



mmeC

DEMISTIFYING AI

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VP MACHINE LEARNING & AI



You

Write a short statement of 3 sentences saying that I'm very happy to talk about AI for this excellent audience and stress the importance for it for the job market. Make a small joke in it



ChatGPT

I'm absolutely thrilled to discuss AI with this fantastic audience today! It's not just an exciting topic, but also incredibly important for the job market. In fact, AI is so influential that even if you're not planning to become a robot programmer, it's still a skill that'll help you avoid becoming a robot's butler in the future!



“selfie of a 40-year old white male with black hair, short beard and black thick glasses standing in Ghent, Belgium”







Team Gallego

02



SPORTSMOBILE
4x4

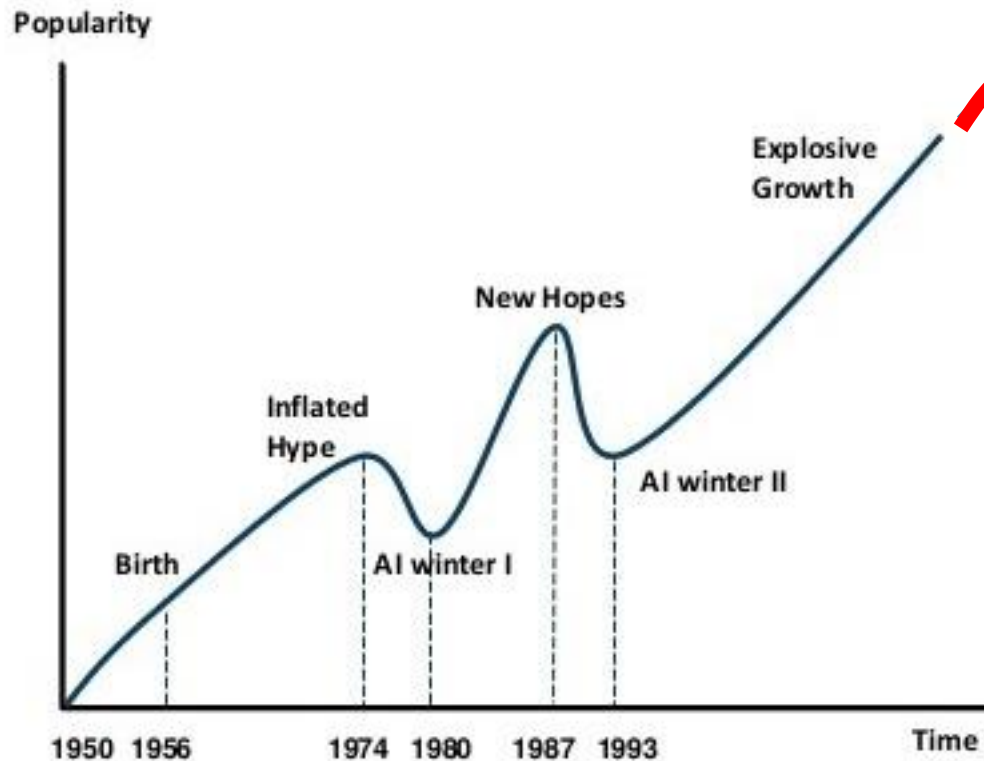


MYRIDE



00:00:00:00

AI HAS A HISTORY OF BEING THE NEXT BIG THING



what's next?

OR: how do we avoid the next winter?



HOW CAN YOU USE IT?

WHERE WE ARE RIGHT NOW AND HOW YOU CAN USE IT...



SMALL PROBLEMS

~ 10,000 parameters

BUILD IT YOURSELF



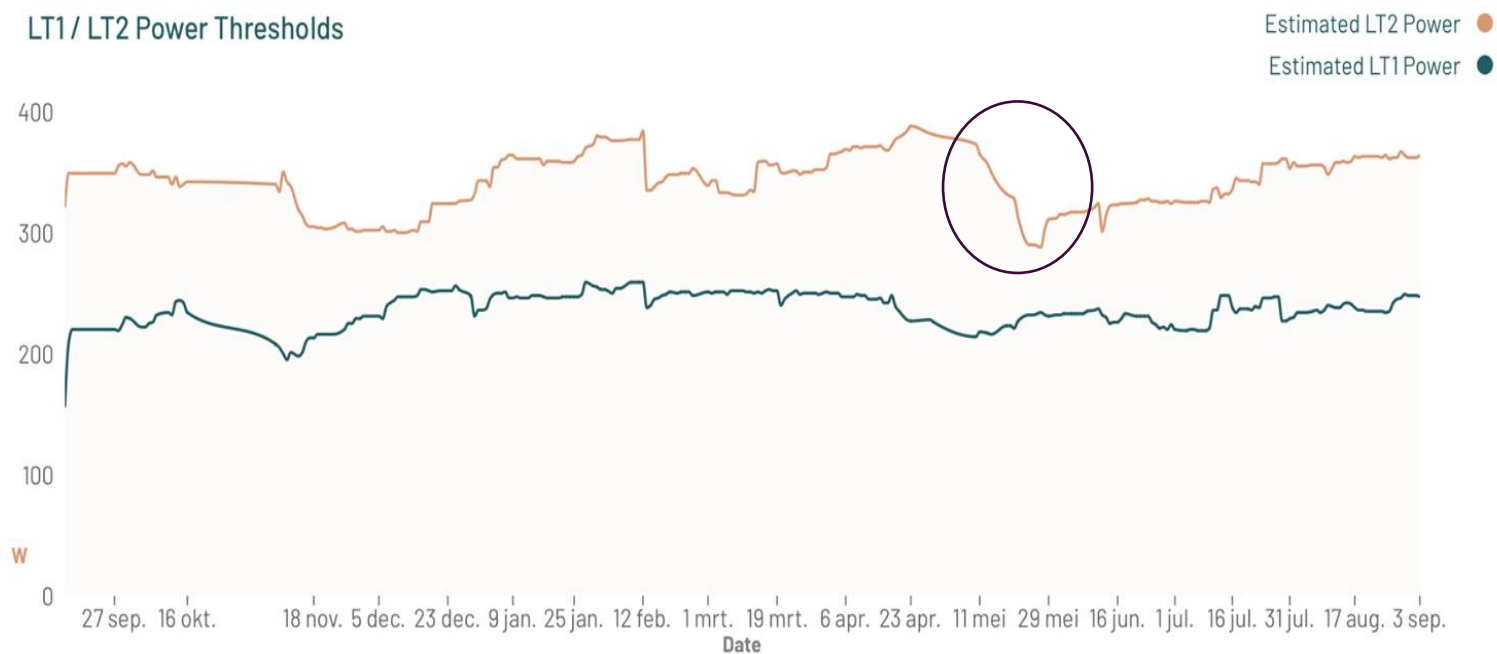
Detecting performance anomalies
Predicting future performance



Insights

Analysis

LT1 / LT2 Power Thresholds



WHERE WE ARE RIGHT NOW AND HOW YOU CAN USE IT...



SMALL PROBLEMS

~ 10,000 parameters


BUILD IT YOURSELF



COMMON PROBLEMS

~ 100 Million parameters

USE EXISTING MODEL &
ADAPT

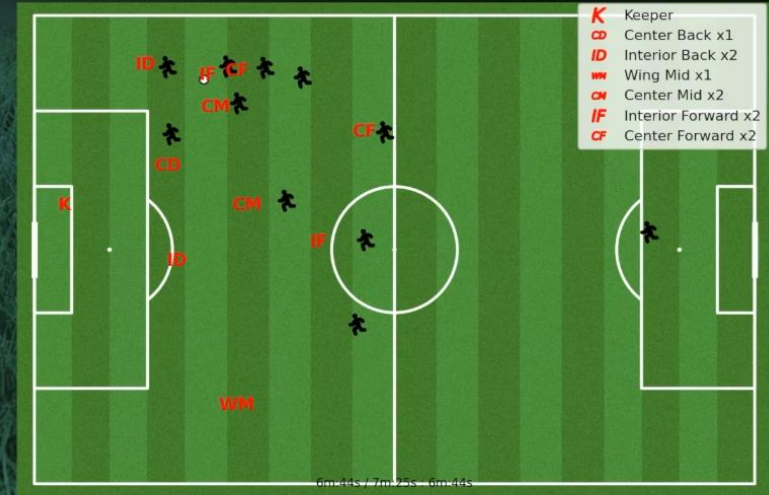
I S O  G R O U P

Catching an empty bottle

(KUKA LWR 4+ and Allegro Hand)



BELGIË – KROATIË



WELKE TACTIEK?

start spel

WHERE WE ARE RIGHT NOW AND HOW YOU CAN USE IT...



SMALL PROBLEMS

~ 10,000 parameters

DO IT YOURSELF



COMMON PROBLEMS

~ 100 Million parameters

USE EXISTING MODEL &
ADAPT



GENERATIVE AI

~ 100 Billion parameters

INTELLIGENTLY
USE THE API







SCARY OR NOT?





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OF UKRAINE



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Unacceptable risk
Prohibited

Art. 5

**Social scoring,
facial recognition,
dark-pattern AI, manipulation**

High Risk
Conformity Assessment

Art. 6 & ss.

**Education, employment,
justice, immigration,
law**

Limited risk
Transparency

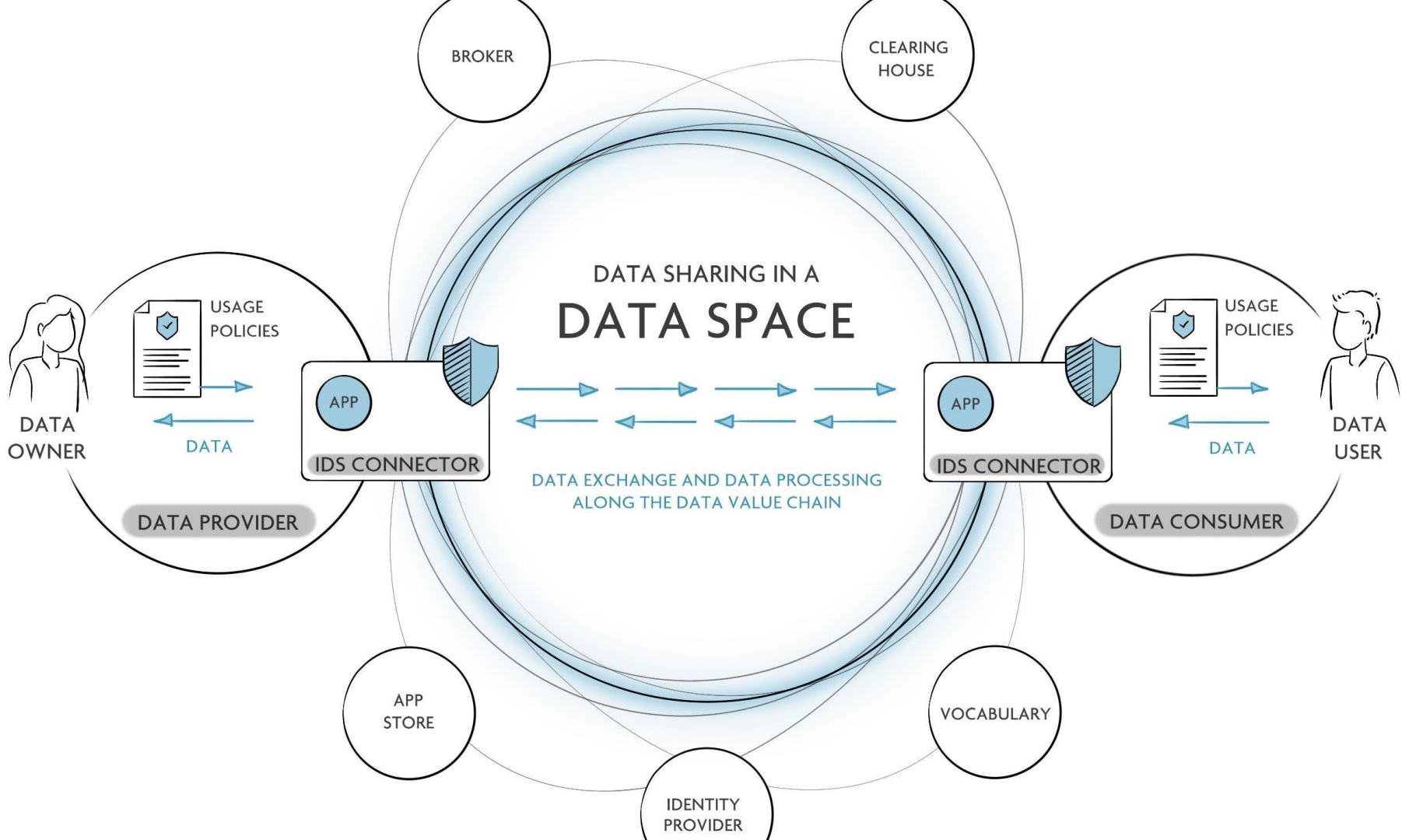
Art. 52

**Chat bots, deep fakes,
emotion recognition
systems**

Minimal risk
Code of conduct

Art. 69

**Spam filters,
Video games**







AI won't take your job...
But someone who knows how to use AI will

A person is seen from behind, sitting at a desk in a dimly lit room. They are working on a computer with multiple monitors. The main monitor displays lines of code, and a laptop is open in front of them. The scene is illuminated by the blue light of the screens and the warm glow of bokeh lights in the background. Overlaid on the image is a large, glowing green text overlay.

**EARN
\$200K
WITH PROMPT ENGINEERING**

[🏠](#) / [Vlaamse innovatiemotor](#) / [Kennisuitwisseling](#) / [Techmeters](#) / [Digimeter](#) / imec.digimeter 2022

imec.digimeter 2022

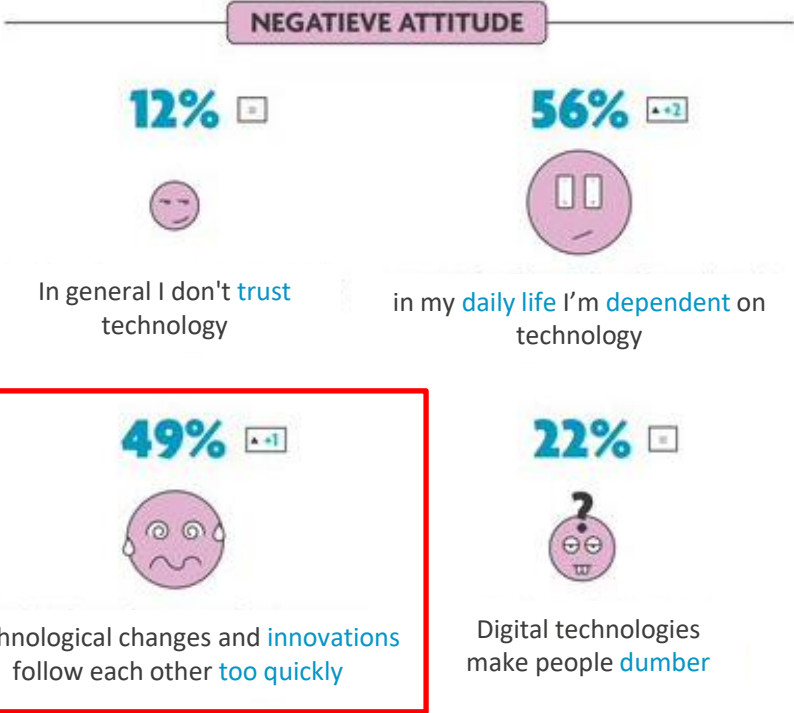
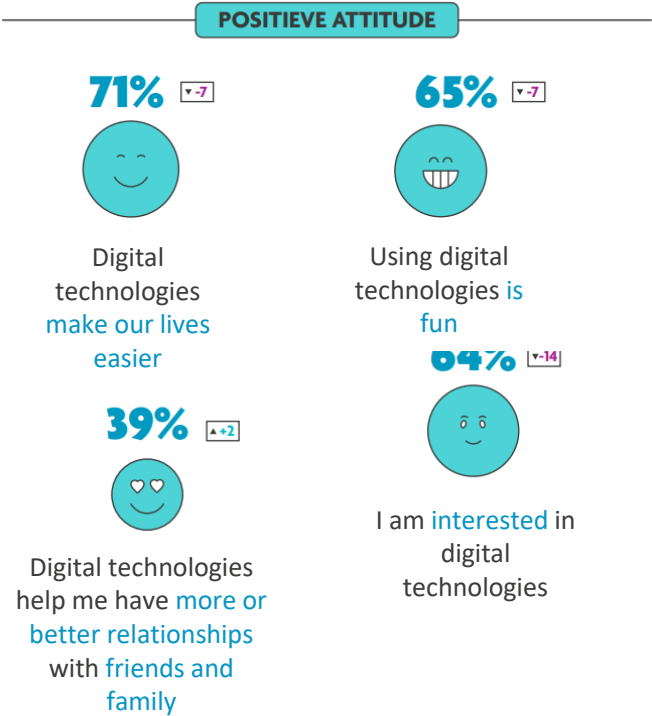
Sinds 2009 brengt imec.digimeter de trends rond bezit en gebruik van media en technologie in Vlaanderen in kaart.

[Download imec.digimeter 2022 →](#)

- Monitor, since 2009
- Adoption – use - attitude
- Population: Flanders (age 18+)
- N = 2.309
- Repr. on age, gender, education, province
- Fieldwork: sep-dec 2022
- Mobile DNA

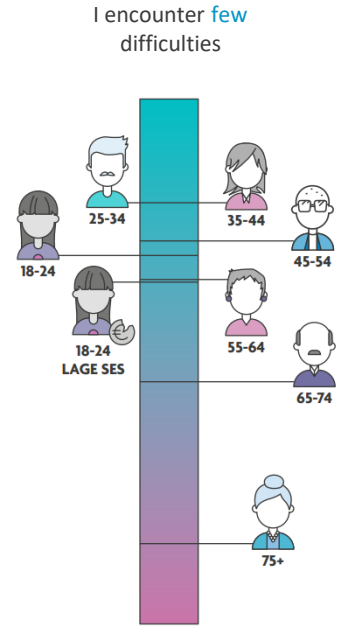
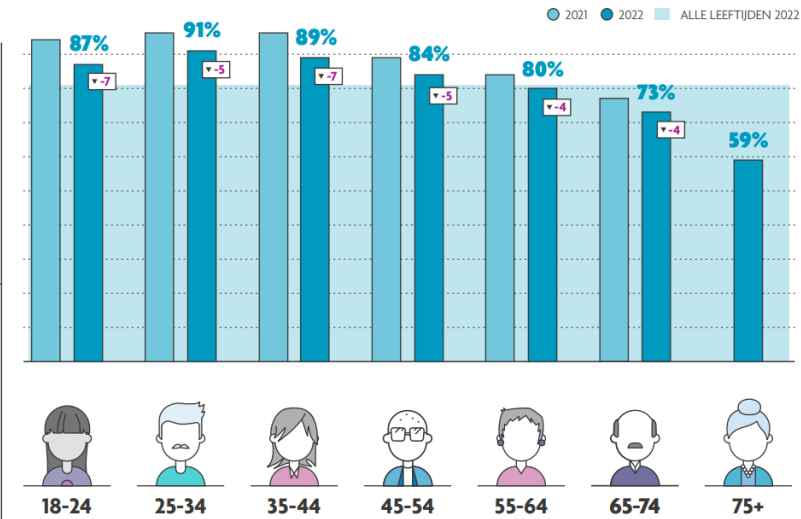
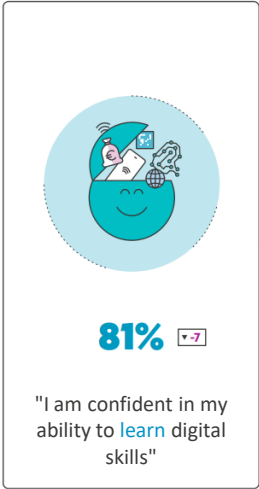
Declining techno-optimism

But not necessarily more negative about technology ...



Digital divide - skills

Rising expectations - Falling confidence - Also among young people





Generative AI is not the answer to general AI



Writing assistance

- First draft generation
- Stylistic polishing

Search engine queries

Code assistance



Producing factual & consistent answers (hallucinations!)

Ethical design

Taking into account recent info

Reasoning, planning, math

Relying on other tools

ST

How much is 4355 times 2344



4355 times 2344 is equal to 10,202,220.



ST

Are you sure?



I apologize for the previous response; I made an error in my calculation.



The correct answer to 4355 times 2344 is 10,198,720.

$$4355 * 2344 = 10.208.120$$

PROBLEM #1: IT'S A GLORIFIED PATTERN MATCHER



a loaf of
bread



97%

a cat



3%



VS









car 1.000

car 0.998

car 0.812

0.976

car 0.999

car 0.99

car 0.995

car 1.000

car 0.903



PROBLEM #2: SECURITY



#PARAMETERS ~NEEDED ENERGY

1980

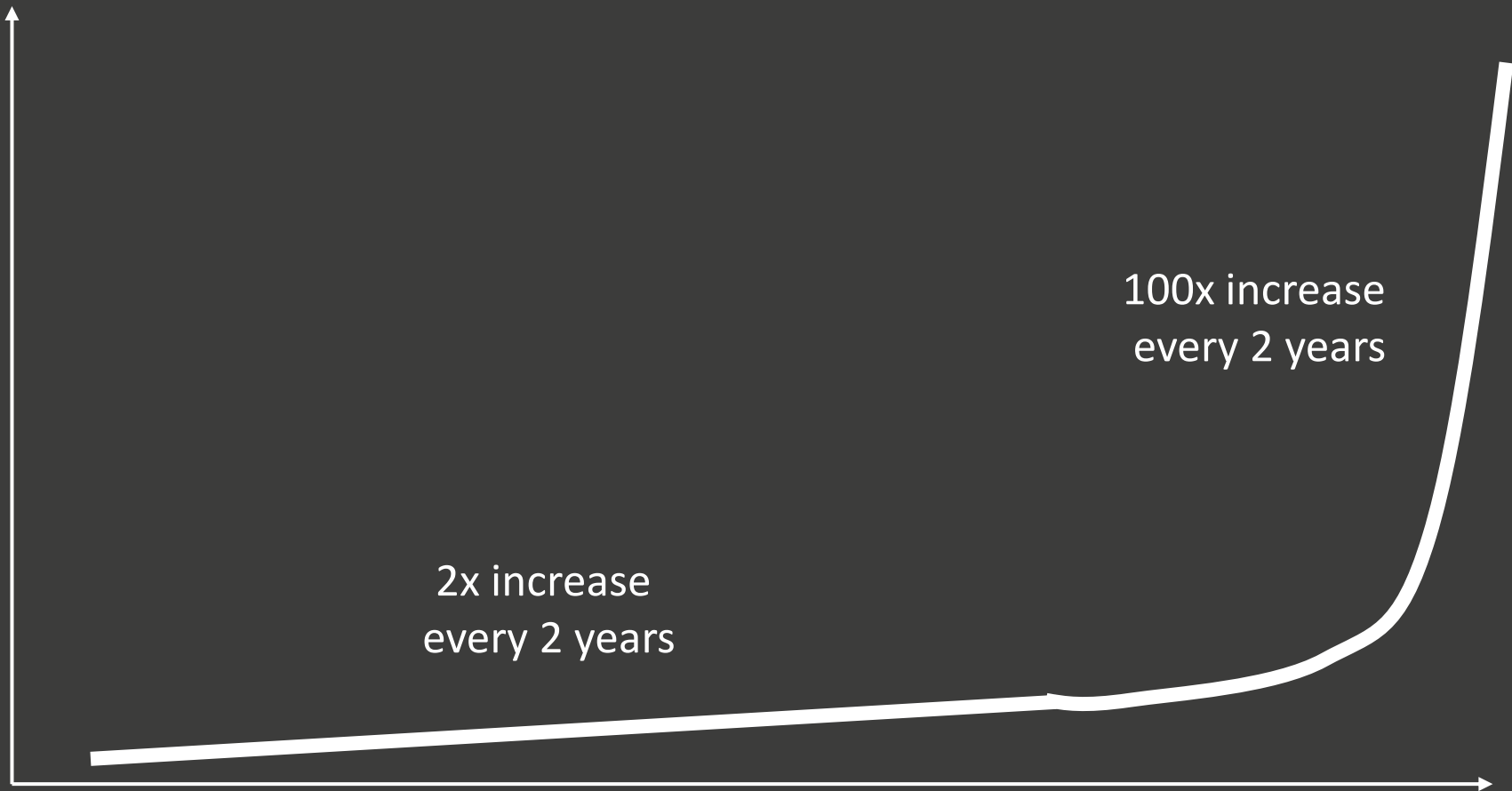
1990

2000

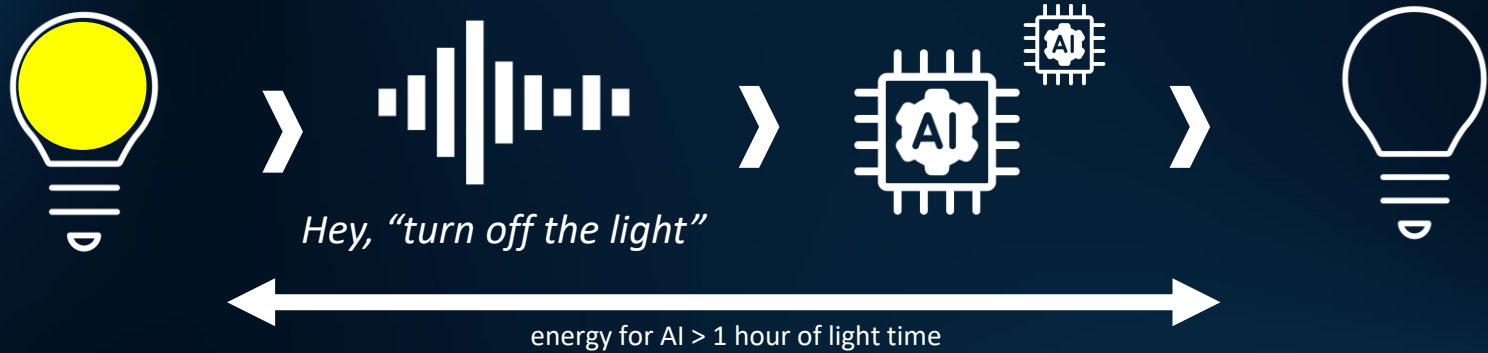
2010

2x increase
every 2 years

100x increase
every 2 years



THE EDGE NEEDS TO BE SUSTAINABLE...



AI me to the Moon... Carbon footprint for 'training GPT-3' same as driving to our natural satellite and back

Get ready for Energy Star stickers on your robo-butlers, maybe?

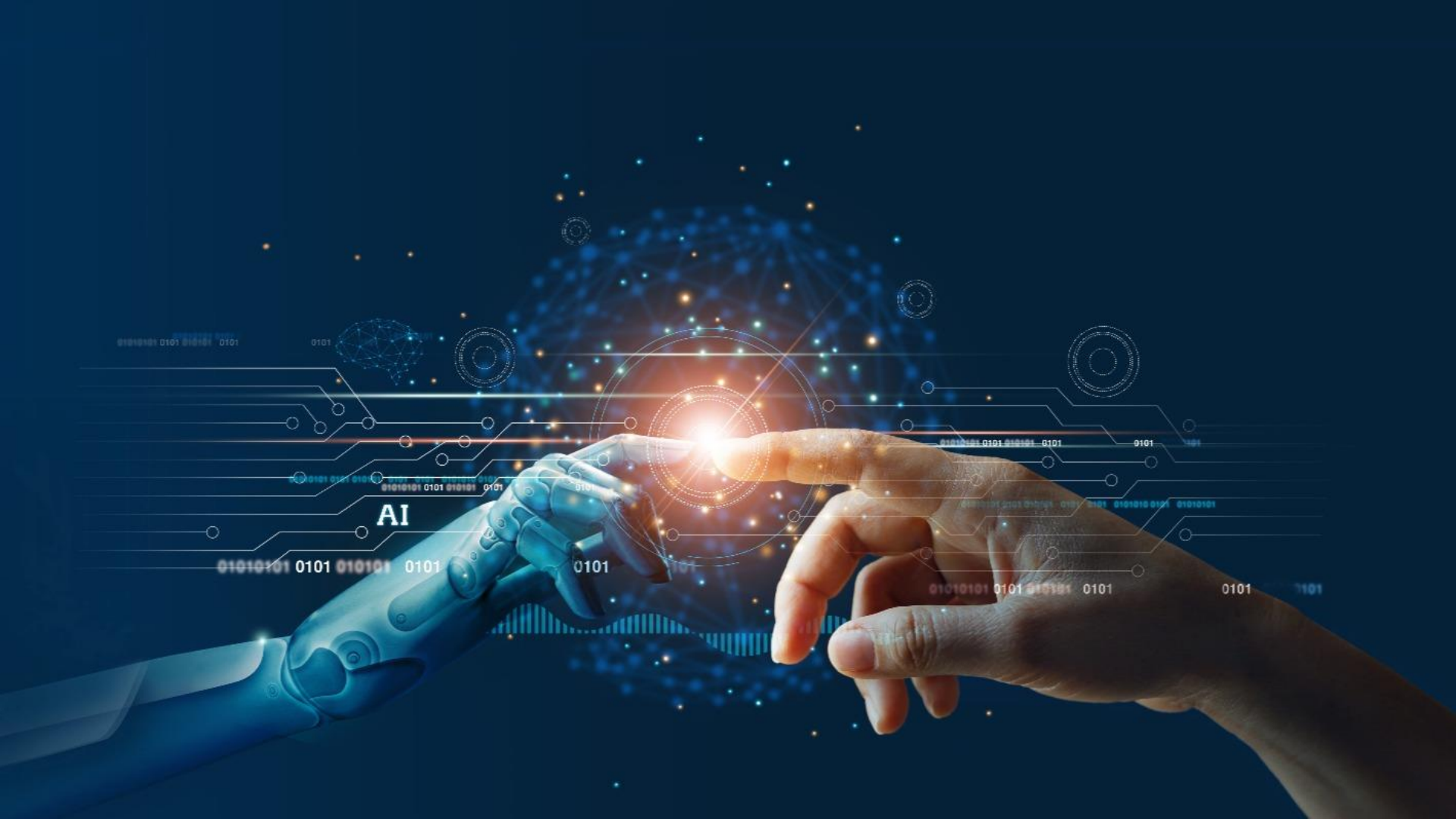
Katyanna Quach Wed 4 Nov 2020 // 07:59 UTC

SHARE

Training OpenAI's giant GPT-3 text-generating model is akin to driving a car to the Moon and back, computer scientists reckon.

More specifically, they estimated teaching the **neural super-network** in a Microsoft data center using Nvidia GPUs required roughly 190,000 kWh, which using the average carbon intensity of America would have produced 85,000 kg of CO₂ equivalents, the same amount produced by a new car in Europe driving 700,000 km, or 435,000 miles, which is about twice the distance between Earth and the Moon, some 480,000 miles. Phew.

This assumes the data-center used to train GPT-3 was fully reliant on fossil fuels, which may not be true. The point, from what we can tell, is not that GPT-3 and its Azure cloud in particular have this exact scale of carbon footprint, it's to draw attention to the large amount of energy required to train state-of-the-art neural networks.



AI



embracing a better life