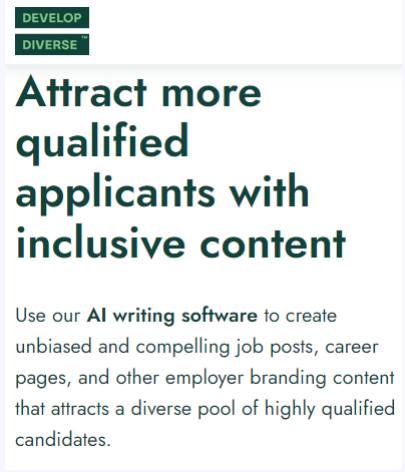
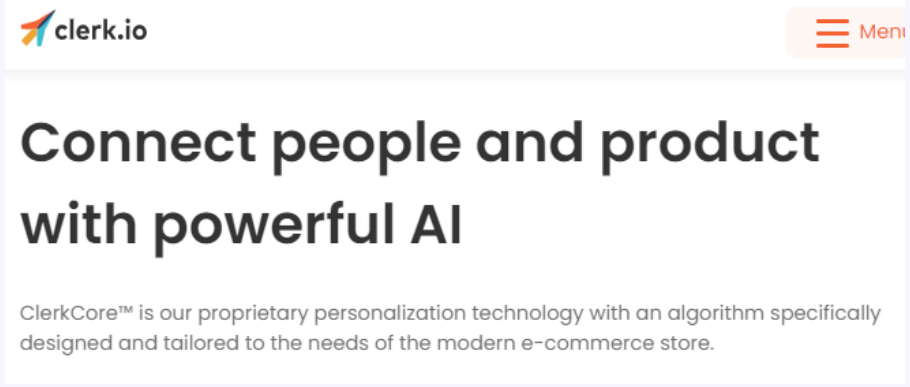
General purpose to niche









From chatbots trough copilots to agents

Multimodal AI-agents

Claude 3.5 gets a computer

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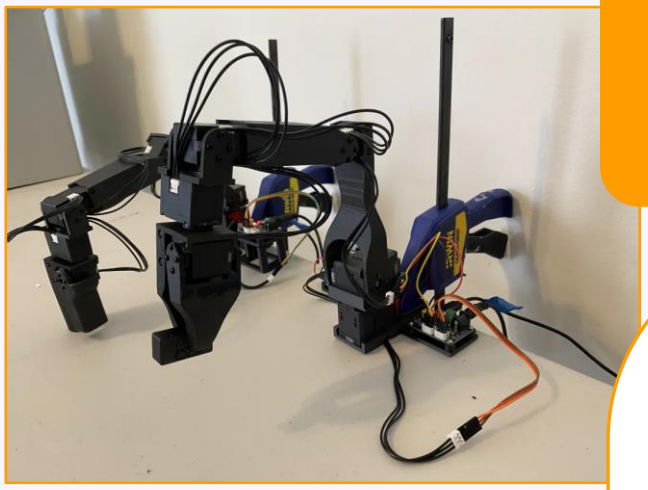
Online

Offline

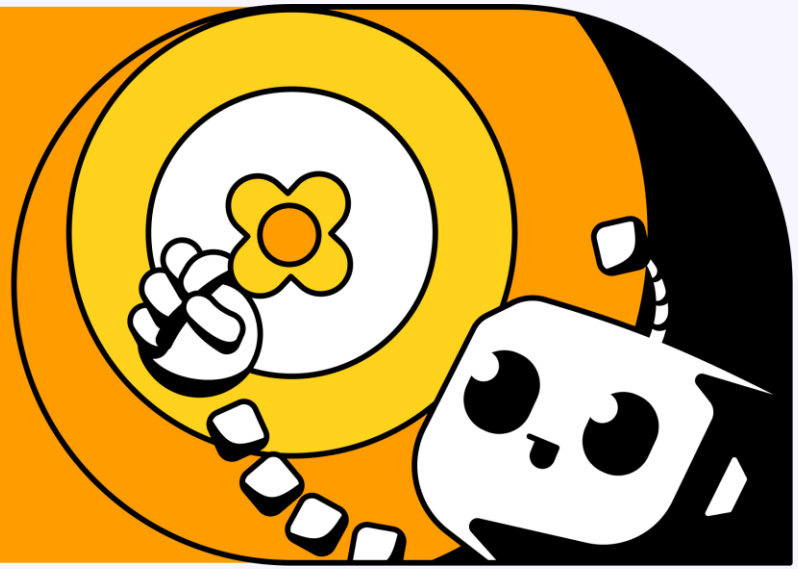
Offline

Open-source robotics picks up



Hugging Face

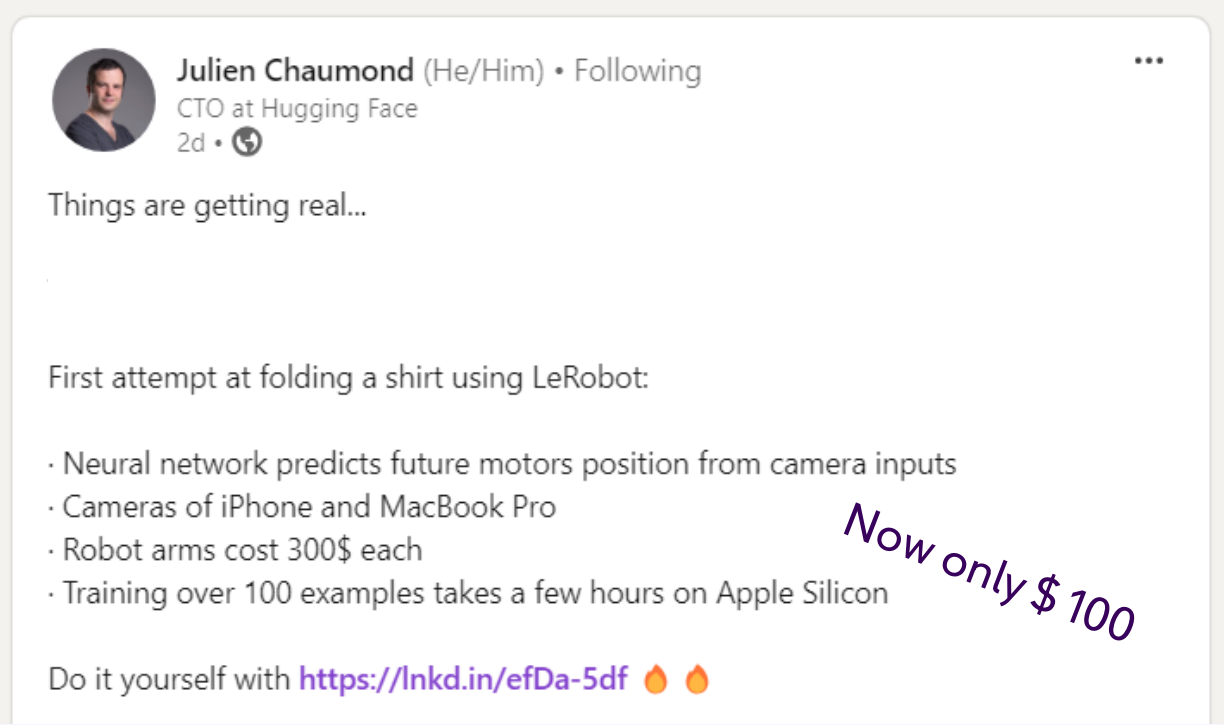
LeRobot



“Hugging Face LeRobot aims to provide models, datasets, and tools for real-world robotics.

The goal is to lower the barrier for entry to robotics so everyone can contribute and benefit from sharing datasets and pretrained models.”

Constantly cheaper and more accessible



Julien Chaumond (He/Him) • Following
CTO at Hugging Face
2d •

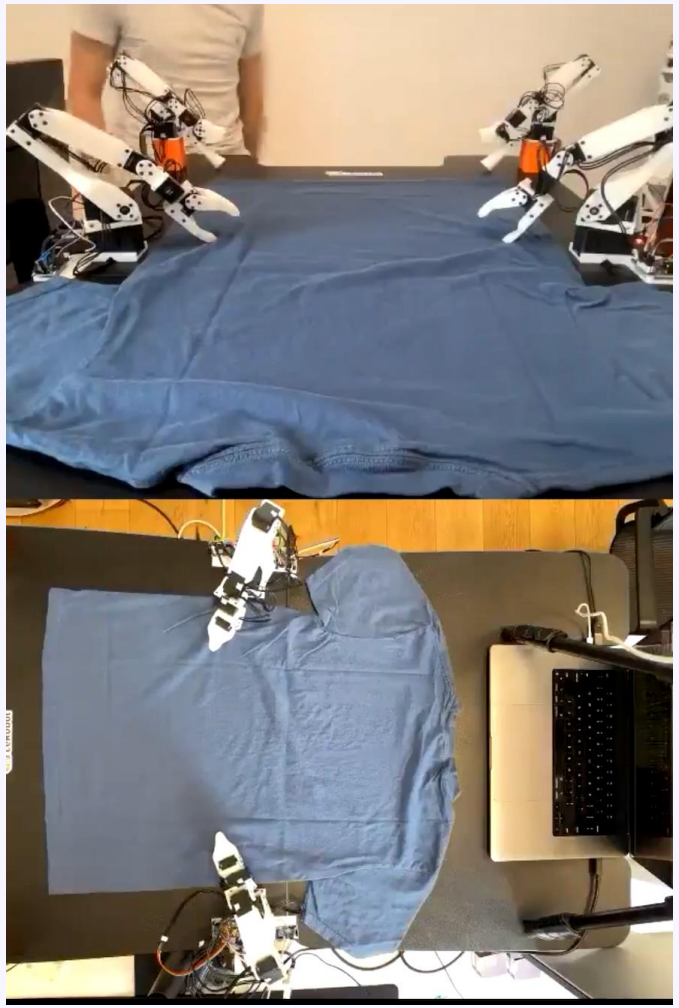
Things are getting real...

First attempt at folding a shirt using LeRobot:

· Neural network predicts future motors position from camera inputs
· Cameras of iPhone and MacBook Pro
· Robot arms cost 300$ each
· Training over 100 examples takes a few hours on Apple Silicon

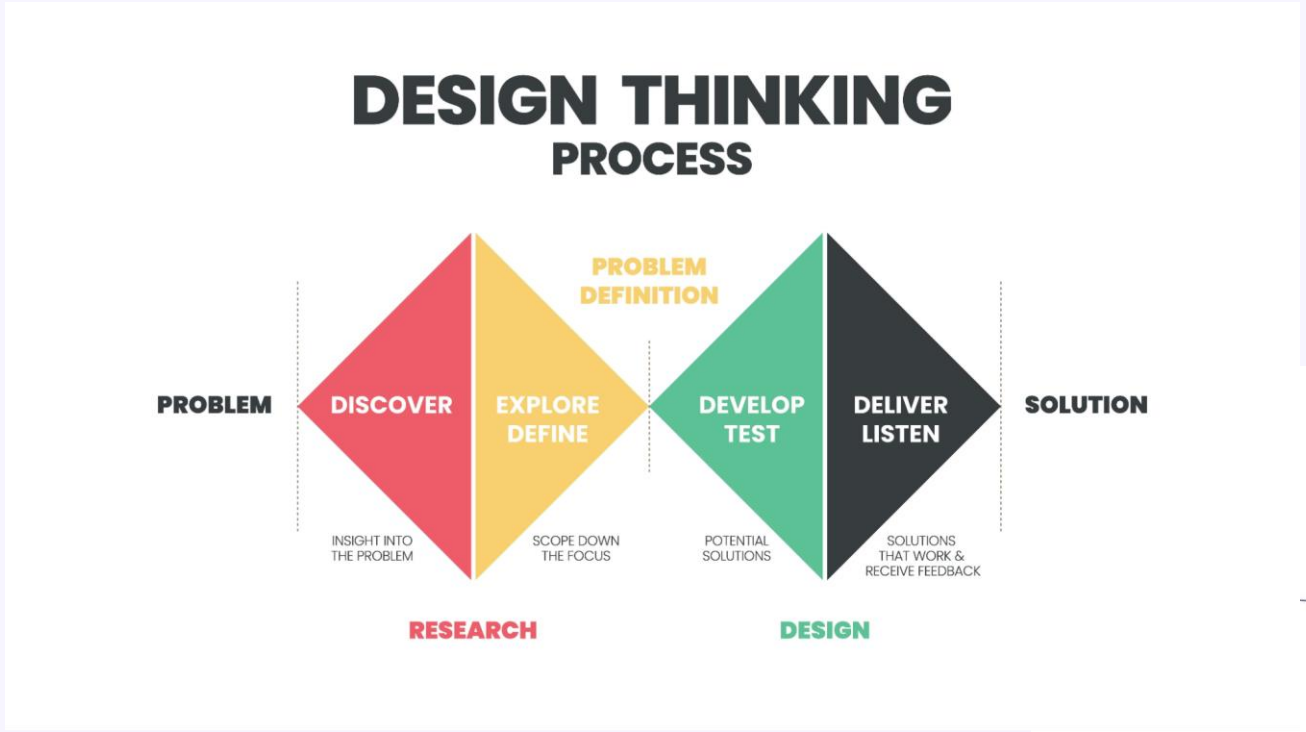
Do it yourself with https://lnkd.in/efDa-5df 🔥 🔥

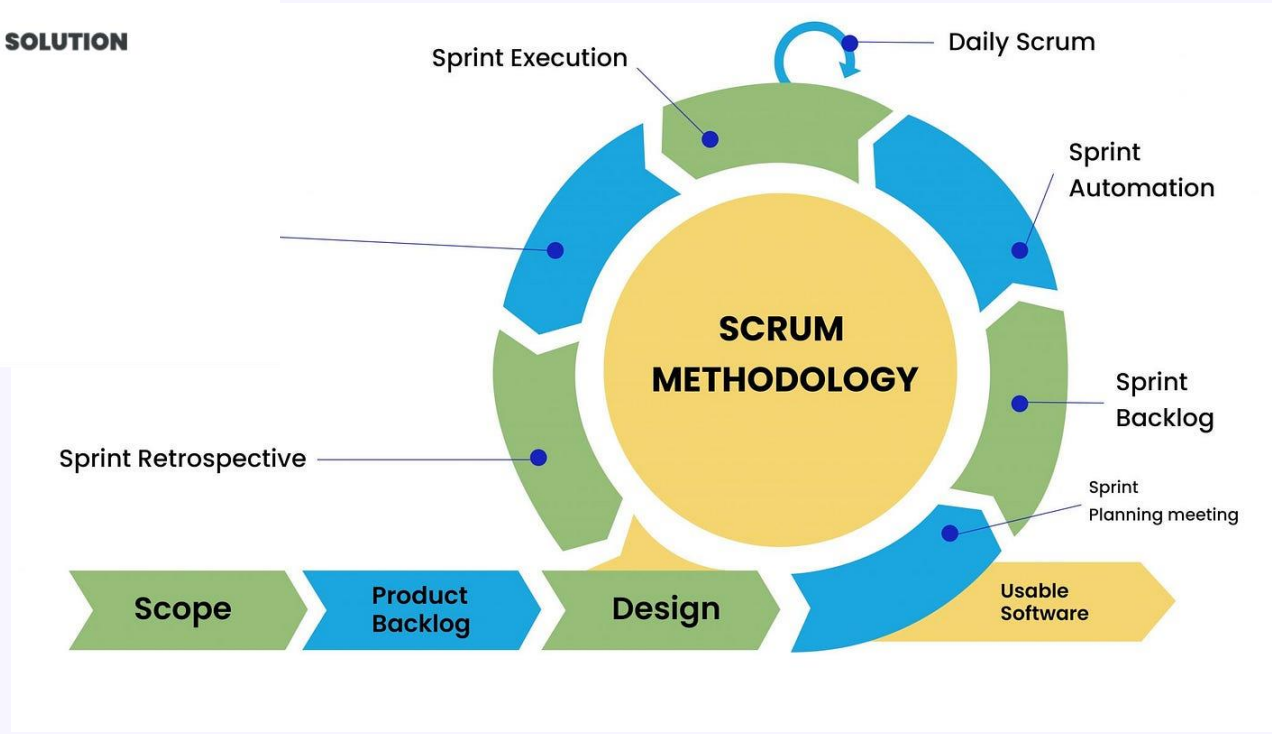
Now only $ 100



Speed of innovation & product development

A paradigm shift





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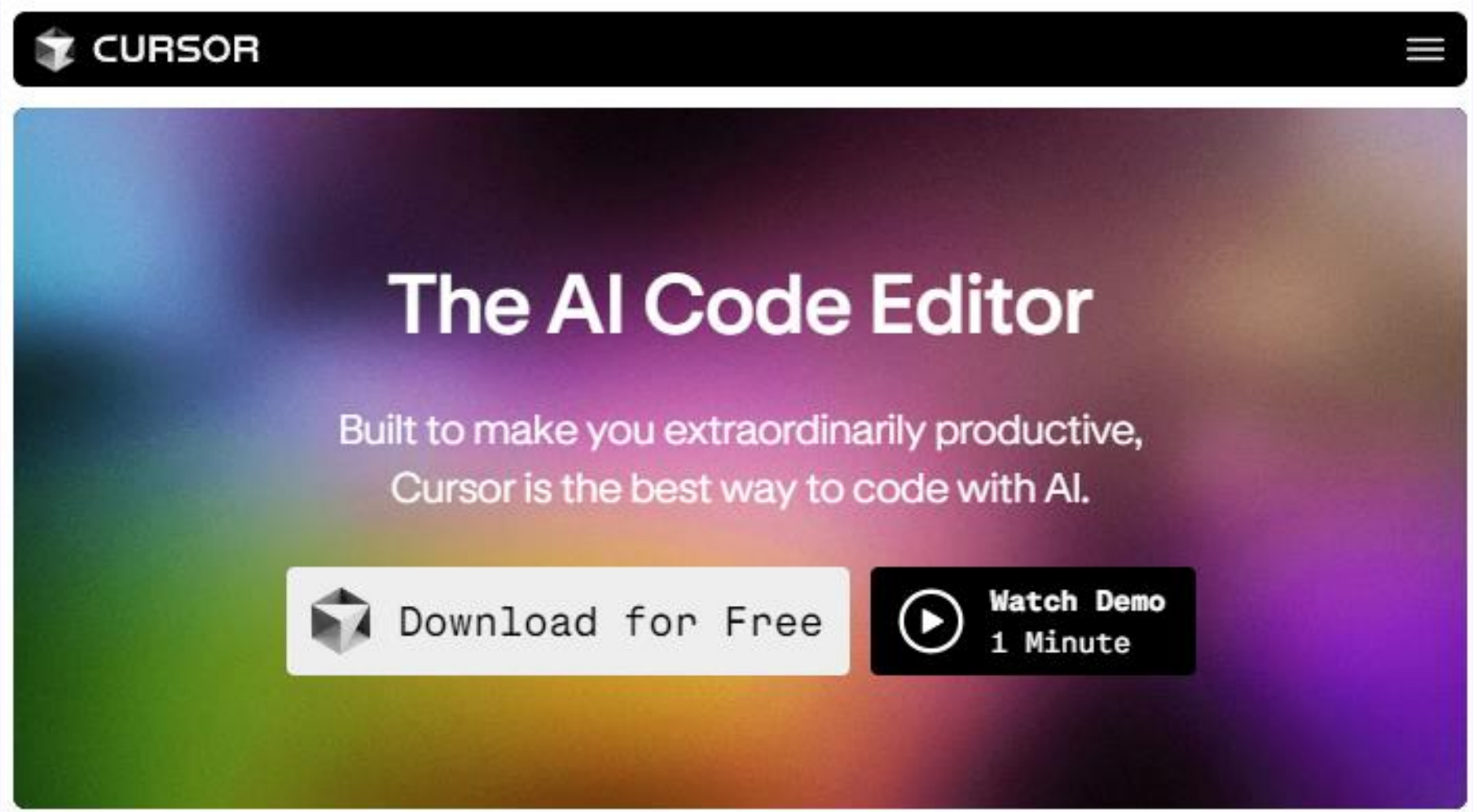
Faster for coders, AI-product team for non-coders

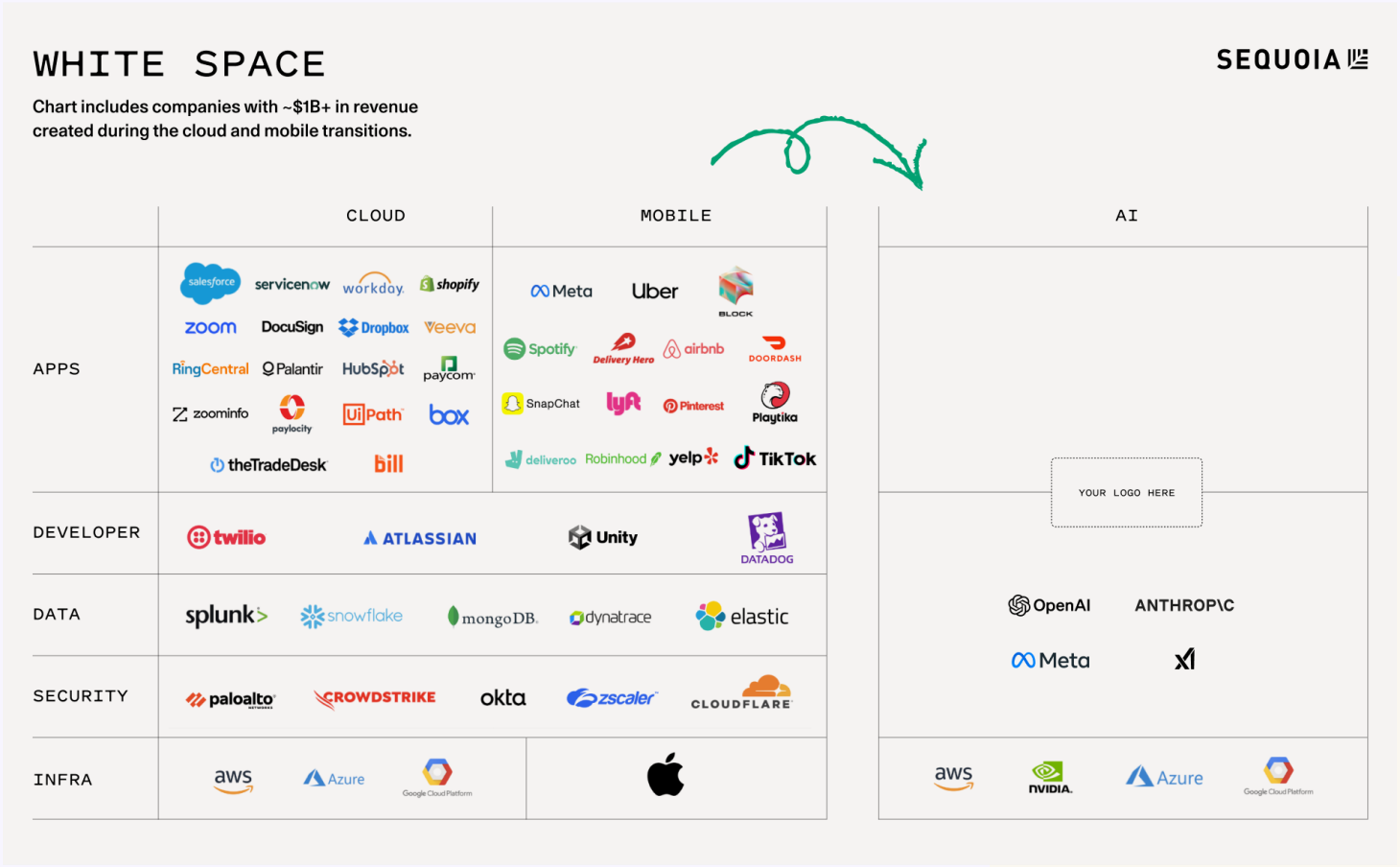


Factor 10

= 10x faster innovation

= 10x less cost

The largest opportunity is in the application layer?



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AI in Customer Experience

@henrikfabrin

Problems for online merchants

98%

of webshop visitors don’t purchase

75%

of customers never come back

Why?

Why?

They don’t know – it’s guesswork at best

But...

85% of shoppers say personally relevant content from brands increases their purchase intent.

MIT research shows that if you know the shopping type of the individual shopper and personalize the webshop accordingly, you will increase sales by +20%.

The 10x opportunity

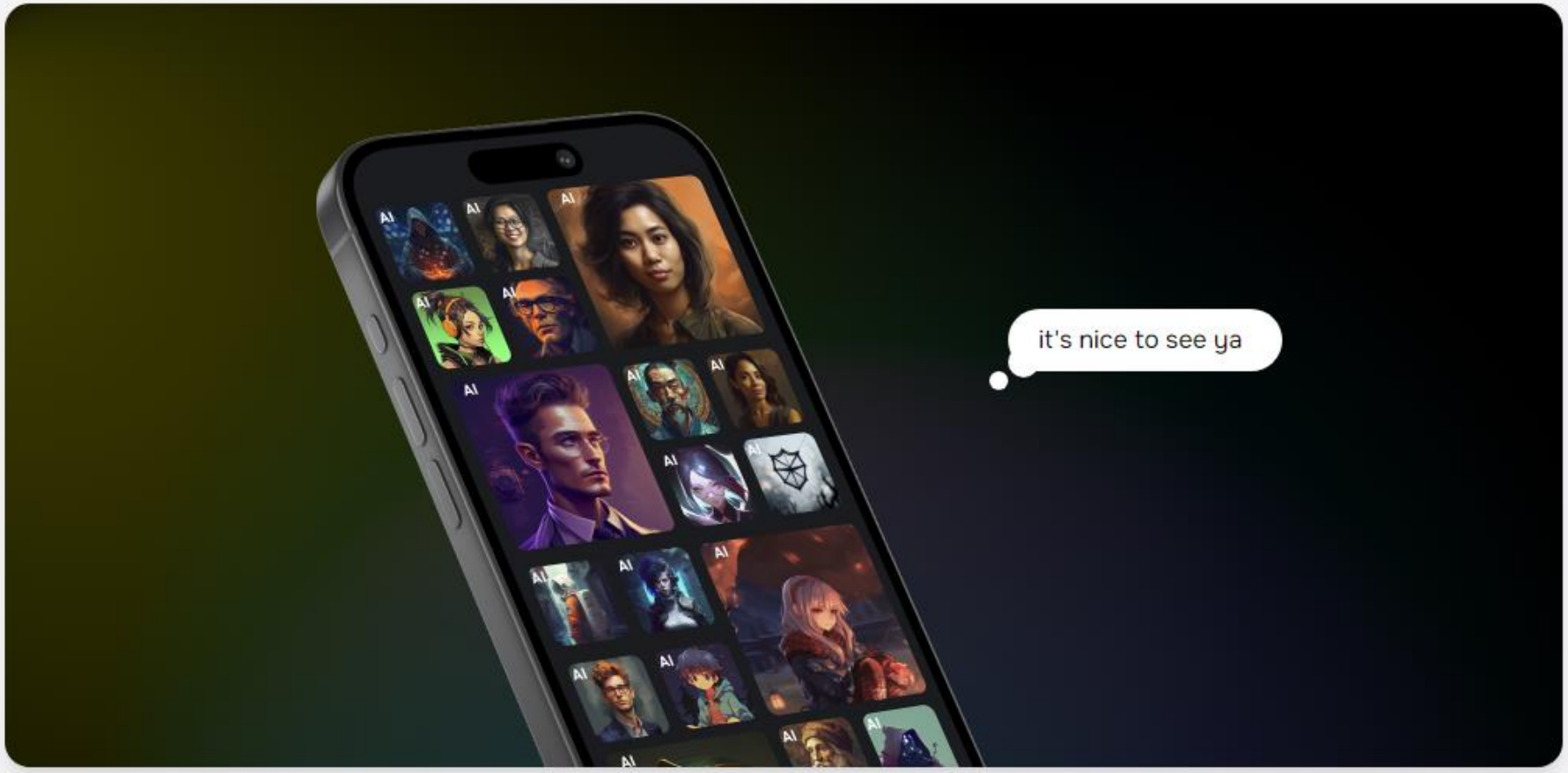
Personalized AI you can talk to

as big of a change as cloud and mobile.

character.ai

Personalized AI for every moment of your day

- **+20M users**
- **Spend two hours a day**
- **60% 18-24 y/o**
- **50/50 male & female**

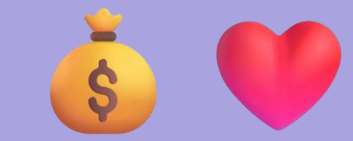


Meta AI

400M daily users

@henrikfabrin

Brands use chatbots to save costs, sell more, and build brand loyalty.



Cutting costs

BBC NEWS

Home UK World Business Politics Tech Science Health Family & Edu

Klarna: AI lets us cut thousands of jobs - but pay more

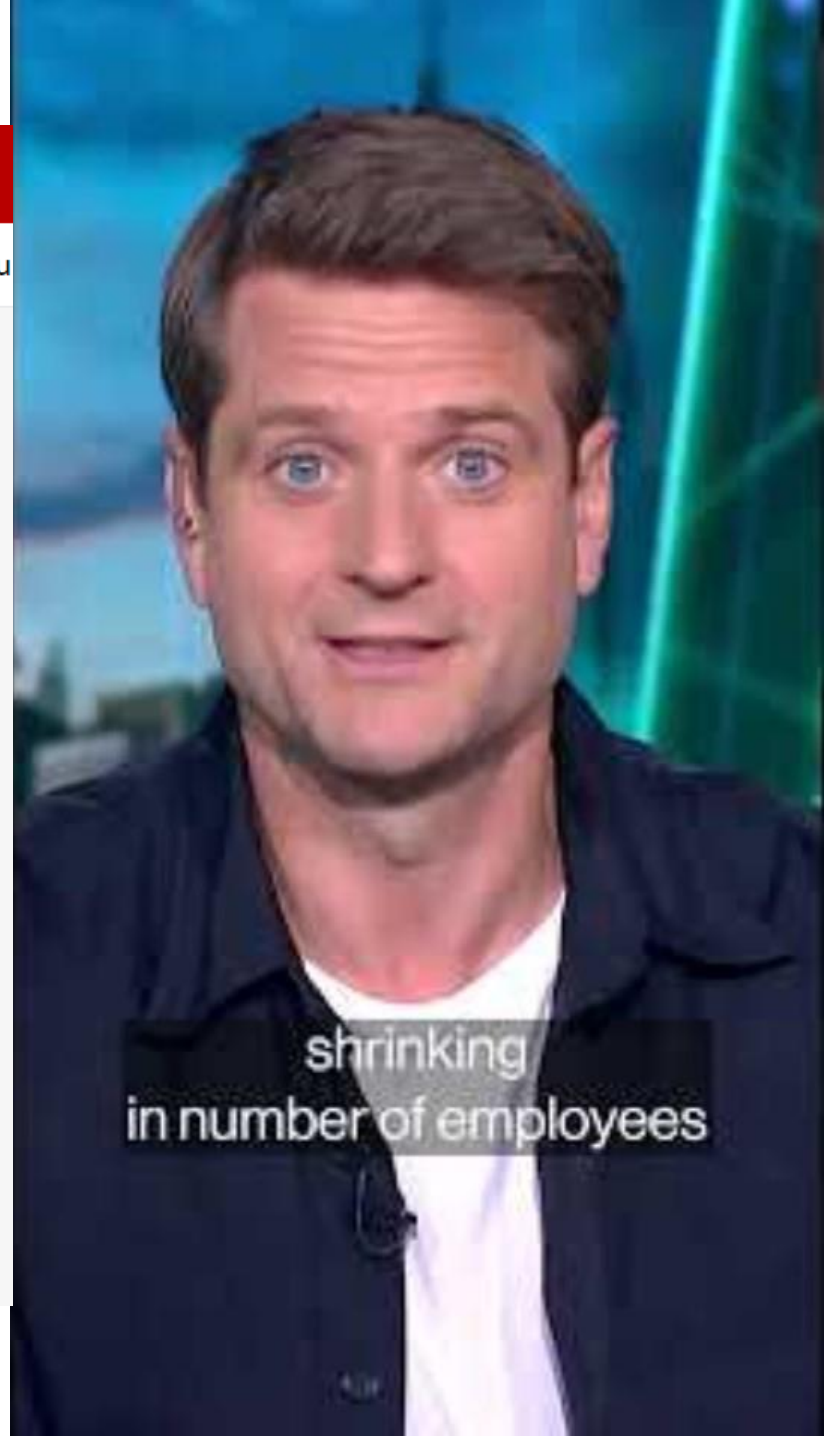
Tom Gerken

Technology reporter

28 August 2024

The buy now, pay later firm Klarna is seeking to get rid of almost half its employees in the coming years through efficiencies it says arise out of its investment in artificial intelligence (AI).

The firm has already cut its workforce from 5,000 to 3,800 in the past year, and wants to reduce that to 2,000 employees by using AI in marketing and customer service.



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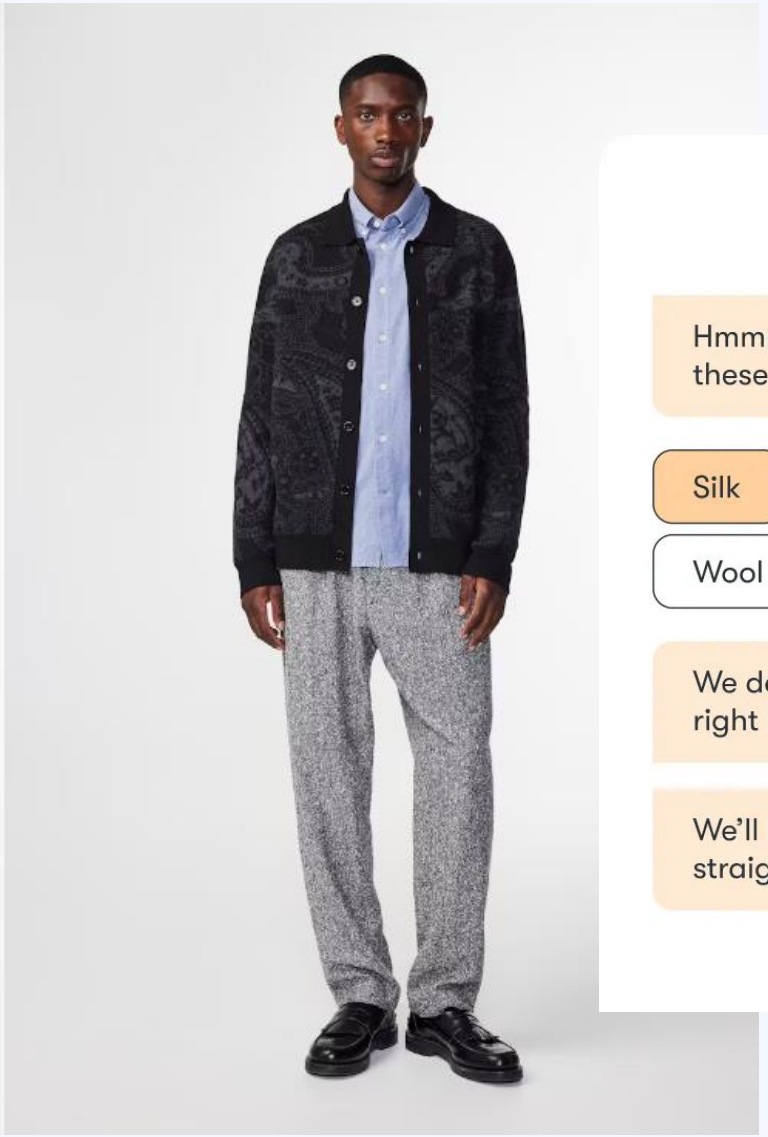
Selling more

(of the right products)

Same Henrik, different needs

Quantitative data: context, behavior, intent



What do you recommend?

Hmmm, good question! Which of these are your preferred material?

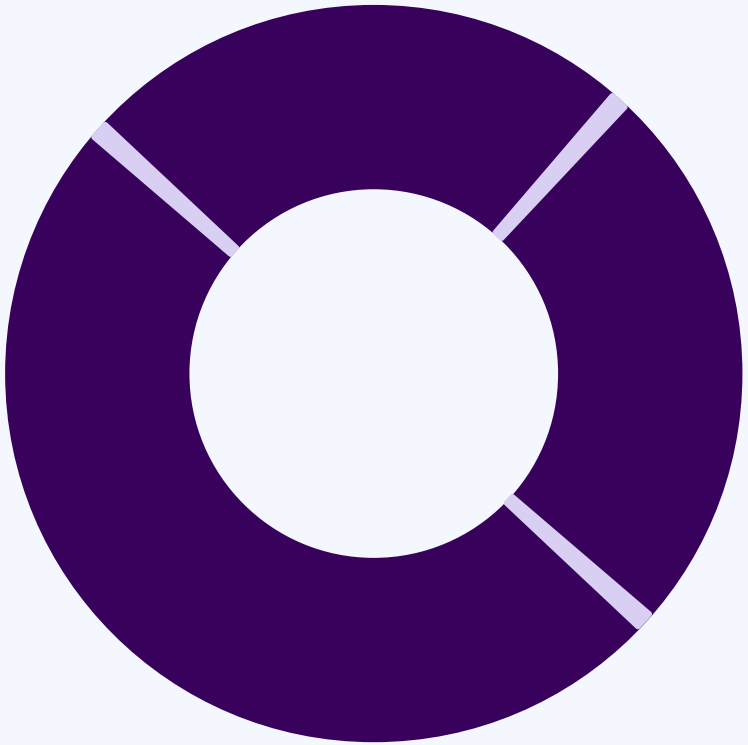
Silk | Cotton | Wool | Linen

We don't have silk items in the collection right now, but it's a great idea!

We'll let our product team know straight away!

Product feedback

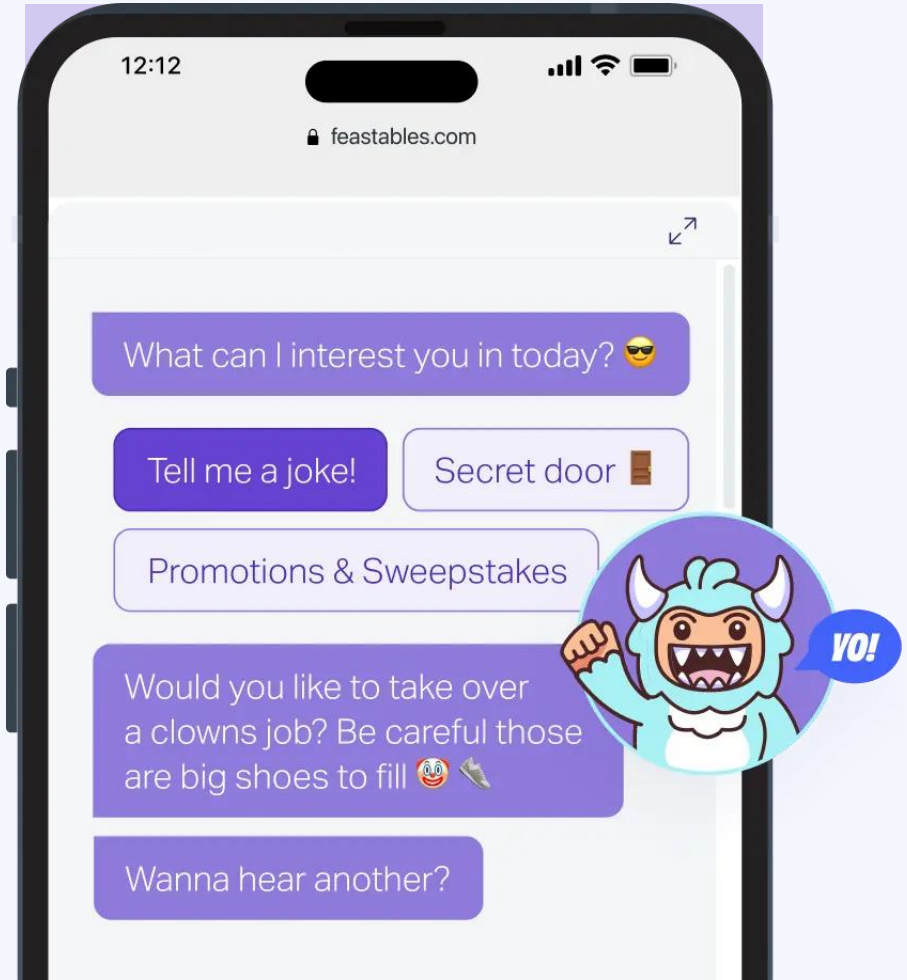
Learnings from working with MrBeast & Feastables



feastables™

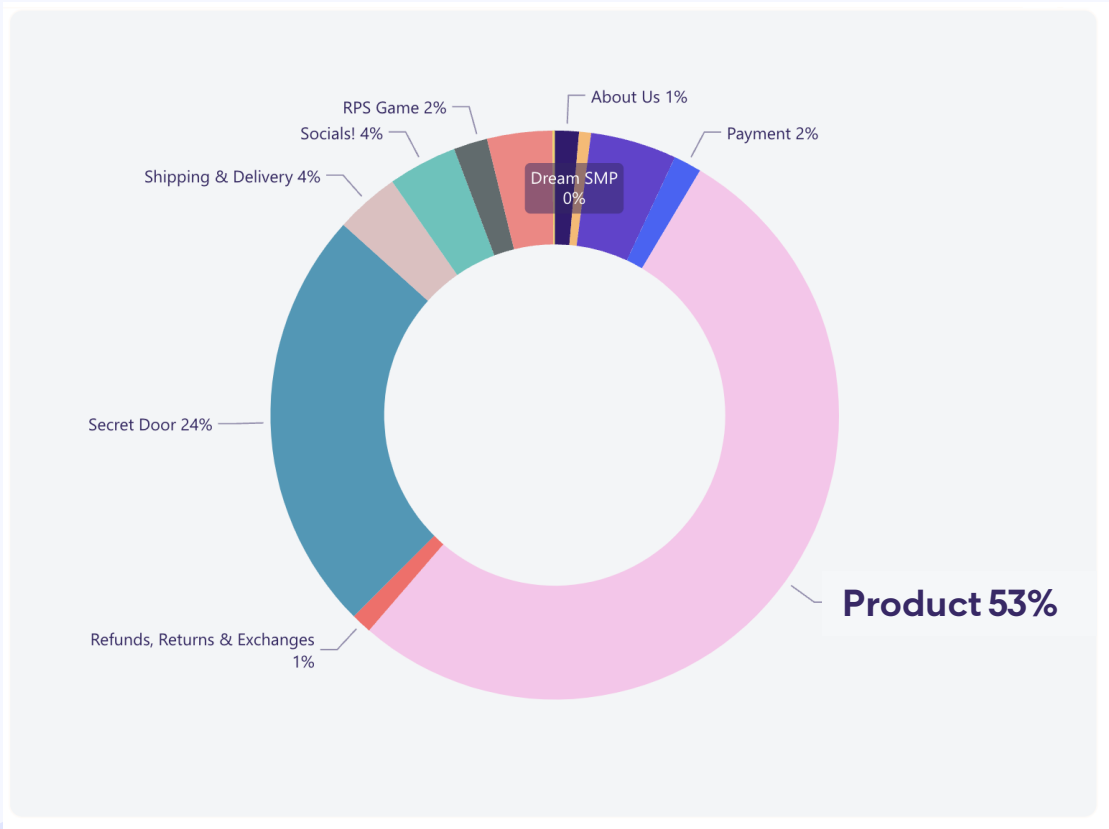
Brand engagement

Engage customers the 362 days a year they're not buying your product

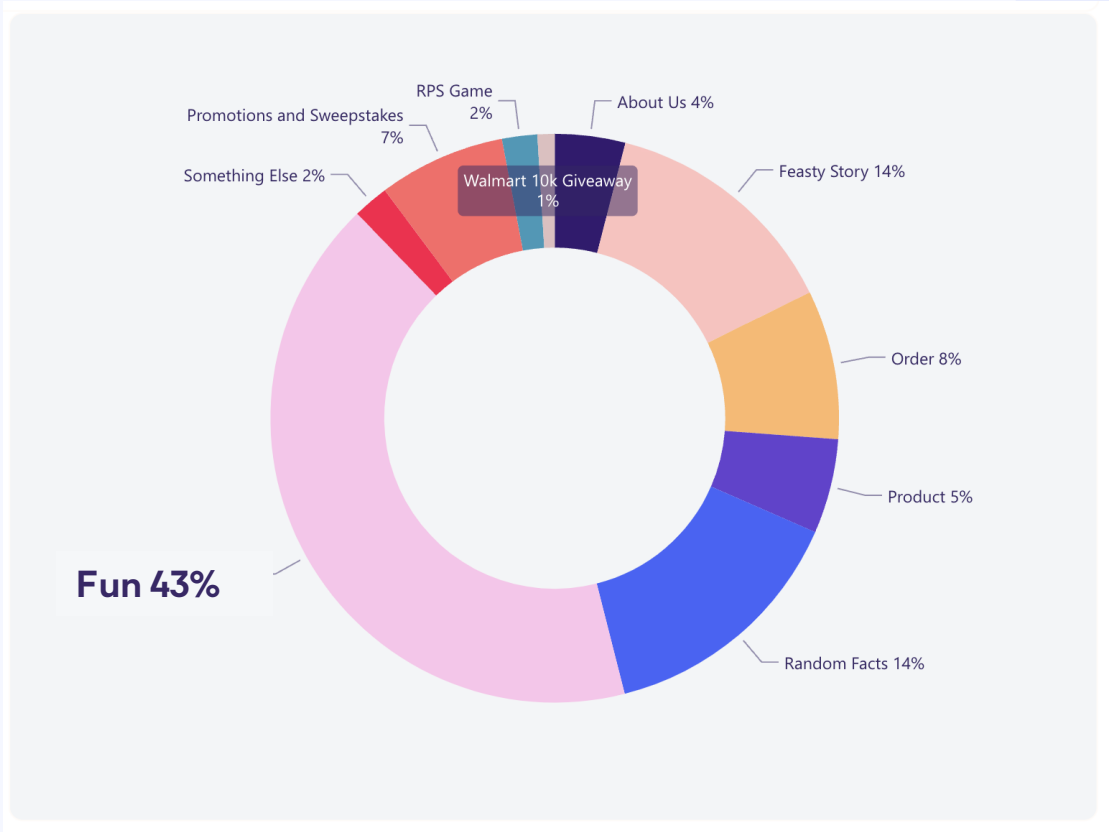

12:12
feastables.com
What can I interest you in today? 😎
Tell me a joke!
Secret door 🚪
Promotions & Sweepstakes
Would you like to take over a clowns job? Be careful those are big shoes to fill 🤡🔪
Wanna hear another?
YO!

Different channels, different needs

Webshop: **Purchasing**



Messaging apps: **Having fun**



MR BEAST

feastables™

$2,000,000
in extra revenue

$400,000
in cost savings

2,3M
conversations

But it’s not all free play

There are important things to keep in mind

The AI Act and general compliance

Legal help for using AI

DI offers you practical AI tools to help you comply with applicable laws, protect IP rights and prepare for the upcoming AI regulation.

Guide

AI Act: Your overview of EU legislation on AI

The guide gives you an overview of the AI Regulation and the practical implications it will have for you.

Guide

How to prepare for the EU AI Regulation

This guide will help you prepare your business for the upcoming AI Act: the EU's legislation on artificial intelligence.

Guidance

Employee policy: Guidance for the use of generative AI

Learn what you need to be aware of when employees use generative AI.

Template

Employee policy: Template for using generative AI

With DI's template, you can tailor a personnel policy on employee use of generative AI.

Docs

Digital Tool

Requirements and criteria: Self-assessment tool

Use the D-mark's free self-assessment tool to see which criteria and requirements fit your company's use of AI.

digital

Template

Data protection impact assessment in AI projects

Get a handle on data security in your AI projects and make sure you comply with the GDPR and Data Protection Act.

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AI is for everyone – also bad actors

The 3rd largest economy

North Korean Hackers Using AI in Advanced Cyberattacks

U.S.-Led Sanctions Do Little to Curtail North Korea's Development of AI

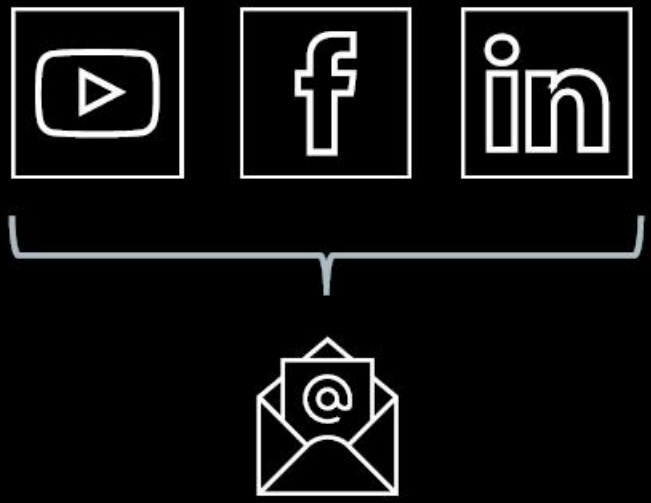
Jayant Chakravarti (@JayJay_Tech) • January 24, 2024

https://www.databreachtoday.com/north-korean-hackers-using-ai-in-advanced-cyberattacks-a-24184

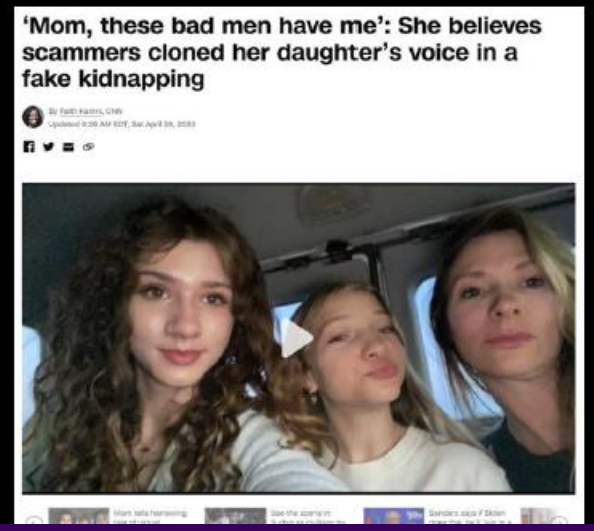
WormGPT - ChatGPT's Evil Twin
Large Language Model

Malware development

AI assisted phishing



Deepfake



Lastly

How DI helps companies

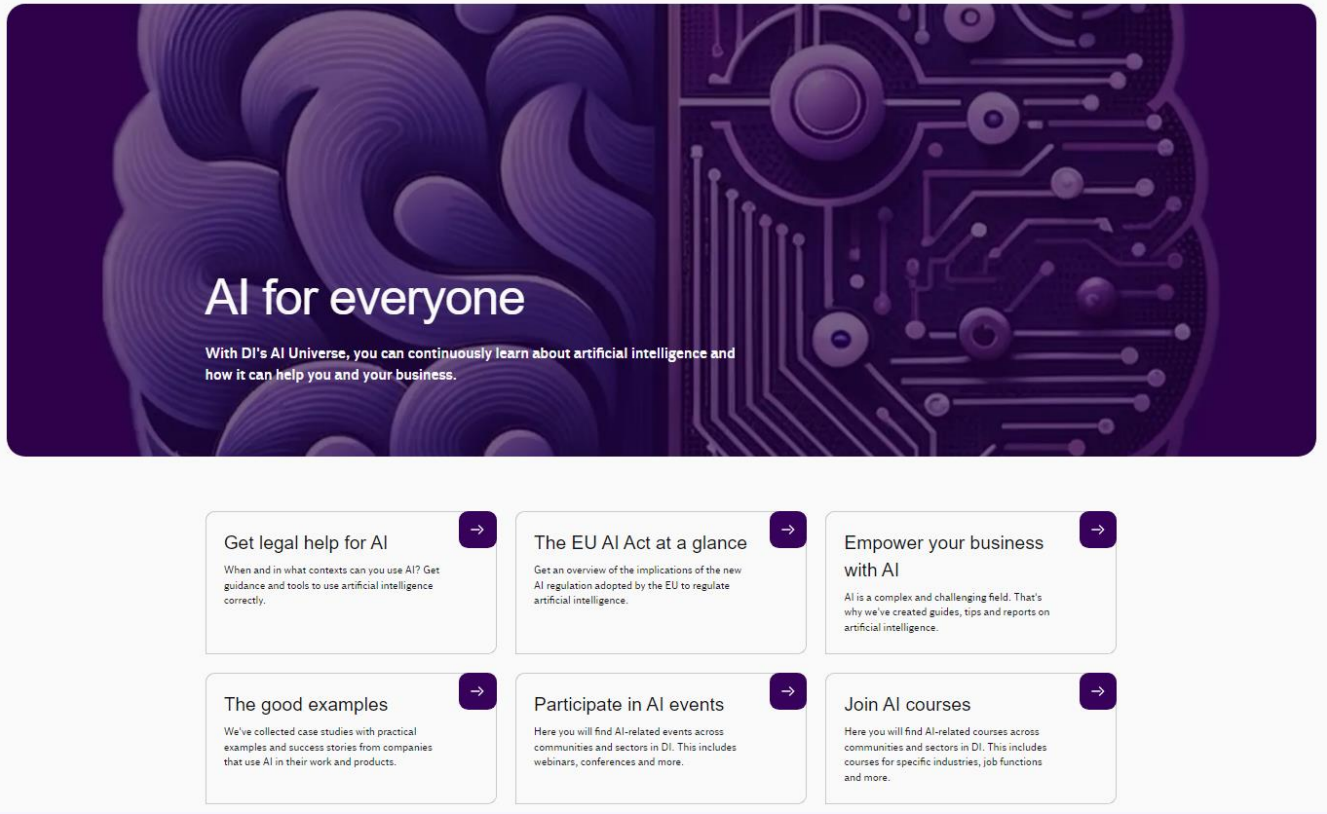
Practical guides and case studies on how to empower your business with AI

Exclusive AI community, masterclasses, courses, and events

Policy formulation and lobbying, ensuring the best framework for adaptation.

Legal counselling on the implementation of AI

--> Visit di.dk/ai



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Key takeaways

1. Brands and people using AI will have a clear advantage.

2. Put your customers' needs first.

3. If you start today, you're still be (almost) early.

- 01
- 02
- 03
- 04

Thank you!

hefa@di.dk | linkedin/henrikfabrin

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