Navigating the AI Revolution: Opportunities, Risks, and Strategic Leadership

Prof. Dr. Win Htein Win

Founder & President (GUSTO College)

Vice President (Myanmar Computer Professionals Association)

Prof. Dr. Win Htein Win's brief bio

- Prof. Dr. Win Htein Win is a distinguished professor, renowned for his expertise in innovation, technology, and the digital economy. As a visiting professor, Dr. Win was invited to speak **at internationally renowned institutions** such as the Asian Institute of Management (AIM) and Chulalongkorn University, among others.

- His remarkable academic record includes **five notable international scholarly achievements**, among which are **two scholarships for IT awarded by the Japanese government**, alongside distinguished **Young Leaders Program (YLP) scholarship** for his MBA. Furthermore, he has been honored with prestigious awards such as the Young Business Leaders Initiative award from the **ASIA New Zealand Foundation** and a distinguished accolade from the **Israel Agency for International Development**.

- He holds a **Ph.D. in Human Resource Development** from NIDA, Thailand, and has also completed executive programs at prestigious institutions such as Saïd Business School**, Oxford University**, and **Auckland University**. His diverse academic pursuits include an **MBA from Hitotsubashi University, Japan**, and specialized training in innovation from **Israel**. Additionally, he holds **a B.E in Electronics from the Mandalay Institute of Technology**.

Experience across wide spectrum of business industries

- Founder and President @GUSTO College
- Managing Director @GUSTO Technology Company Limited
- Investor and Board of Directors @iSGM (JV company with NEC Group, Japan)
- Investor and Board of Directors @Myanmar Agribusiness Public Corporation (MAPCO)
- Ex. Board of Directors at Myanmar National Telecom Holdings (MNTH)

Sasin School of Management, a graduate business school under Chulalongkorn University, holds prestigious dual accreditation from both AACSB and EQUIS.

Although based in Bangkok, Thailand, its MBA programs are highly competitive with internationally renowned business schools.

The Executive MBA program, priced at USD 70,000, reflects the exceptional quality of education and global standards Sasin offers.

Bitcoin Innovation Decoded:
Exploring Economic &
Technological Implications for
Business Leaders
Sasin
School of Management
Win Htein Win, PhD
Founder & President, GUSTO University
02/05/2024
Pyae Phyo Aung
Prof. Dr. Win
IT Record
Luke Phillips (M...
Harry Jay Cavite

Sasin
AUAN

As a Visiting Professor, I delivered a lecture on the economic and technological innovations underpinning the Bitcoin protocol at AIM.

The Asian Institute of Management (AIM) is a management school and research institution in the Philippines. Established in partnership with Harvard Business School, it is one of the few business schools in Asia to be internationally accredited with the Association to Advance Collegiate Schools of Business.

SPEAKER
Dr. Win Htein Win
Founder & President
Gusto University
ASIAN
INSTITU
MANAGE

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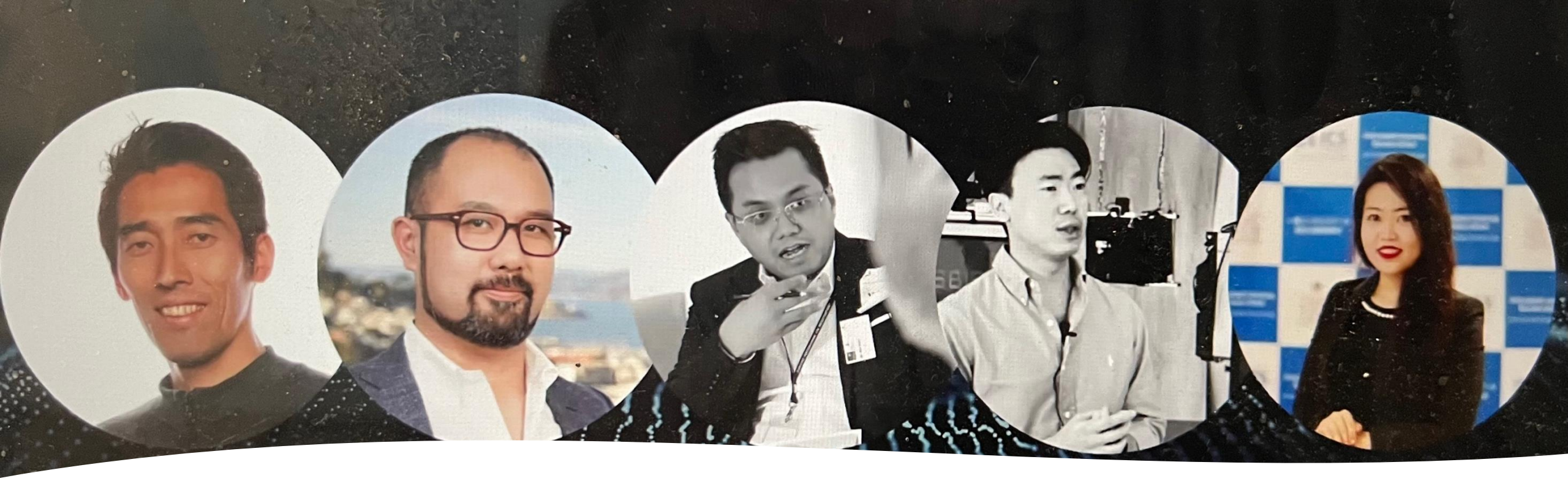
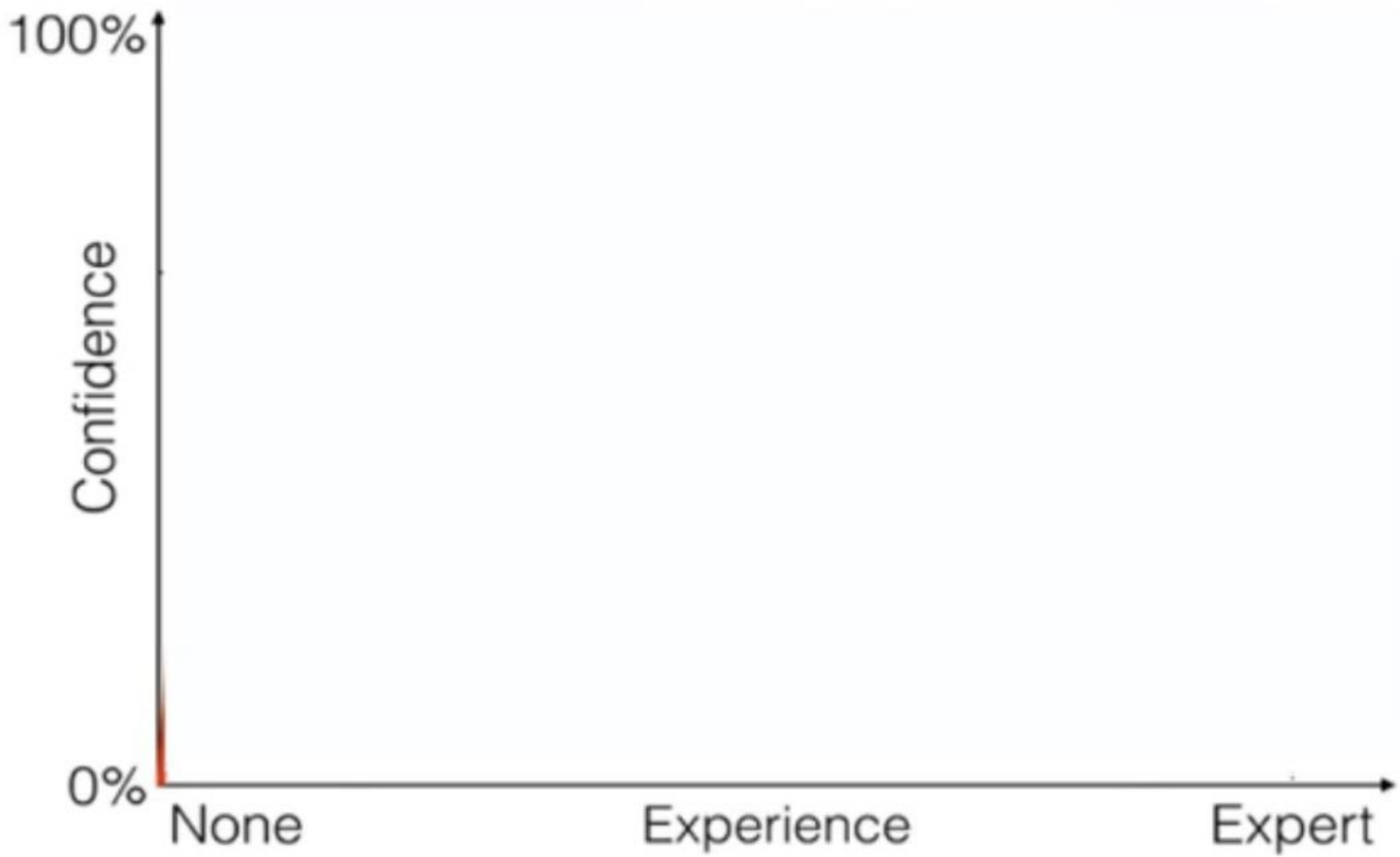
Presenter View



Transformation in the Age of Generative AI

- At ICS, Hitotsubashi University, the #1 business school in Japan

Dunning-Kruger Effect



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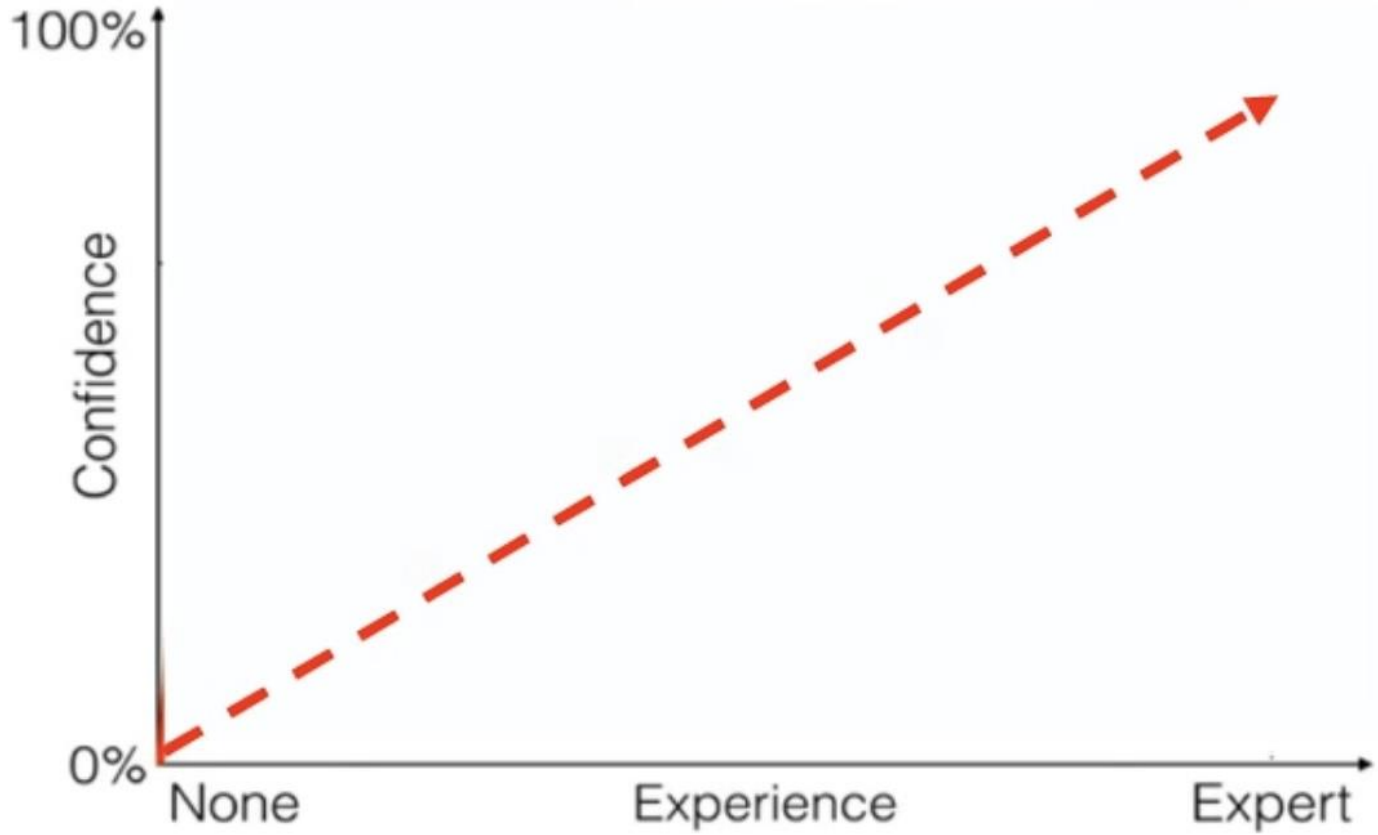
Dunning-Kruger Effect



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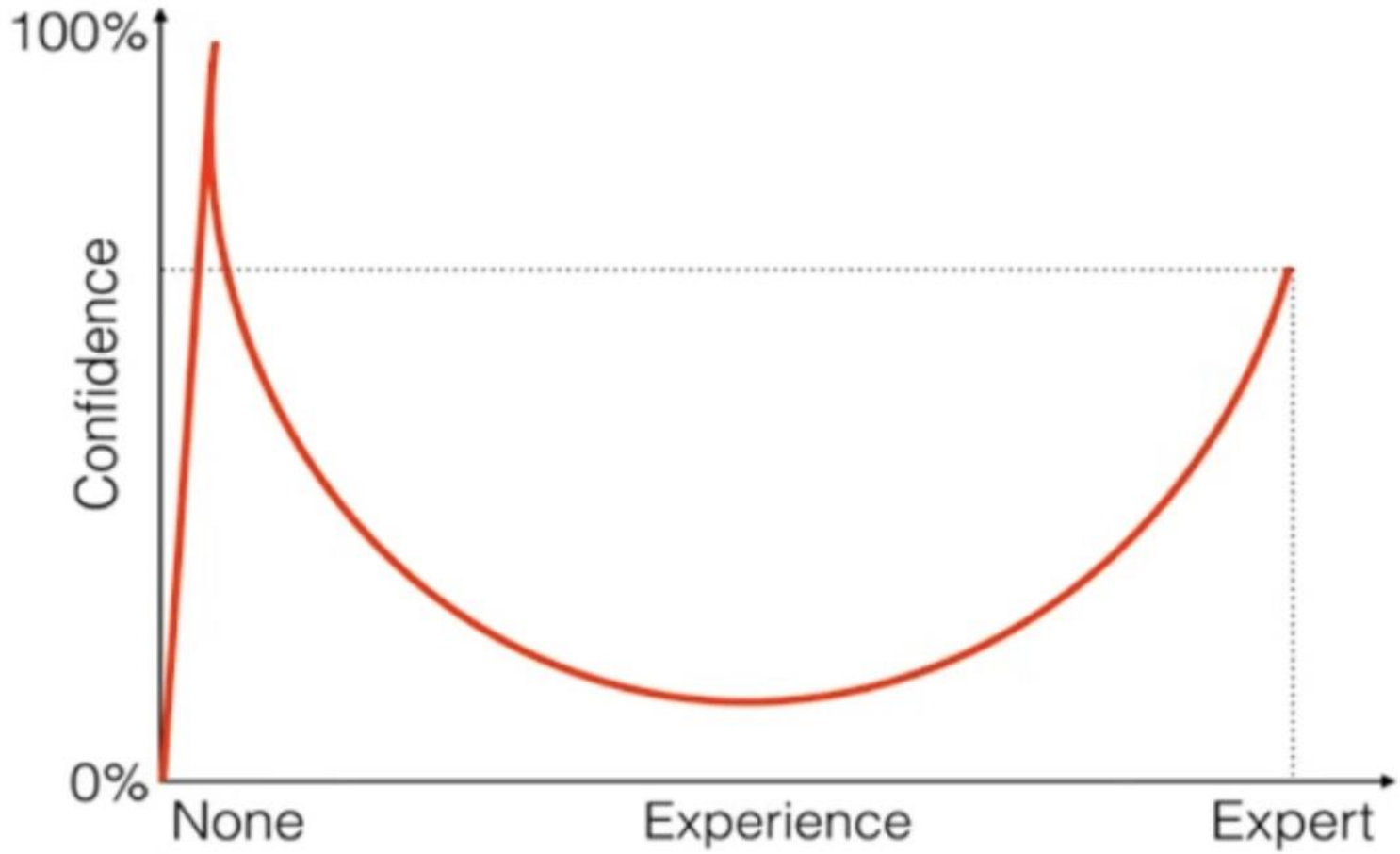
Dunning-Kruger Effect



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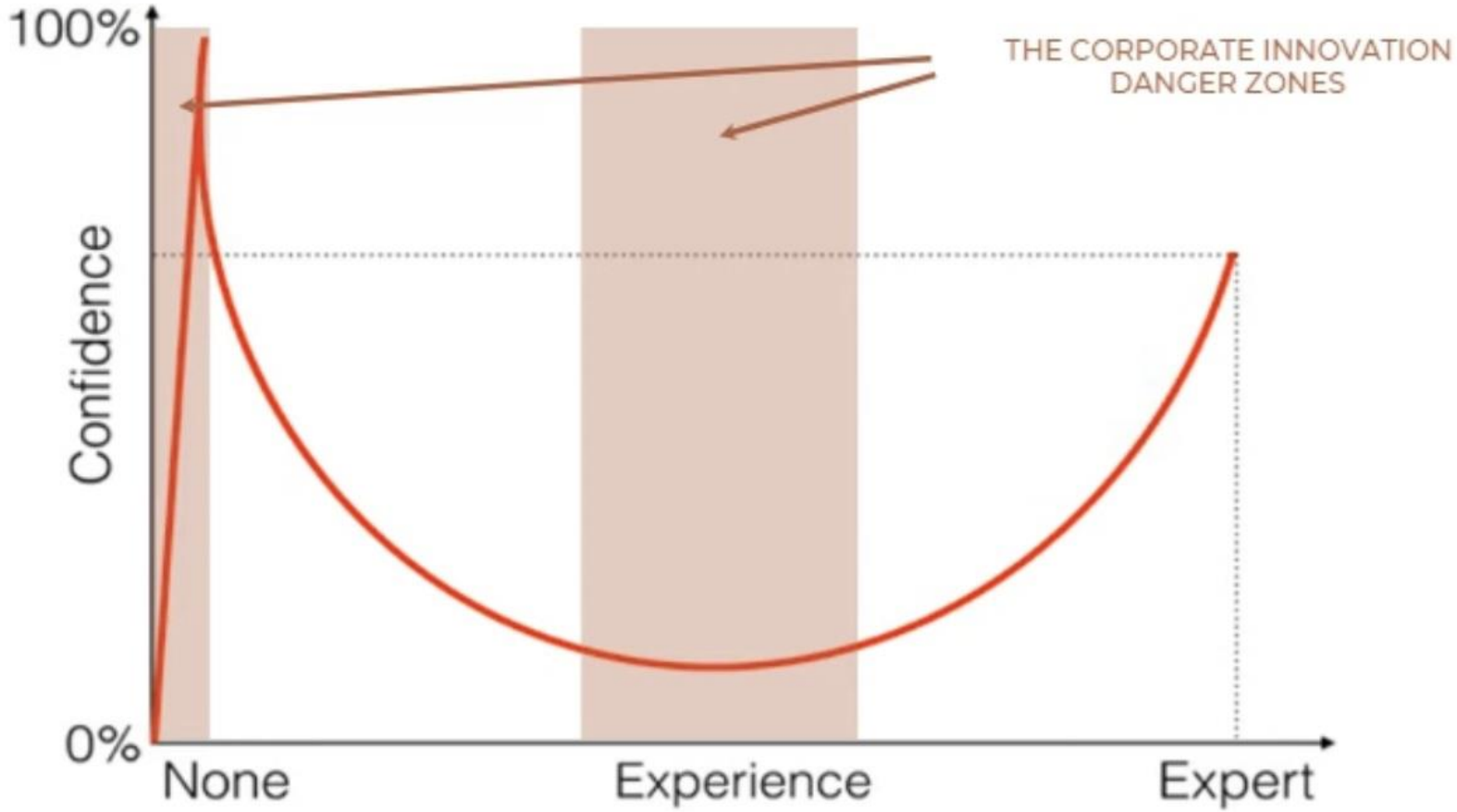
Dunning-Kruger Effect



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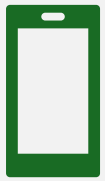
Since the early 1900

Three Game Changing Technology Platforms evolving at the same time.



Telephone

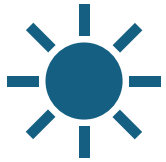
Electricity

Automobile

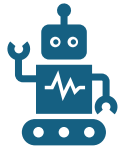
Currently, five innovation platforms are advancing simultaneously.

Artificial Intelligence

Public Blockchain



Energy storage



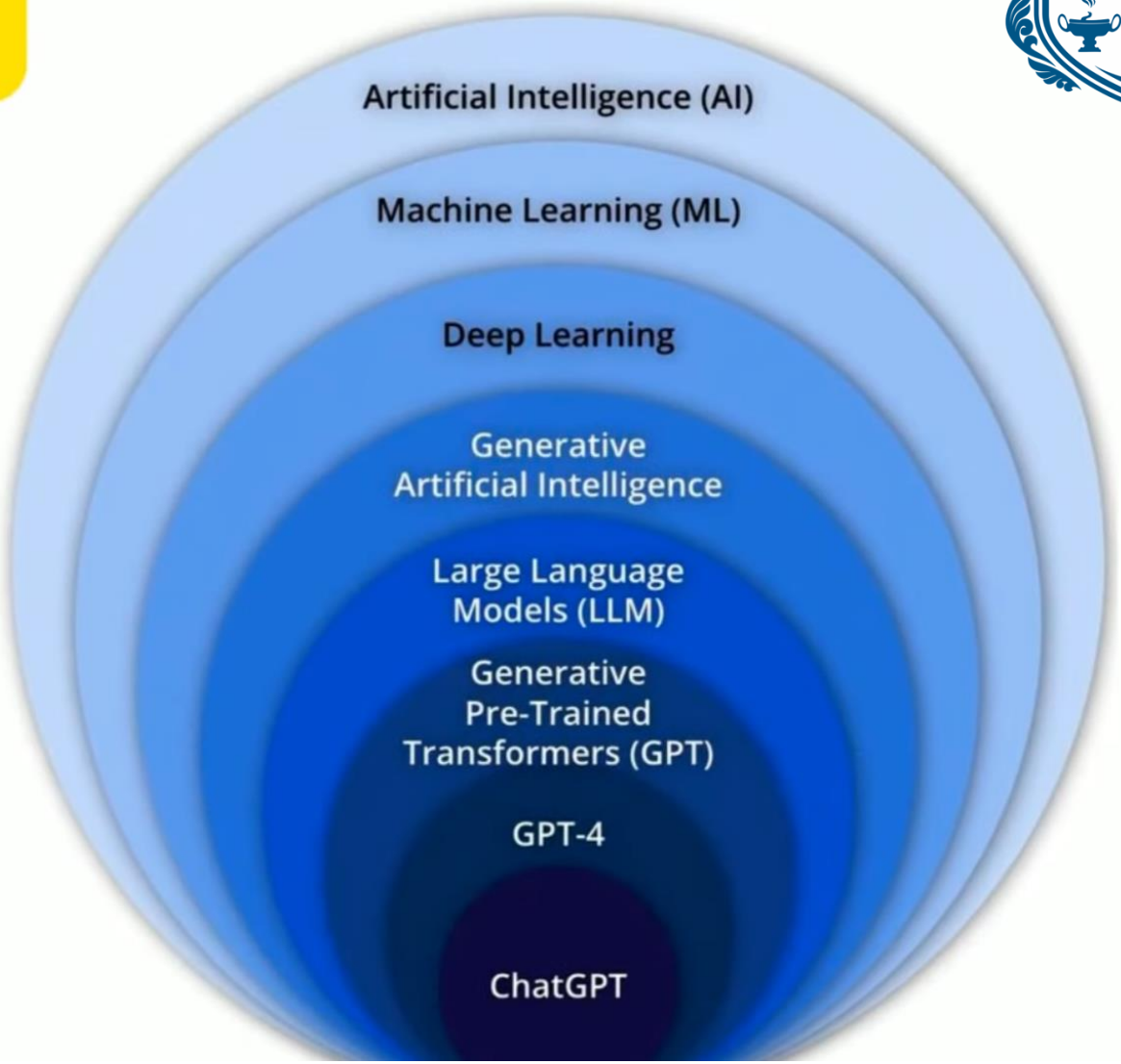
Robotics

Multiomic Sequencing

The AI Layers

GPT: It's a family of AI models built by OpenAI.

GPT is a deep learning model that uses transformer architecture to generate human-like text.



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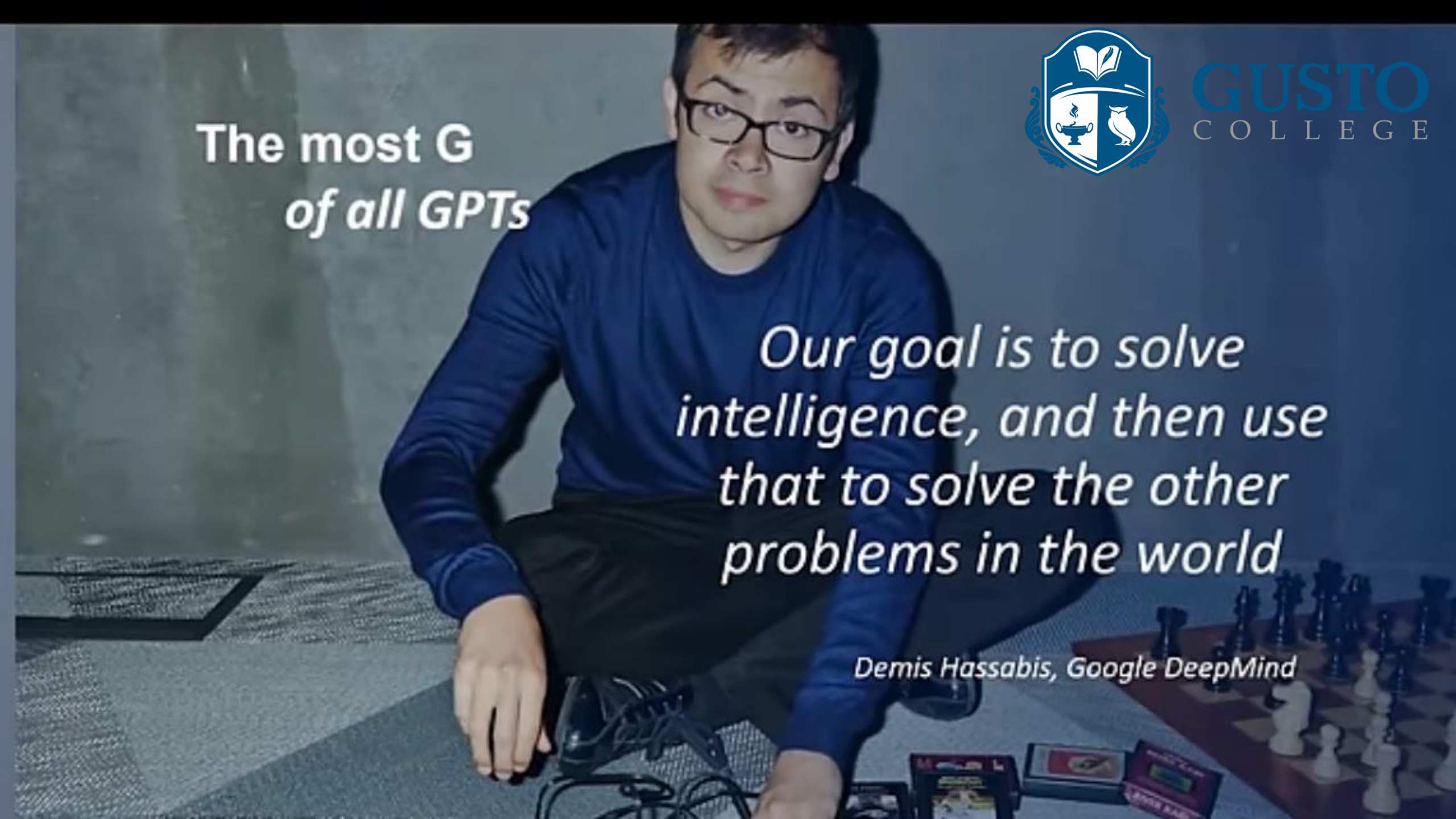
AI is a GPT.

General Purpose Technology.

AI is the most important technology of our era.

Lke Steam Engine, Electricity, etc


The most G
of all GPTs
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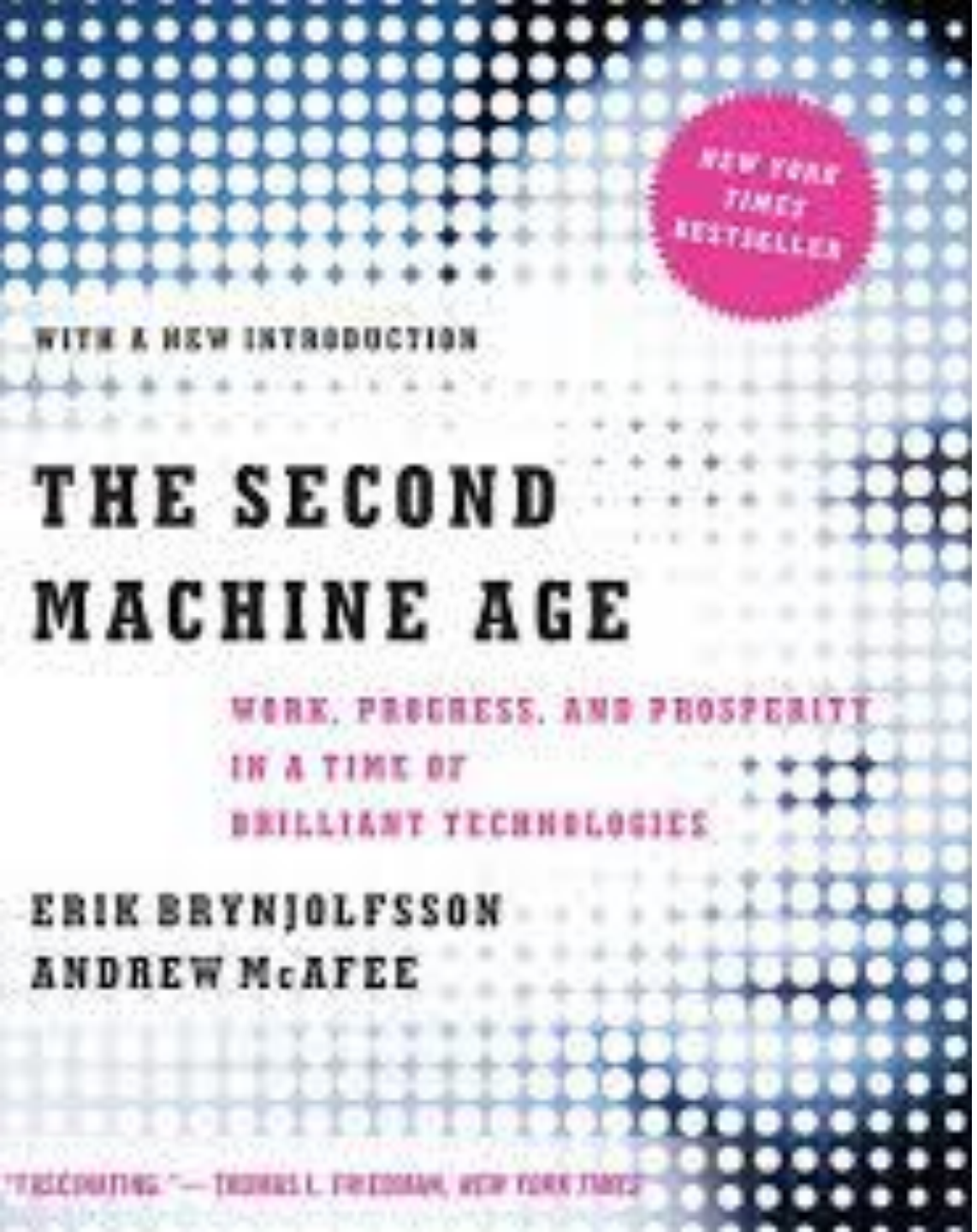
Our goal is to solve intelligence, and then use that to solve the other problems in the world
Demis Hassabis, Google DeepMind



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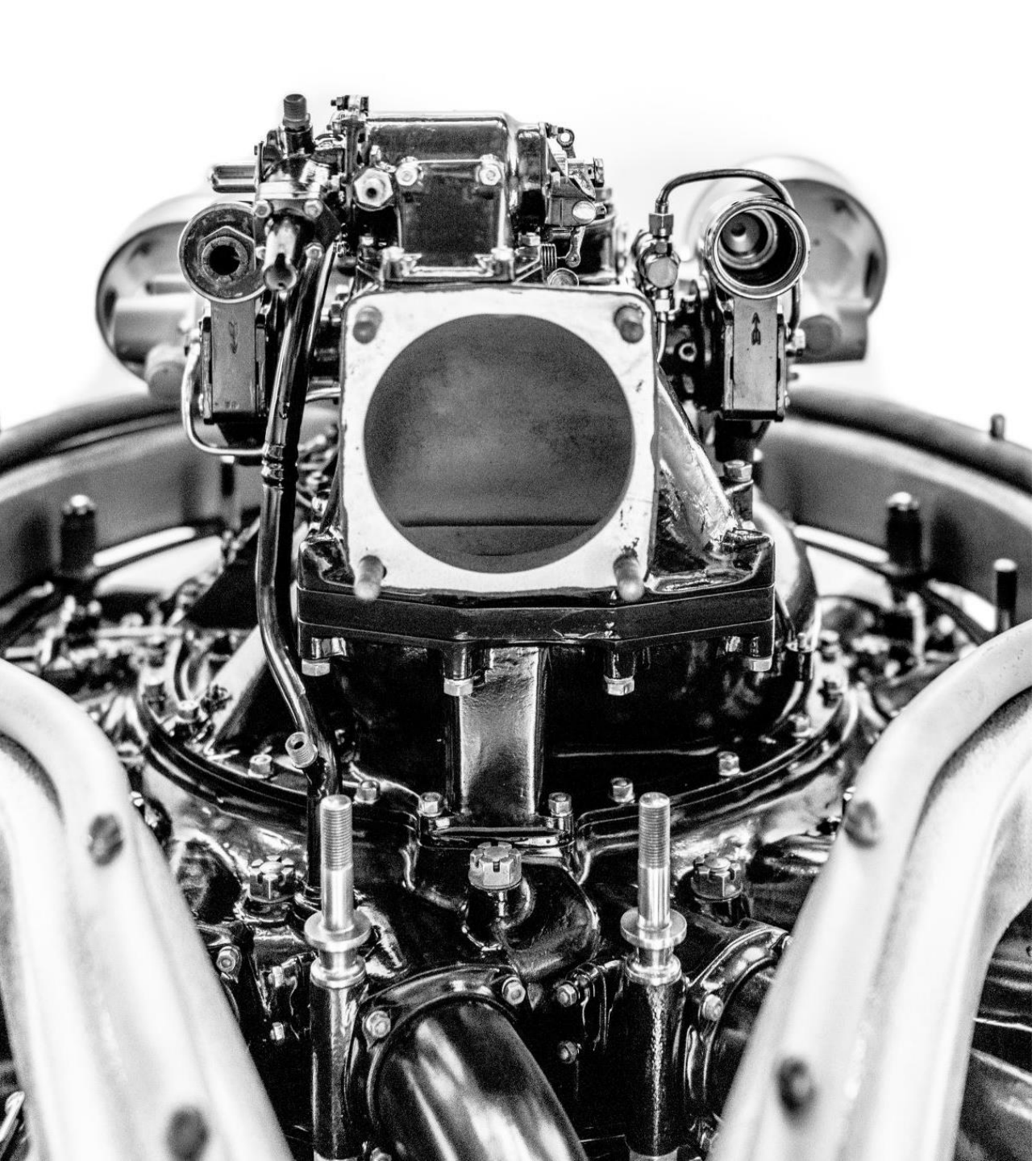
The Second Machine Age:
Work, Progress, and Prosperity in a Time of Brilliant Technologies

by Erik Brynjolfsson and Andrew McAfee in 2014.



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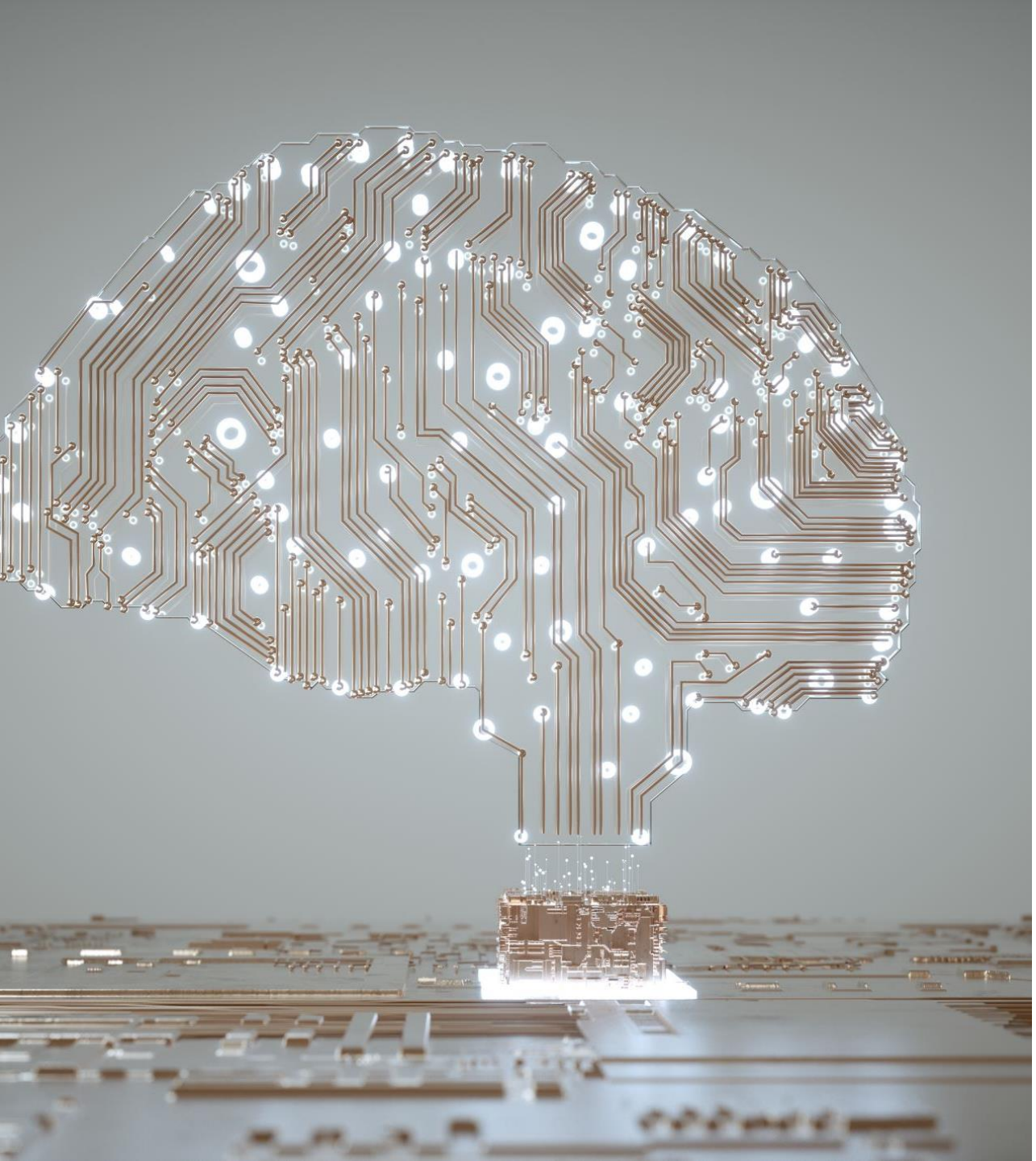
The First Machine Age,

- Brynjolfsson and McAfee argue that the steam engine replaced ‘human muscle’ power and vastly accelerated industrial development- from trains to factories.
- Using the steam engine to perform tasks with more strength, speed and efficiency… and not get tired, changed economies.



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The Second Machine Age

- They argue Compute power replaces ‘human brain’ power, and vastly accelerated technological development- from algorithmic trading to autonomous cars.
- Using technology to conduct analyze, calculate, and interpret meaning from data sources… and make logical decisions are are affecting economies and human capital.

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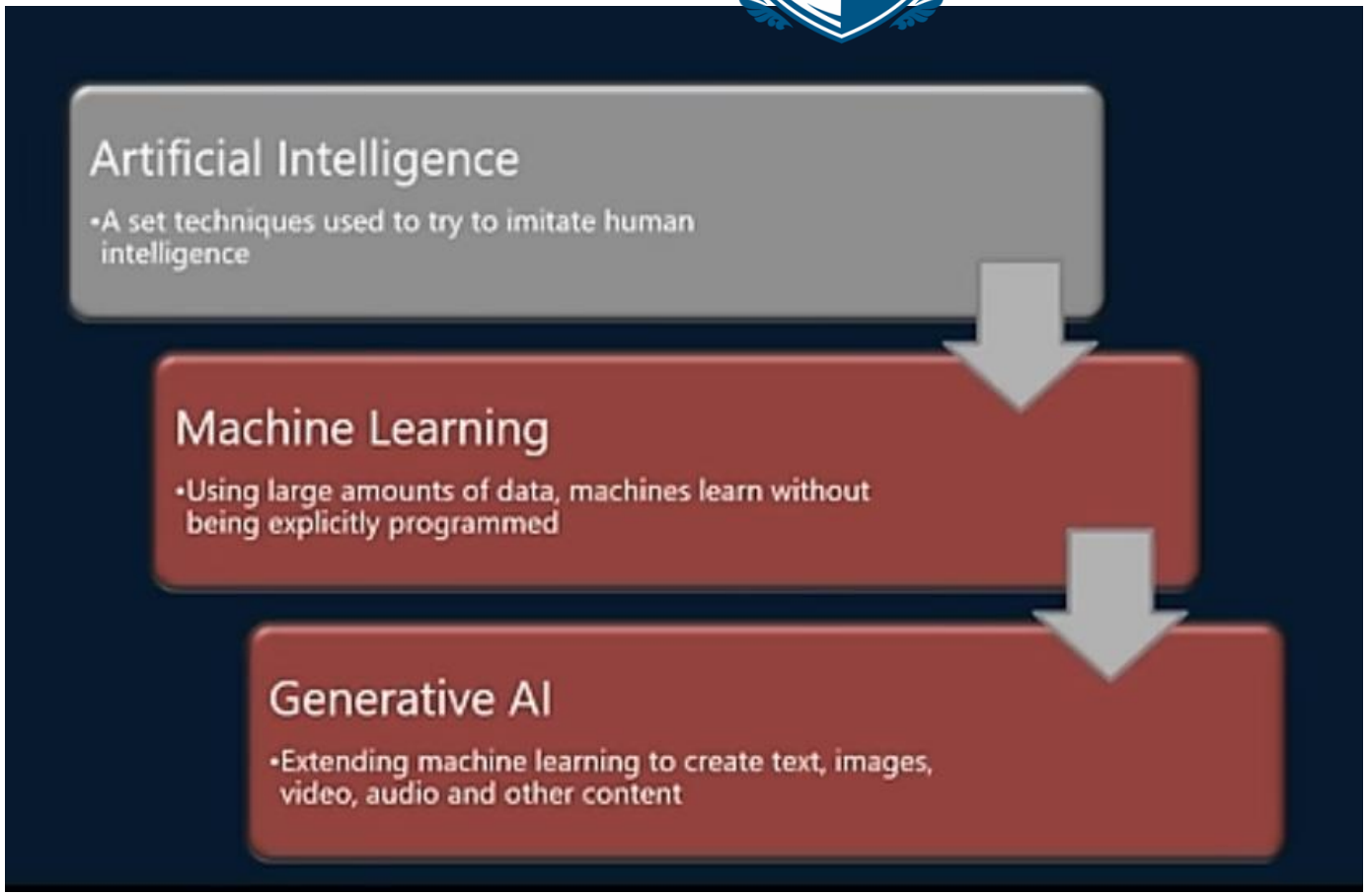
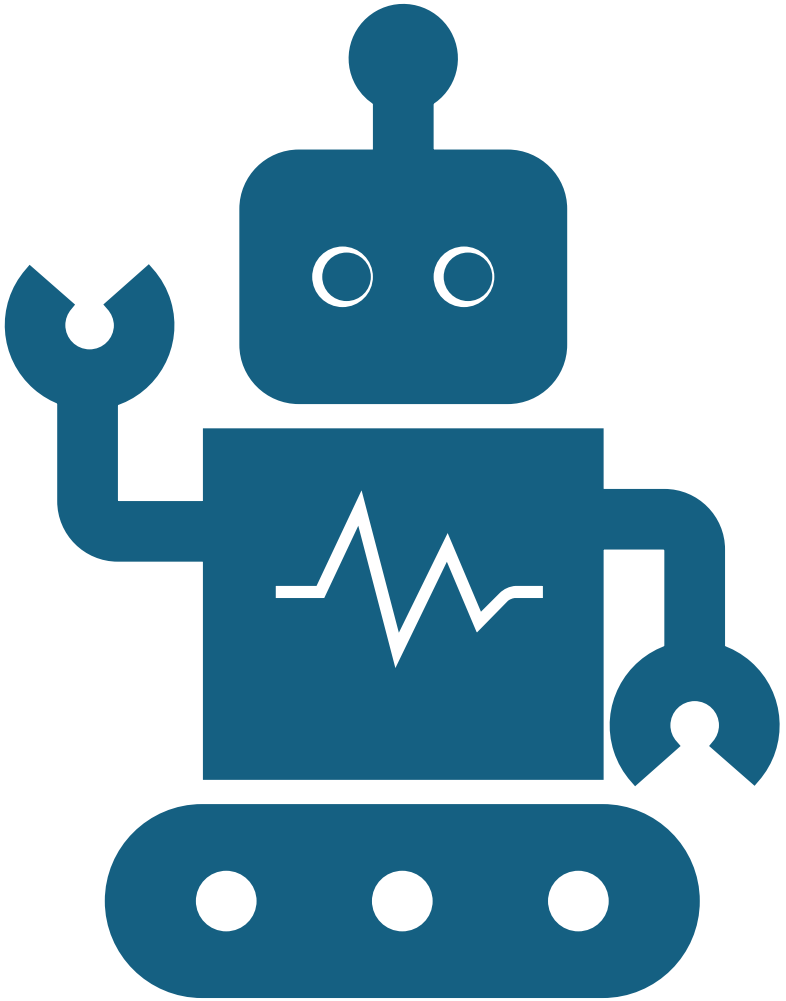
The third wave of the second machine age

Machine that create





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Generative AI is evolving rapidly, driving advancements in socio-economic development.

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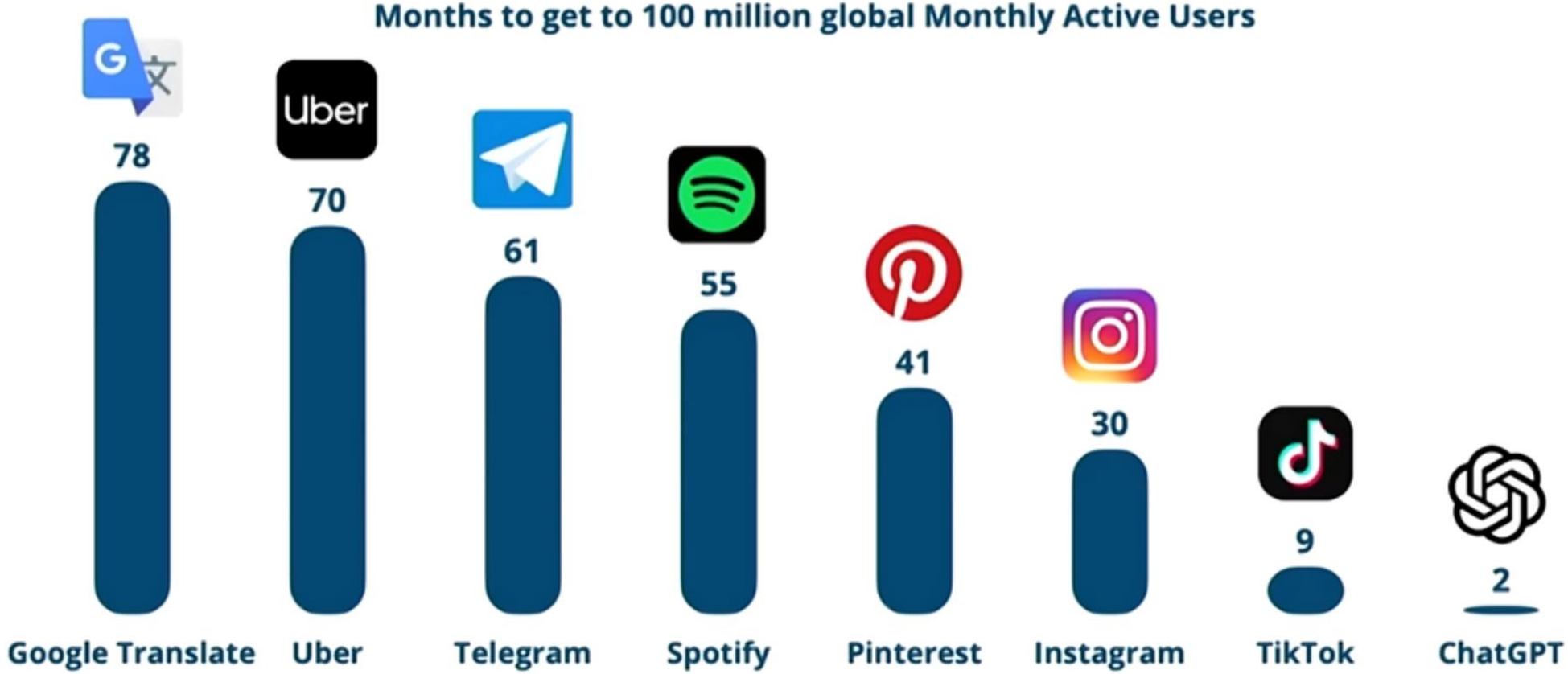
Time to Reach 100M Users

Months to get to 100 million global Monthly Active Users

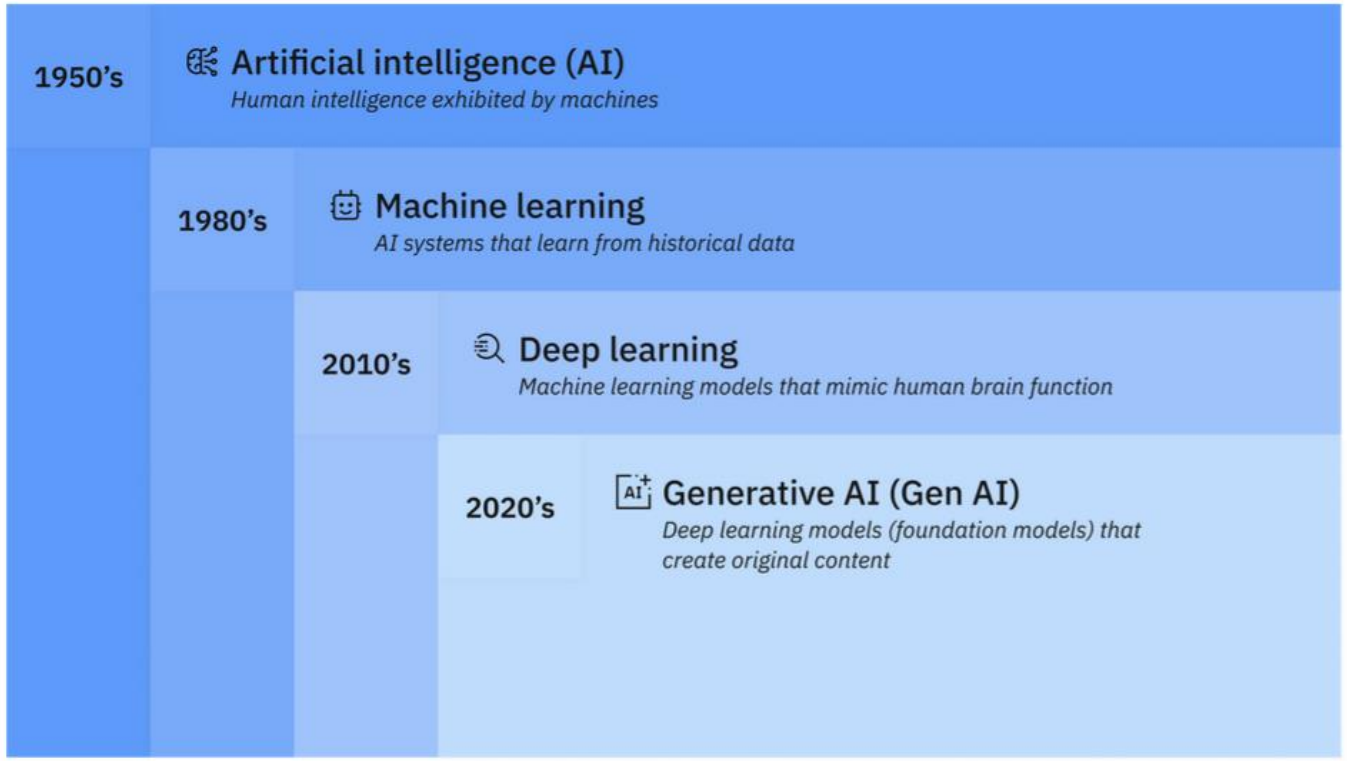


Source: UBS / Yahoo Finance

@EconomyApp

APP ECONOMY **INSIGHTS**

Generation of AI, ML, DL, Gen AI



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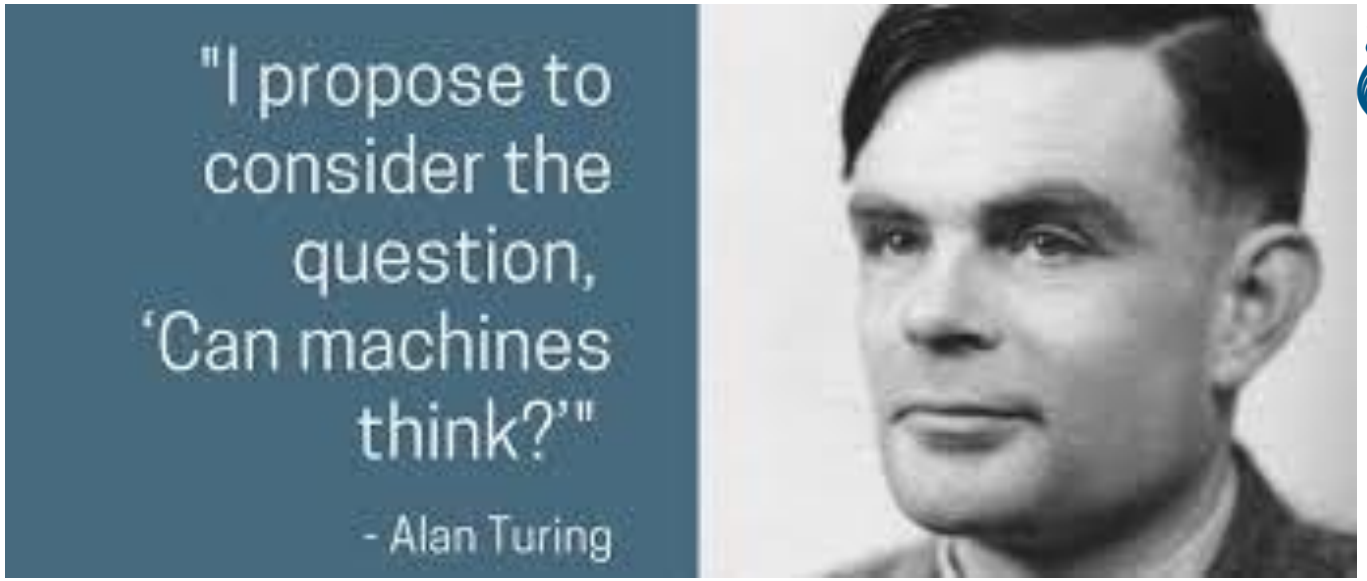

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Can Machine Think?

1950 paper, Computing Machinery and Intelligence.

Machine Learning

Goal is to learn a mapping from inputs to outputs

Simplest technique is supervised learning

Uses training data

Machine Learning

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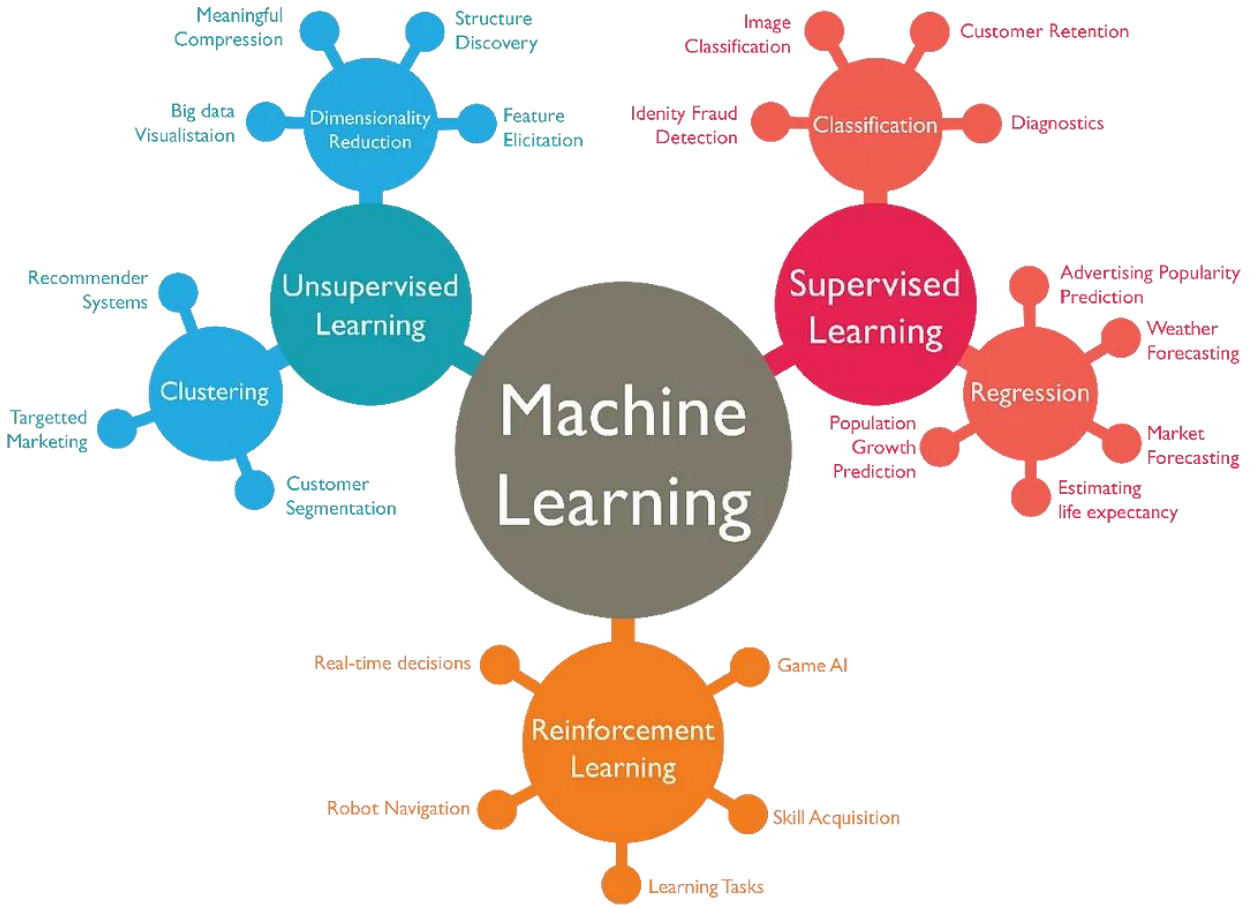
- Supervised Learning
- Unsupervised Learning
- Reinforcement Learning



Machine Learning is basically classification task

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Just this kind of task on its own

is incredibly powerful.

Exactly this technology can be used, for example, to recognize tumuors on x-ray scans.

Or abnormalities on ultrasound scans and a range of different tasks.

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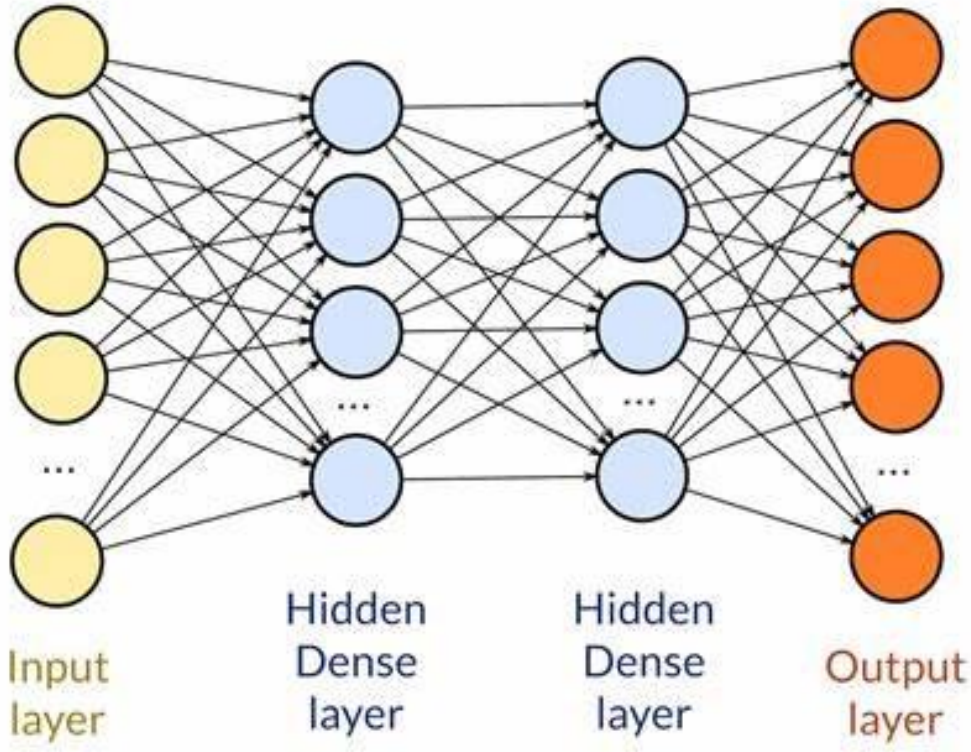
Deep Learning (Neural Networks)



Why Deep Learning?

Hand engineered features are time consuming, brittle, and not scalable in practice

Can we learn the **underlying features** directly from data?

Low Level Features

Lines & Edges

Mid Level Features

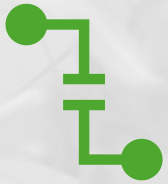
Eyes & Nose & Ears

High Level Features

Facial Structure

Neural Networks

Look at an animal brain or nervous system under a microscope, and you'll find that it contains **enormous numbers of nerve cells called neurons**.



And those nerve cells are connected to one another in vast networks.

is something like 86 billion neurons in the human brain.

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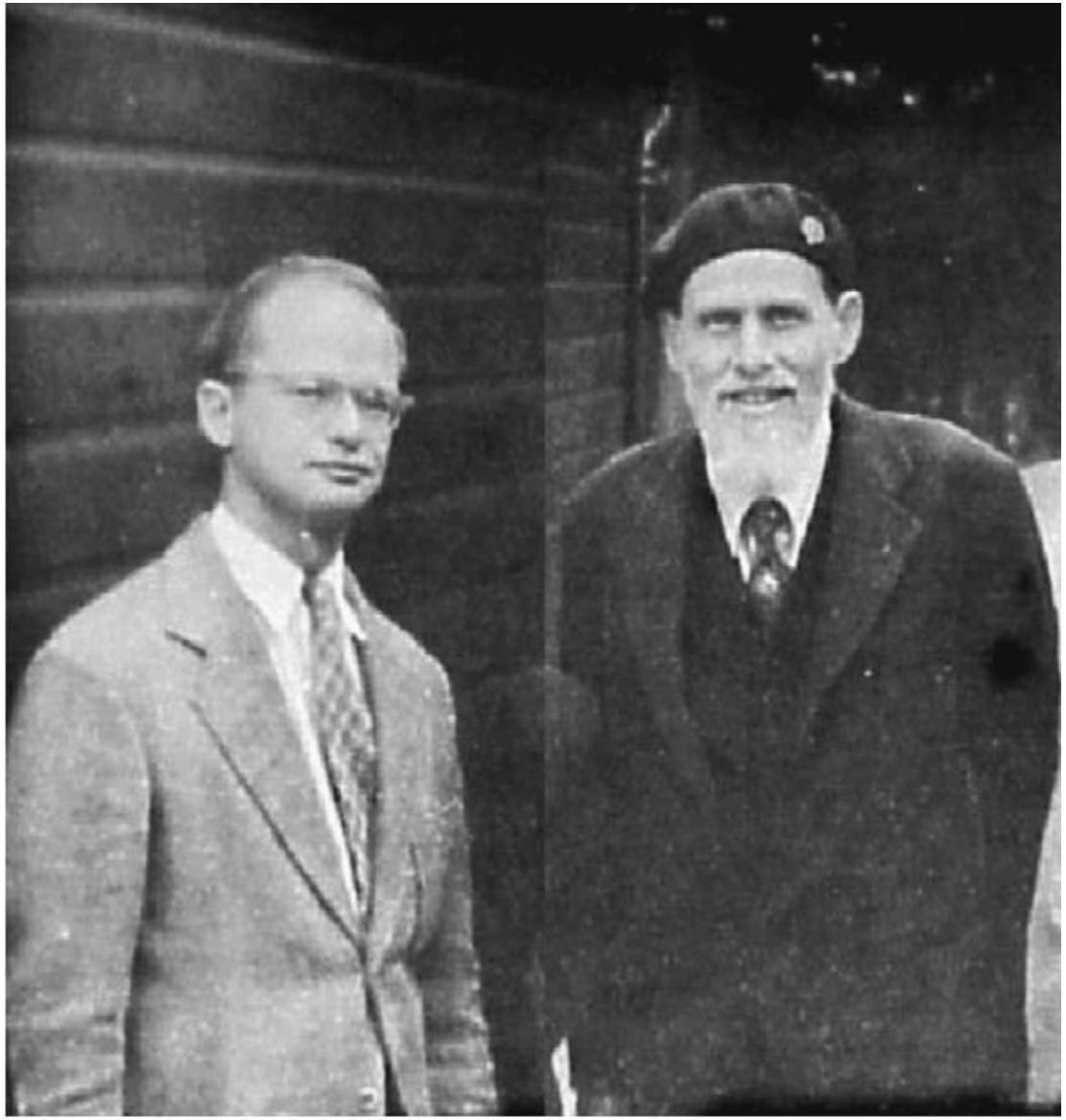
The idea goes back to the 1940s,



Researcher McCulloch & Pitts Publish the First Mathematical Model of a Neural Network

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One particular academic paper suddenly seems to be very, very well-suited in 2017/1028

Attention Is All You Need

Ashish Vaswani* Google Brain avaswani@google.com

Noam Shazeer* Google Brain noam@google.com

Niki Parmar* Google Research nikip@google.com

Jakob Uszkoreit* Google Research usz@google.com

Llion Jones* Google Research llion@google.com

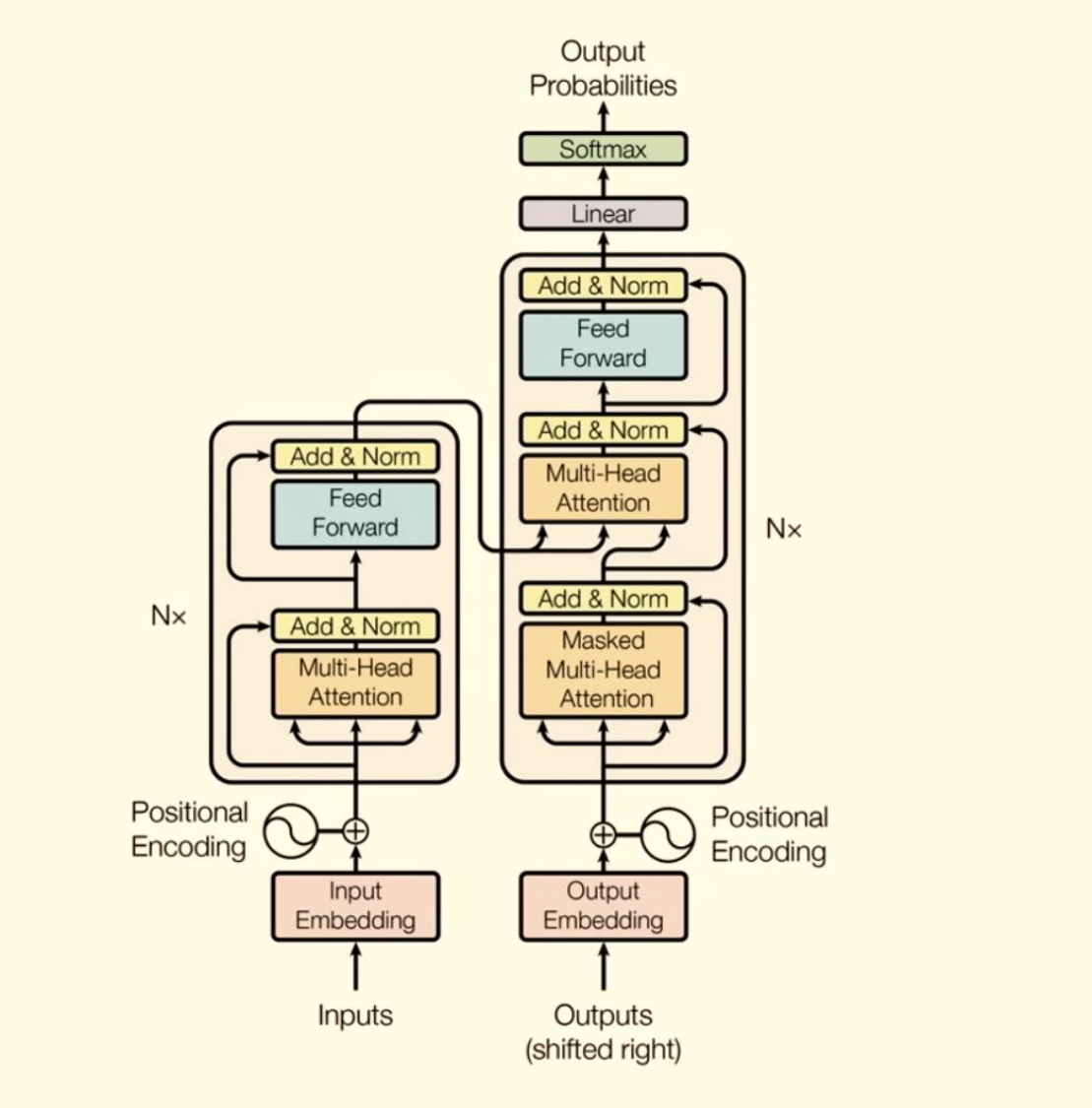
Aidan N. Gomez* † University of Toronto aidan@cs.toronto.edu

Łukasz Kaiser* Google Brain lukaszkaiser@google.com

Illia Polosukhin* ‡ illia.polosukhin@gmail.com

Abstract

The dominant sequence transduction models are based on complex recurrent or convolutional neural networks that include an encoder and a decoder. The best performing models also connect the encoder and decoder through an attention mechanism. We propose a new simple network architecture, the Transformer, based solely on attention mechanisms, dispensing with recurrence and convolutions entirely. Experiments on two machine translation tasks show these models to be superior in quality while being more parallelizable and requiring significantly less time to train. Our model achieves 28.4 BLEU on the WMT 2014 English-to-German translation task, improving over the existing best results, including ensembles, by over 2 BLEU. On the WMT 2014 English-to-French translation task, our model establishes a new single-model state-of-the-art BLEU score of 41.8 after training for 3.5 days on eight GPUs, a small fraction of the training costs of the best models from the literature. We show that the Transformer generalizes well to other tasks by applying it successfully to English constituency parsing both with large and limited training data.



- Transformer Architecture
  - Specialized architecture for **token prediction**
  - Key Innovation:
    - Attention mechanisms
  - Not just a big neural net

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GPT-3 from Open AI (2020)

- 175 billion parameters
  - 10 million times larger than 1980s
- Training data: 500 billion words
- A large language model – main task text generation
  - Think of it as an incredibly powerful auto-complete

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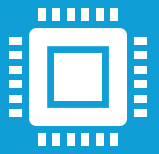
Why did AI become possible in 2000?

There was some **scientific advances** - what's called deep learning.

There was the availability of **big data –** (and you need data to be able to configure these neural networks.)



And, finally, to configure these neural networks, you need **lots of computer power**.

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Some Issues

- LLMs get things wrong a lot
  - They aren’t trying to tell you the truth!
- Bias & Toxicity
- Copyright and intellectural property
- Interpolation vs extrapolation

Tesla full self-driving mode

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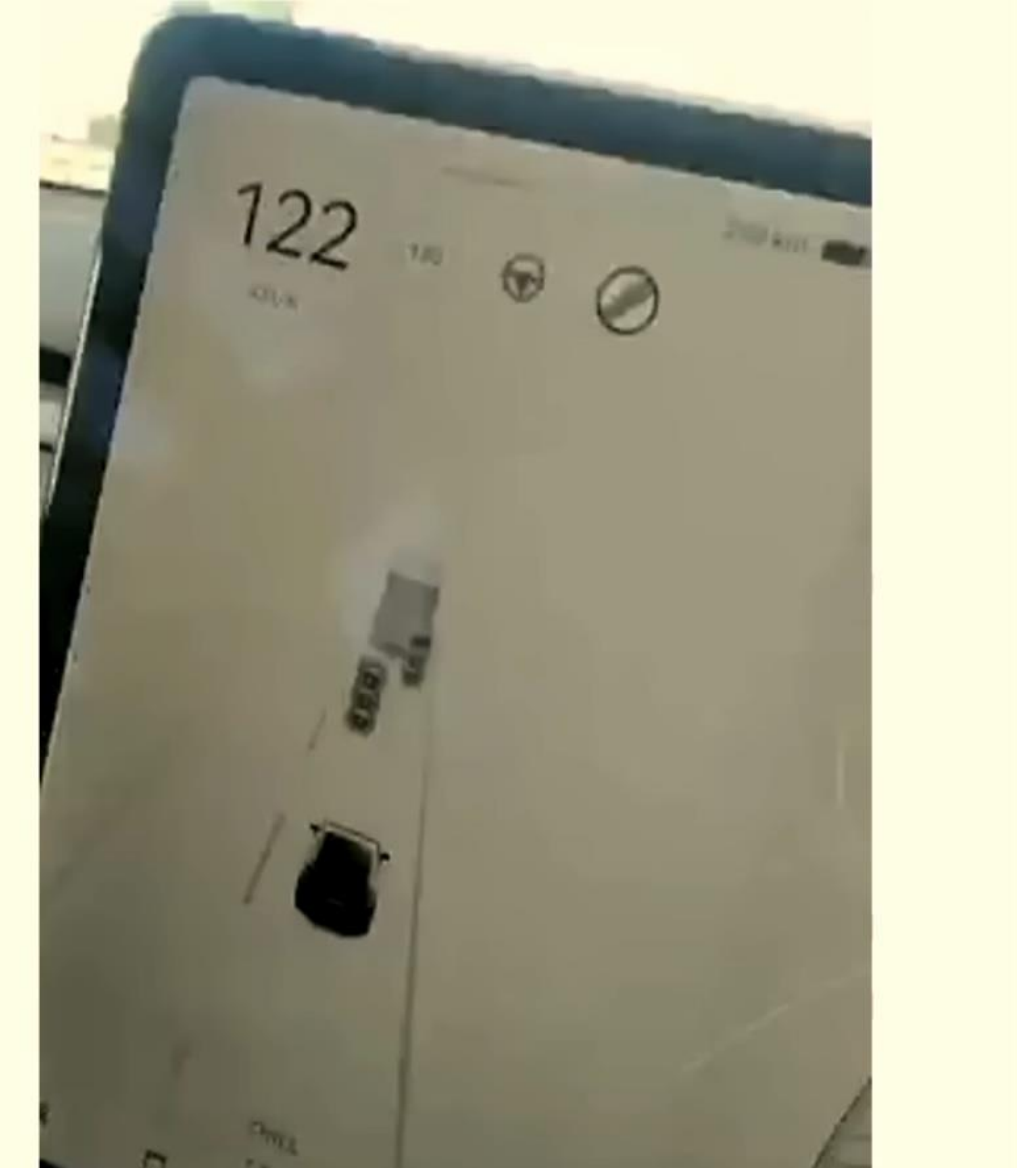
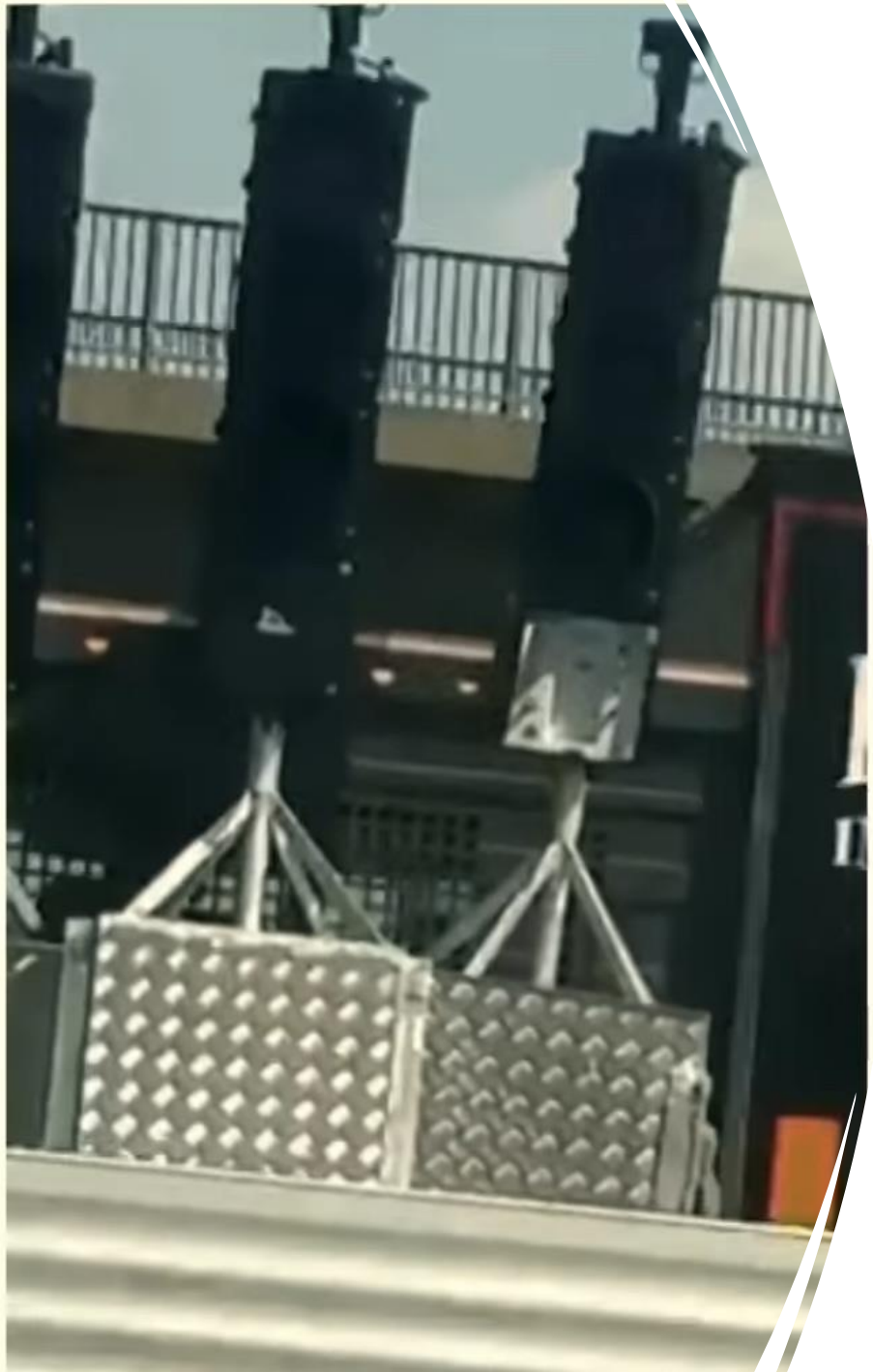
- Neural nets do badly when presented with problems outside their trained data set
- They don’t reason
- They aren’t minds





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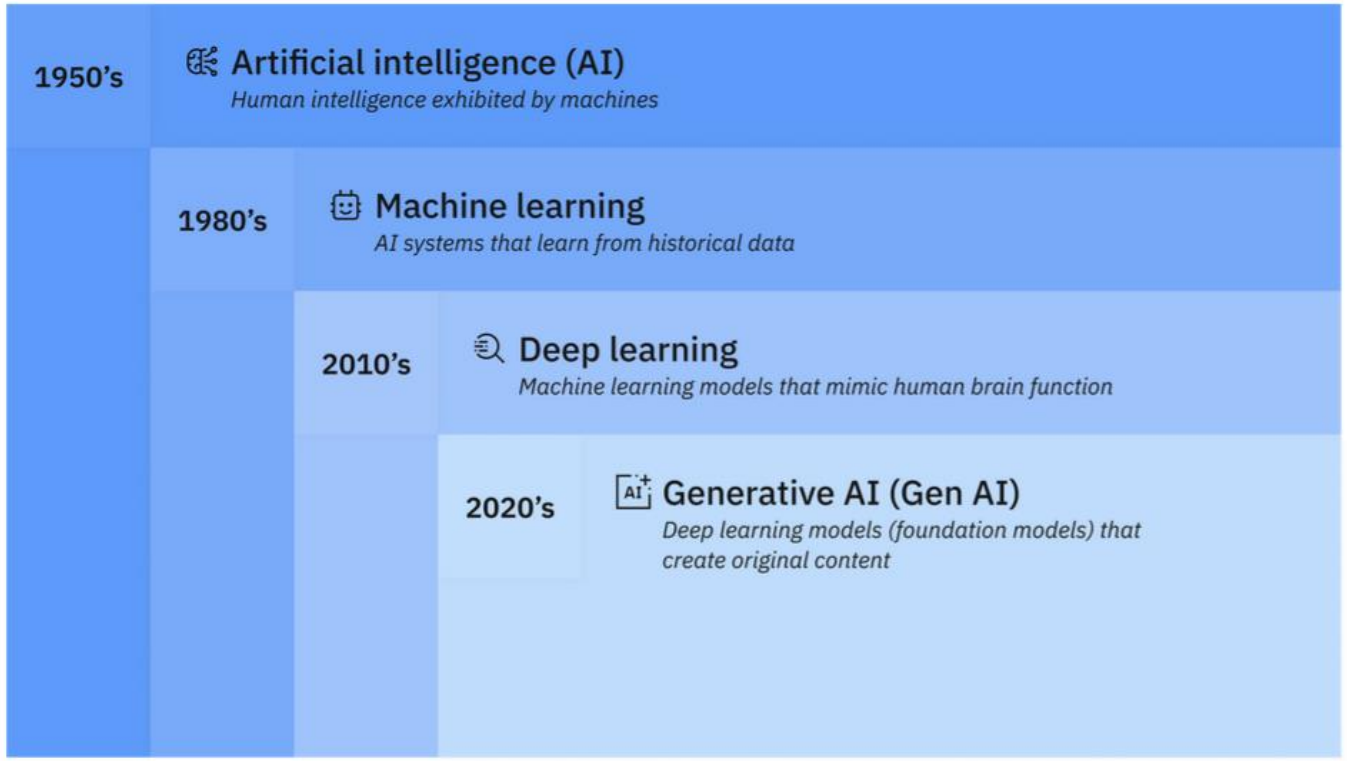
Traffic stop signs are being transported by the truck.

Generation of AI, ML, DL, Gen AI



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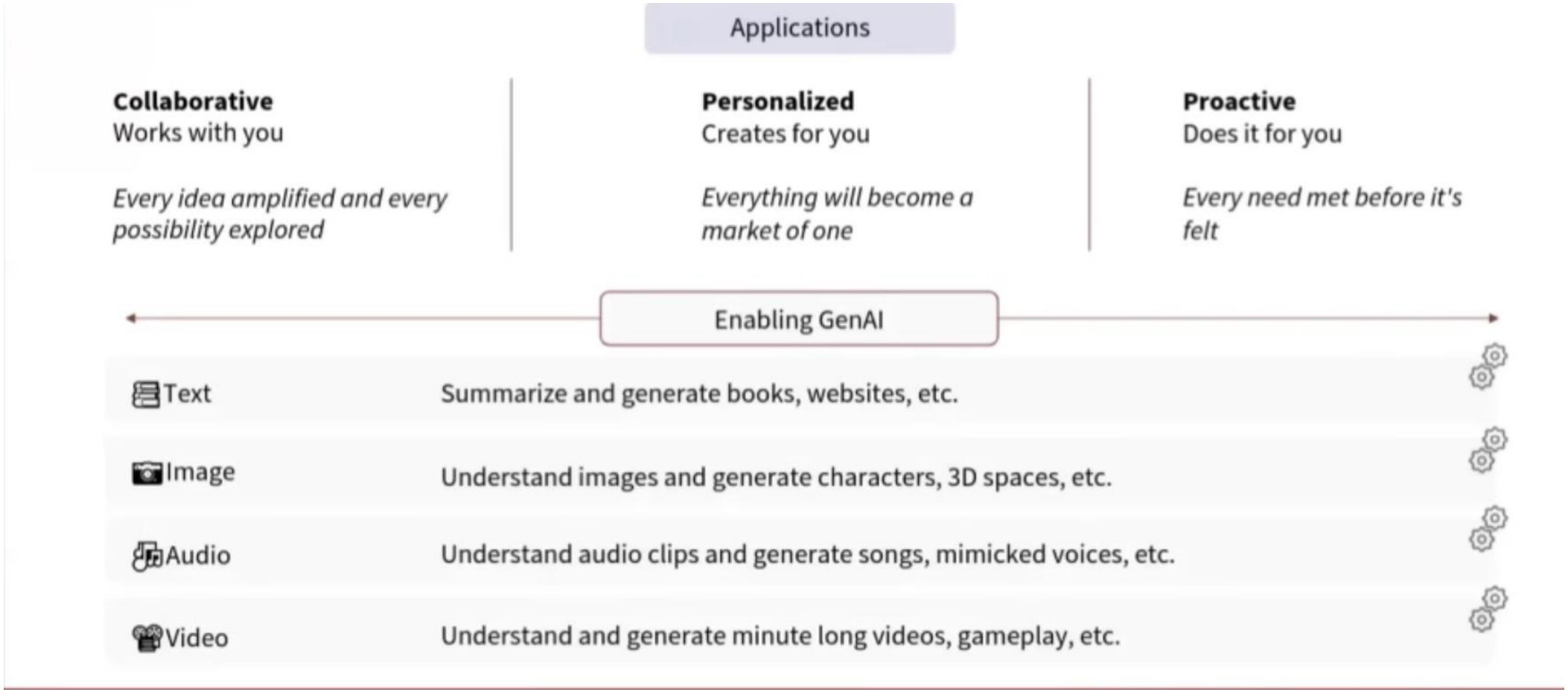
Types of GenAI



Future of AI

- Noone knows exactly

- OpenAI (Sam Altman)
- Nvidia (Jensen Huang)

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Artificial general intelligence (AGI)

- is a type of (AI) that matches or surpasses human cognitive capabilities across a wide range of cognitive tasks.

- Not well defined
- Roughly: general purpose intelligent systems
- A true “general AI” would be broadly intelligent in the same way we are

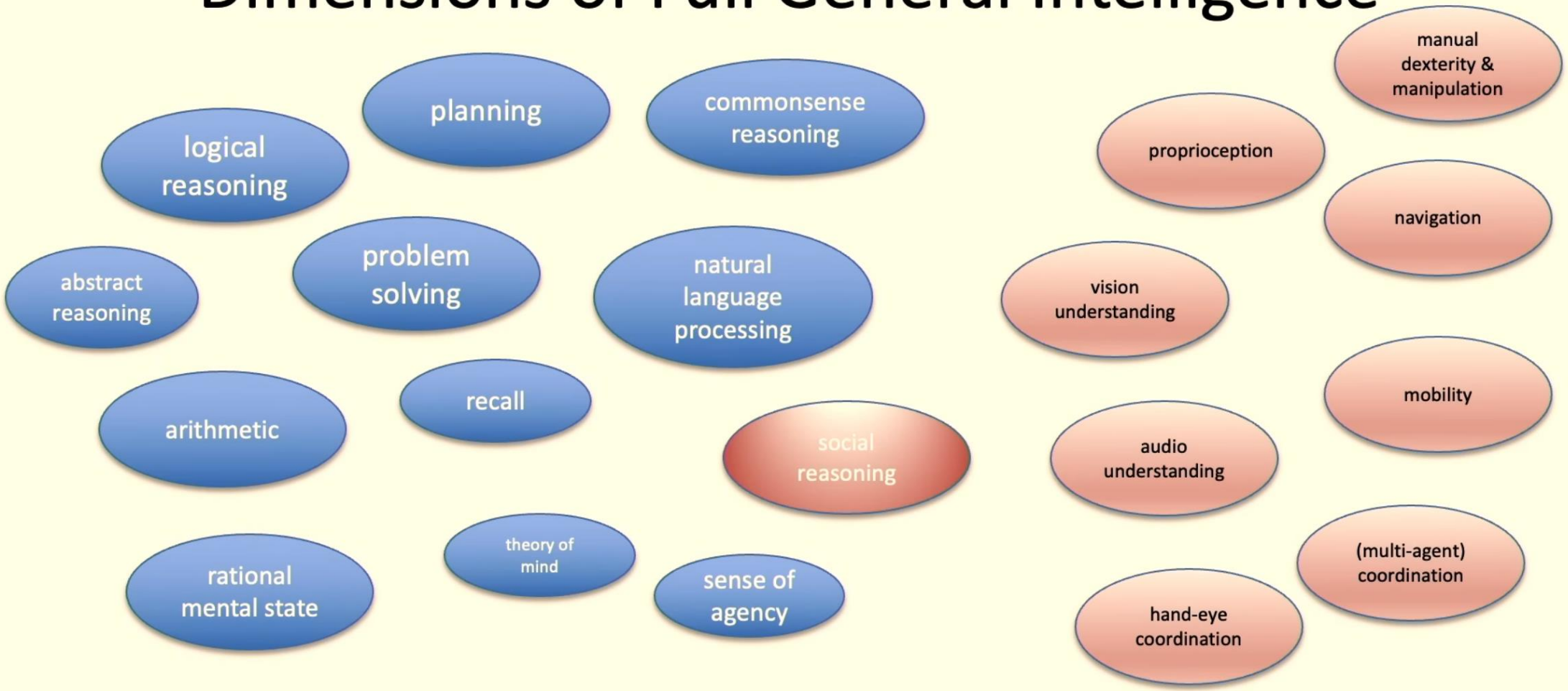
Varieties of AGI

Machines that can do anything a human can do

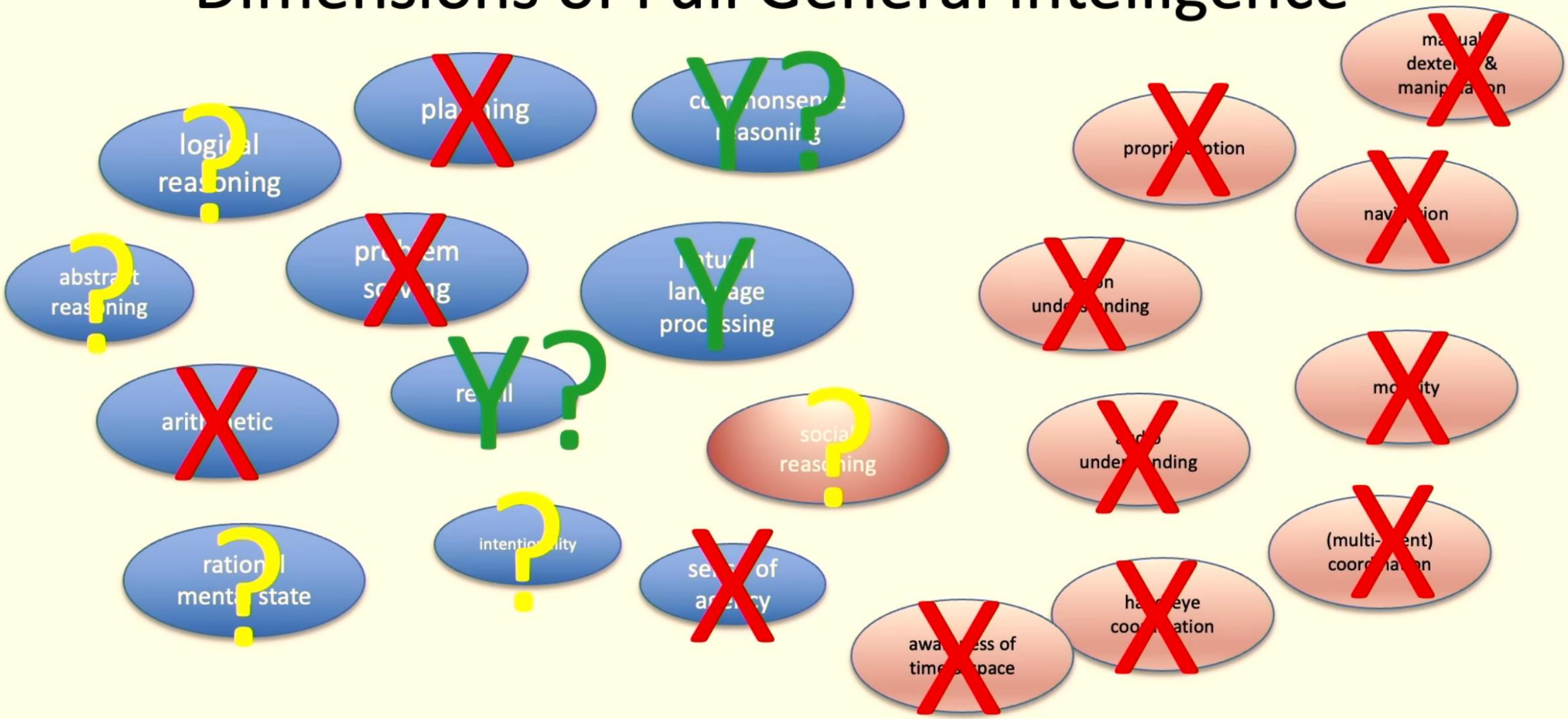
Machines that can do any cognitive task a human can do

Machines that can do any language-based task that a human can do

Dimensions of Full General Intelligence



Dimensions of Full General Intelligence



The era of convergence of AI & Blockchain

The Highly Potential of Public Open Blockchain-Based Currency for AI

- What forms of currency are AI agents most likely to accept?

- **Autonomous: self-operating without human inpiut**.

- Imagine a car that not only drives itself – but also fuels itself at the gas station, does its own oil changes.

Once in a lifetime opportunity for Engineers to build innovative products

PC Era,

Internet Era,

Mobile Era, (Web 2)

Bitcoin Network + AI Era

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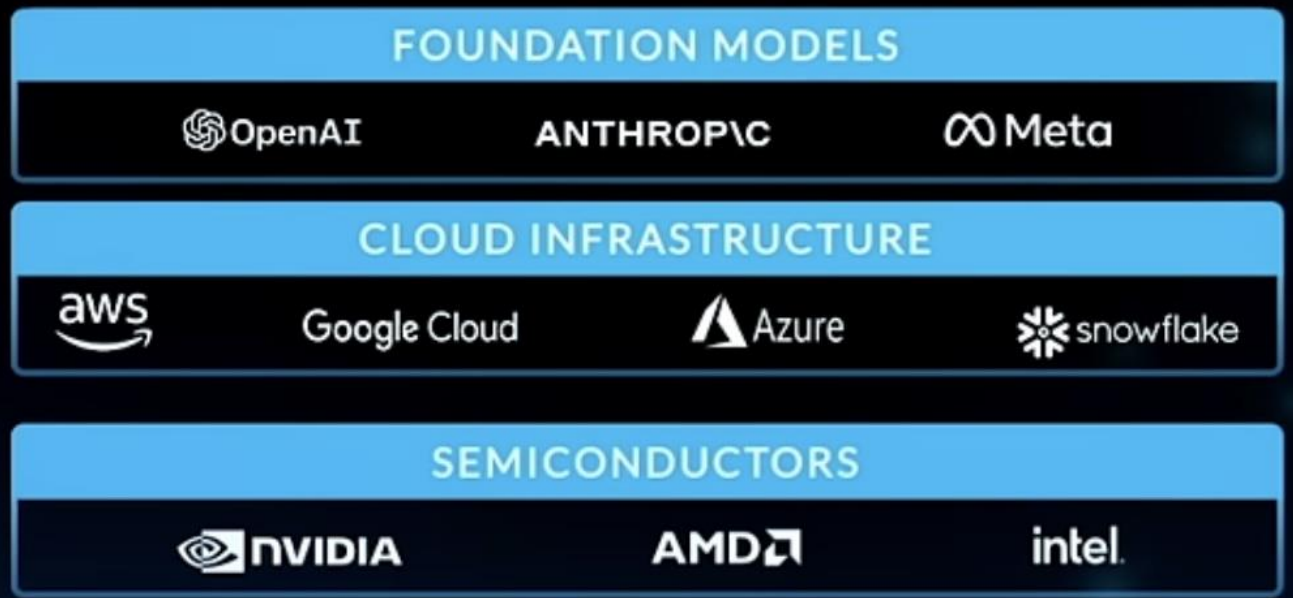
THE AI STACK
WHERE ARE THE BIGGEST OPPORTUNITIES?



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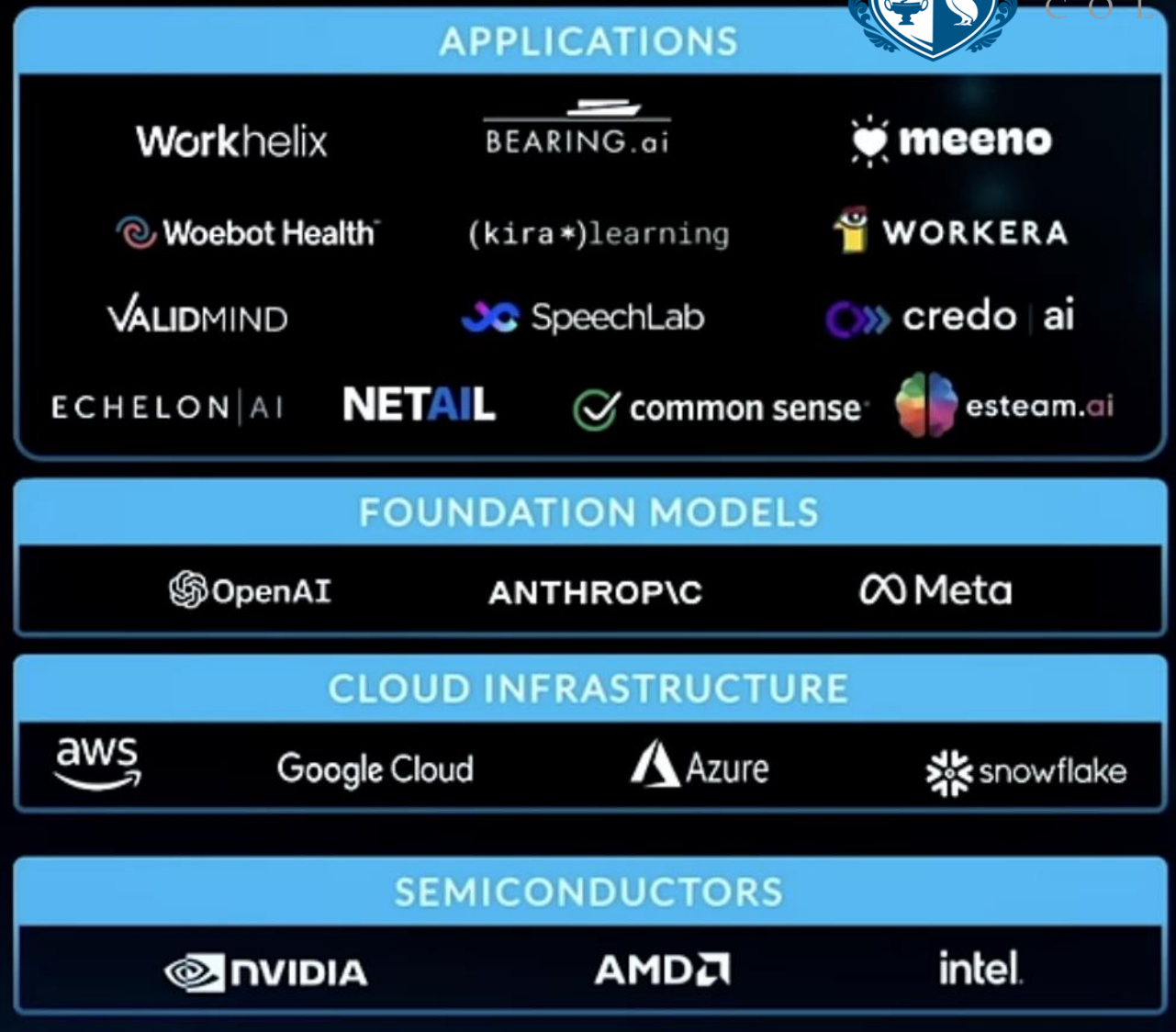
THE AI STACK
WHERE ARE THE BIGGEST OPPORTUNITIES?

Even though a lot of attention is on AI technology (esp. foundation models) most of the opportunities will be in building AI applications.



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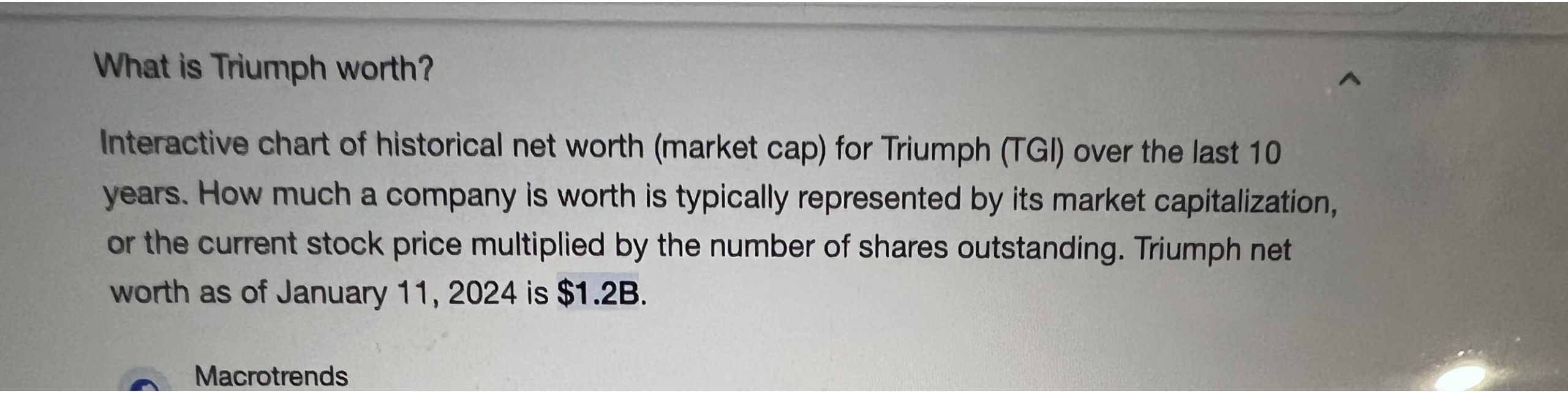
Nurturing Engineers to Build Unicorn.

World-famous Billionarie's Networth

GUSTO UNIVERSITY
Executive Education
Graduate School of Modern Business & Technology



1	Microsoft MSFT	$2.927 T	$393.87	▲ 1.13%
2	Apple AAPL	$2.916 T	$188.63	▲ 3.26%
3	Saudi Aramco 2222.SR	$2.058 T	$8.51	▲ 0.47
4	Alphabet (Google) GOOG	$1.804 T	$144.99	▲ 1.47%
5	Amazon AMZN	$1.586 T	$153.50	▲ 1.18%
6	NVIDIA NVDA	$1.410 T	$571.07	▲ 1.88%

Triumph’s wealth is almost a joke when compared to the innovative startups

8	Berkshire Hathaway BRK-B	$788.29 B	$362.38	▲ 0.86%

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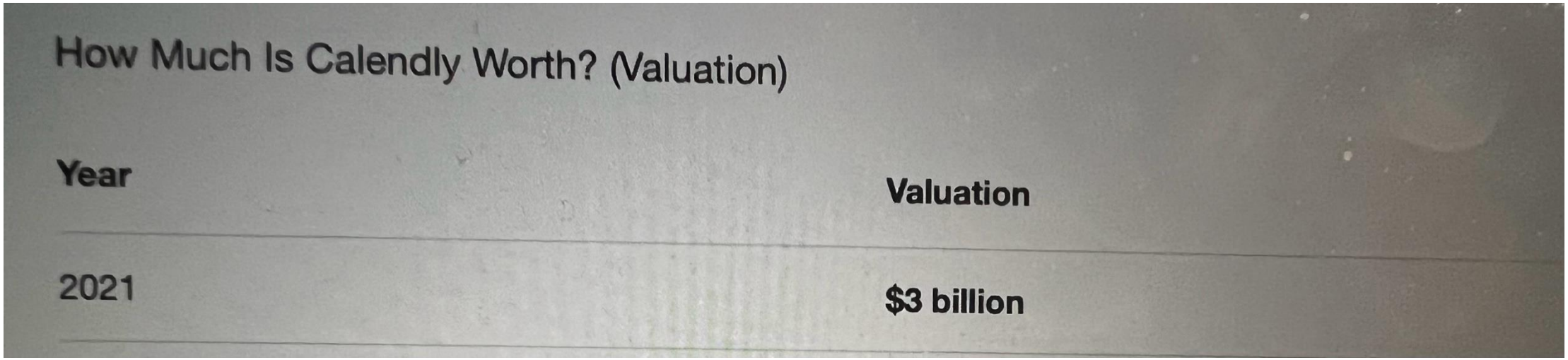
Calendly

- Calendly and its; Nigerian founder – Tope Awotona. He used to be salesman.



How Much Is Calendly Worth? (Valuation)

Year	Valuation
2021	$3 billion

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Prof. Dr. Win Htein Win

winhteinwin@gusto-education.com

Nurturing Engineers to Build
Unicorn Companies