

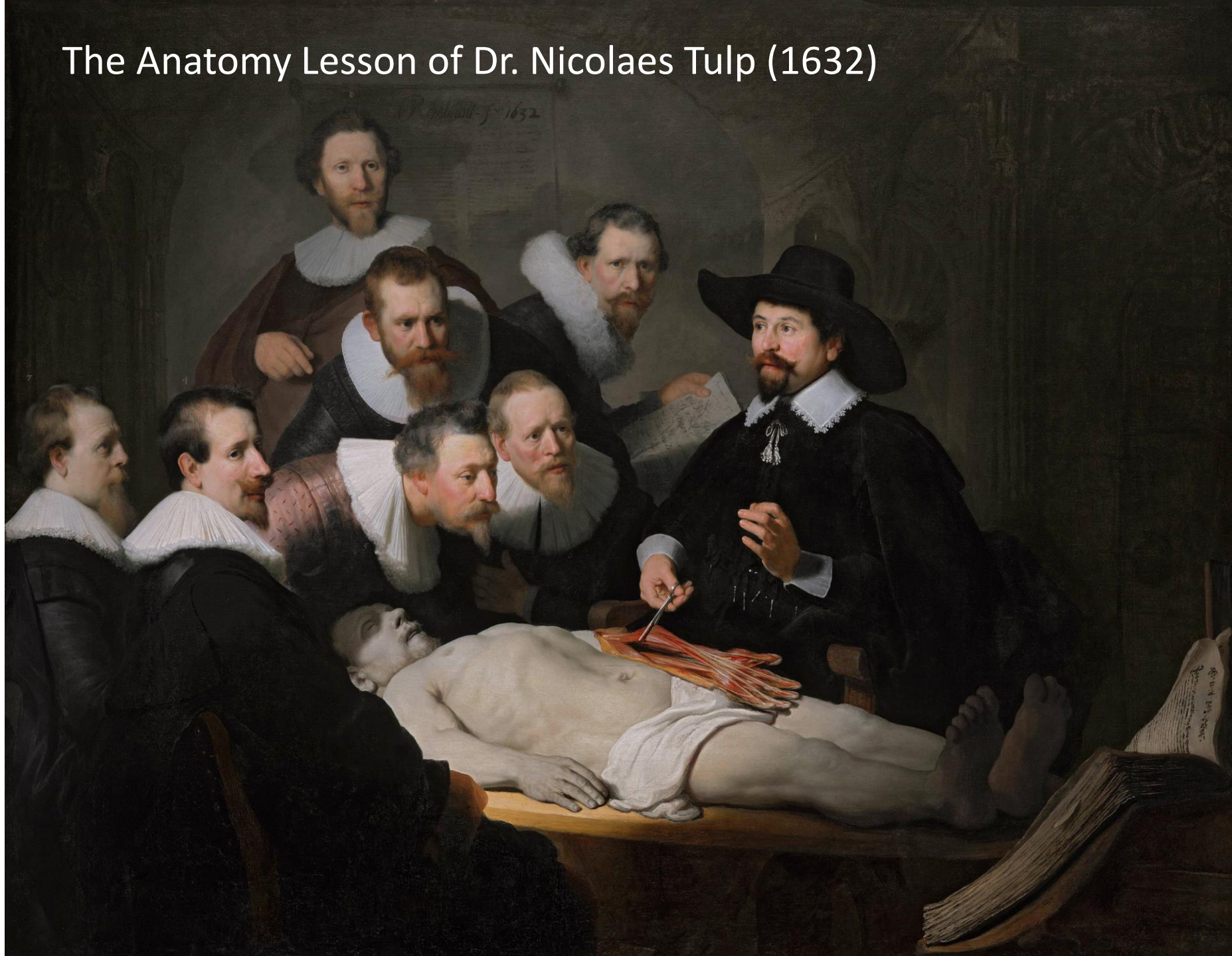
What Should We Be Teaching About AI?

Lee Chu Keong

Rembrandt van Rijn
1606–1669



The Anatomy Lesson of Dr. Nicolaes Tulp (1632)



Who Was Rembrandt?

Dutch painter, widely regarded as one of the greatest artists in history

Painted many portraits, which sells for million of US dollars today!

Rembrandt died in 1669

Rijksmuseum in Amsterdam has the largest collection

How nice it would be if Rembrandt was still alive ...

If he was still alive ...

What would he paint?

In 2016, ING, together with J. Walter Thompson and Microsoft worked on a project ...

THE NEXT
REMBRANDT

BRINGING BACK THE GREAT MASTER
TO CREATE ONE MORE PAINTING



The Next Rembrandt (2016, 148 million pixels)

The Next Rembrandt is a computer-generated painting created from data.

The Next Rembrandt came into being via artificial intelligence.

the artist was made redundant!

AI Transformed The Arts

AI became a force in the arts, connecting various disciplines and media, and expanding the range of artistic possibilities.

Google organised a community of artists and engineers to explore how creative practices are being transformed (the Arts and Machine Intelligence program).

THE
WRITING
— IS ON THE —
WALL



DALL·E 3



MIDJOURNEY AI



STABLE DIFFUSION 3



Adobe
Firefly



30 Nov 2022: ChatGPT Released



ChatGPT

5 Dec 2022: 1 million users

**Greg Brockman** ✓
@gdb · [Follow](#)



ChatGPT just crossed 1 million users; it's been 5 days since launch.

**Sam Altman** ✓  @sama

little openai update:

gpt-3, github copilot, and dall-e each have more than 1 million signups!

took gpt-3 ~24 months to get there, copilot i think around 6 months, and dall-e only 2.5 months.

4:32 PM · Dec 5, 2022 

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5 Jan 2023: Ban ChatGPT!

New York City schools ban AI chatbot that writes essays and answers prompts

ChatGPT tool will be forbidden across all devices and networks in public schools over 'concerns about negative impacts on learning'


The Washington Post
Democracy Dies in Darkness

New York City blocks use of the ChatGPT bot in its schools

Updated January 5, 2023

12 Jan 2023: Should We Ban ChatGPT?

NewScientist


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Enter search keywords

Should schools ban ChatGPT or embrace the technology instead?

School districts and universities are banning the ChatGPT AI that writes in a human-like fashion, but some teachers say a better approach may be to incorporate it into the curriculum

By [Jeremy Hsu](#)

 12 January 2023

18 May 2023: Remove ChatGPT Ban!

BUSINESS INSIDER

New York City's public schools reverse their ban on ChatGPT — admitting it had been 'knee-jerk fear'

[Lakshmi Varanasi](#) May 20, 2023, 12:11 AM SGT

New York City Public Schools Reverses ChatGPT Ban

Ana Faguy Former Staff

I cover breaking news.



May 18, 2023, 02:11pm EDT

ChatGPT's weekly users have doubled in less than a year



Illustration: The Verge

/ Now 200 million people use the AI chatbot each week.

By [Emma Roth](#), a news writer who covers the streaming wars, consumer tech, crypto, social media, and much more. Previously, she was a writer and editor at MUO.

Aug 30, 2024, 5:49 AM GMT+8



ChatGPT now has over 300 million weekly users



Image: The Verge

/ During the NYT's DealBook Summit, OpenAI CEO Sam Altman said users send over 1 billion messages per day to ChatGPT.

By [Emma Roth](#), a news writer who covers the streaming wars, consumer tech, crypto, social media, and much more. Previously, she was a writer and editor at MUO.

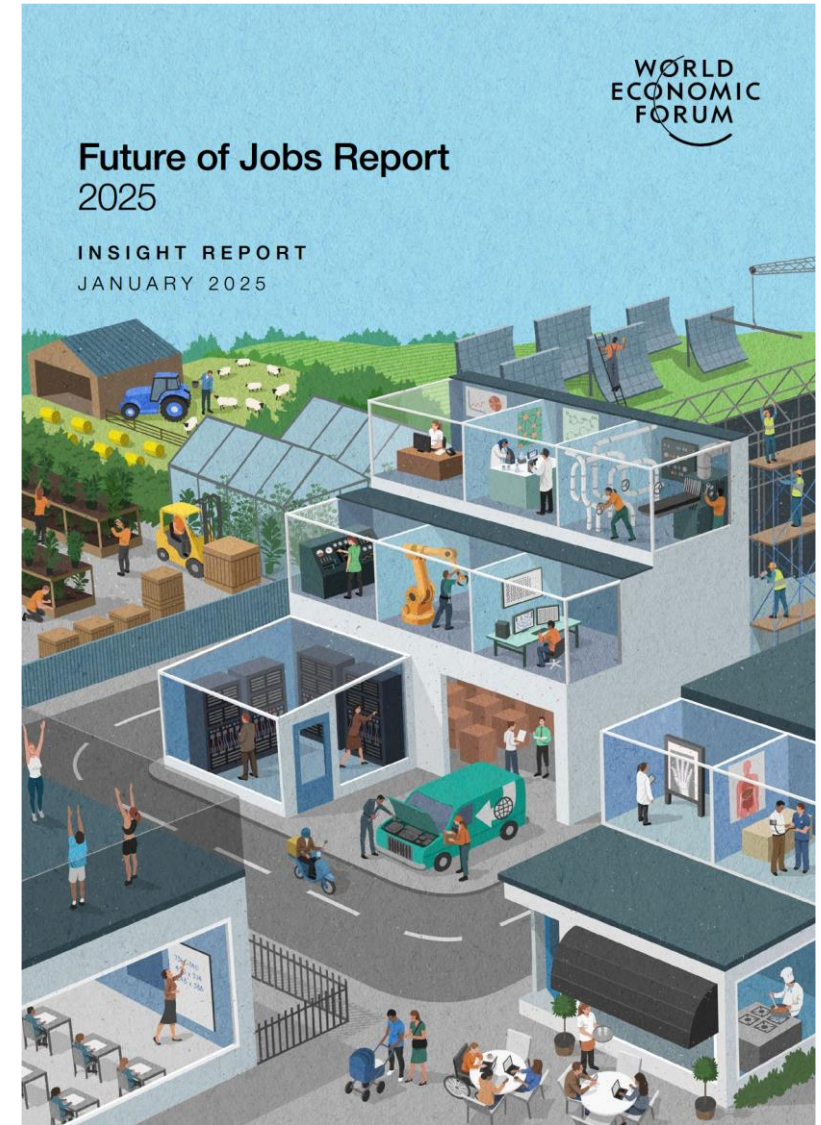
Dec 5, 2024, 12:39 AM GMT+8

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Future of Jobs Report 2025

World Economic Forum



Largest growing and declining jobs by 2030

 Top largest growing jobs

1	Farmworkers, labourers and other agricultural workers
2	Light truck or delivery services drivers
3	Software and applications developers
4	Building framers, finishers and related trades workers
5	Shop salespersons
6	Food processing and related trades workers
7	Car, van and motorcycle drivers
8	Nursing professionals
9	Food and beverage serving workers
10	General and operations managers
11	Social work and counselling professionals
12	Project managers
13	University and higher education teachers
14	Secondary education teachers
15	Personal care aides

 Top largest declining jobs

1	Cashiers and ticket clerks
2	Administrative assistants and executive secretaries
3	Building caretakers, cleaners and housekeepers
4	Material-recording and stock-keeping clerks
5	Printing and related trades workers
6	Accounting, bookkeeping and payroll clerks
7	Accountants and auditors
8	Transportation attendants and conductors
9	Security guards
10	Bank tellers and related clerks
11	Data entry clerks
12	Client information and customer service workers
13	Graphic designers
14	Business services and administration managers
15	Claims adjusters, examiners, and investigators

Home / Business

Tech giants hatch a plan for AI job losses: Reskill 95 million in 10 years

A consortium that includes Google, IBM, Intel, and Microsoft has a lofty goal: Reinvent the careers of workers whose jobs may be lost to AI.



Written by **Don Reisinger**, Contributing Writer

April 4, 2024 at 2:07 p.m. PT



Business

Markets

Tech

Media

Calculators

Videos

AI will shrink workforces within five years, say company execs



By [Anna Cooban](#), CNN

🕒 2 minute read · Published 10:01 AM EDT, Fri April 5, 2024

BREAKING

Almost 65,000 Job Cuts Were Announced In April—And AI Was Blamed For The Most Losses Ever

Mary Whitfill Roeloffs Forbes Staff

Mary Roeloffs is a Forbes breaking news reporter covering pop culture.

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May 2, 2024, 07:30am EDT

**Artificial
intelligence (AI)**

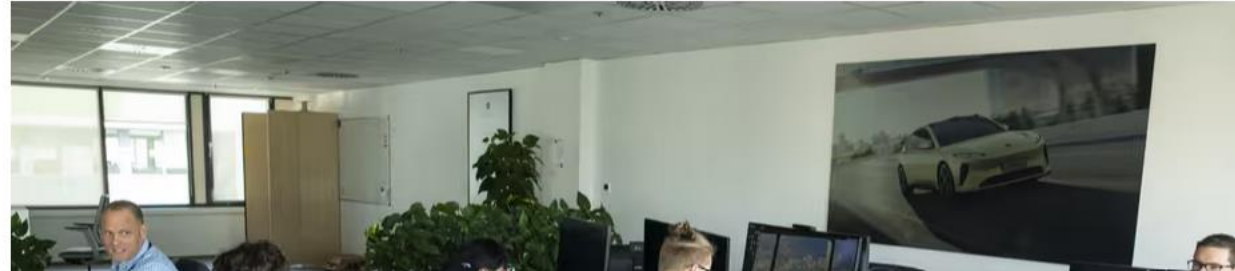
🕒 This article is more than **9 months old**

AI 'apocalypse' could take away almost 8m jobs in UK, says report

Women, younger workers and lower paid are at most risk from artificial intelligence, says IPPR thinktank

**Richard
Partington**
*Economics
correspondent*

Wed 27 Mar 2024 05.00
GMT





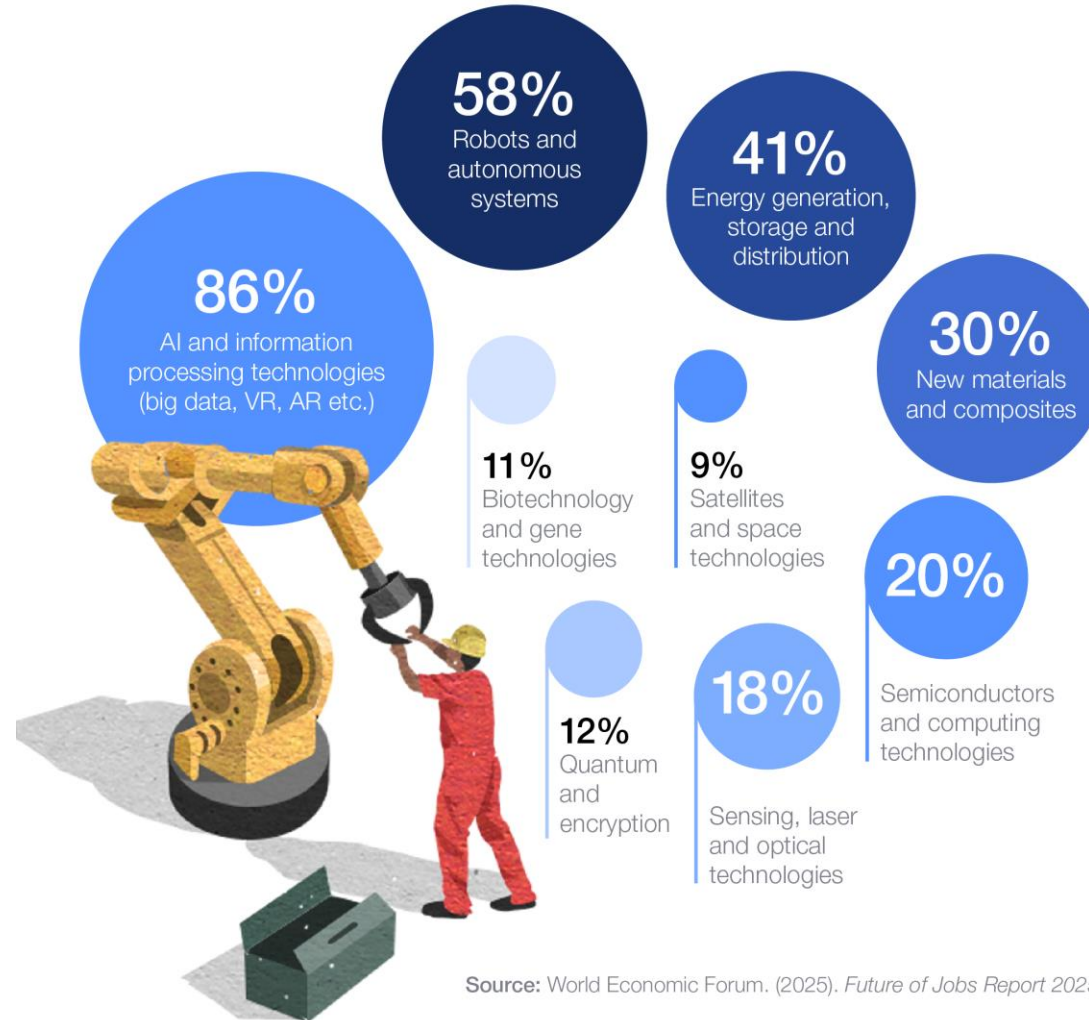
 Business And Society | **AI Won't Replace Humans — But Humans With AI Will**

AI Won't Replace Humans — But Humans With AI Will Replace Humans Without AI

August 04, 2023

Trends in AI, robotics and energy technologies are most likely to drive business transformation

Share of employers expecting the technology to transform their organization



Source: World Economic Forum. (2025). *Future of Jobs Report 2025*.



The Age of AI

1: AI Is NOT New

The term “artificial intelligence” was coined at a workshop held at Dartmouth College in 1956.

It was coined by one of the organisers, John McCarthy.

This workshop is a key milestone in the history of AI.

2: AI Is NOT Magic, It's Mathematics

The areas of mathematics important in AI are:

- Linear algebra
- Probability and statistics
- Calculus
- Numerical analysis

3: AI Will Improve



4: There Are Two Categories of AI

	Tasks routinely performed using human intelligence today "Things humans can do"	Tasks that cannot be performed at all or as well with human intelligence alone "Things humans cannot do"
Generative AI models "Artists"	<ul style="list-style-type: none">• Drafting all manner of documents including business plans, meeting summaries, legal contracts, and financial reports.• Creating recipes, meal plans, and grocery lists.• Responding to customer queries.• Generating computer code.• Sketching architectural blueprints.• Answering medical questions.	<ul style="list-style-type: none">• Producing highly individualized content and media including novels, movies, games, music, and art.• Simulating virtual outfit trials and interior designs.• Accelerating drug discovery.• Creating novel enzymes for specific tasks like breaking down plastic waste.• Providing personalized investment advice at scale.• Climate change modeling.
Discriminative AI models "Detectives"	<ul style="list-style-type: none">• Classifying images and identifying people within them.• Identifying email spam.• Driving cars.• Analyzing investment opportunities.• Valuing insurance losses.• Restoring coral reefs through coral grafting and placement.	<ul style="list-style-type: none">• Spotting signs of cancer in scans years before radiologists can see anything.• Detecting financial fraud.• Optimizing predictive maintenance of energy grids, aircraft parts, and industrial equipment.• Predicting individual disease risks and treatment outcomes in precision medicine.• Modeling earthquakes.• Decoding brain waves to reconstruct images, thoughts, and music, and help paralyzed people walk and speak.

5: We've **Already** Been Using AI

Spam filters

Predictive text and autocorrect

Search engine algorithms

Recommendation systems

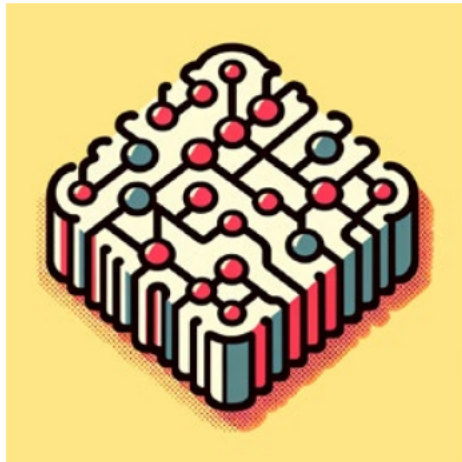
Virtual assistants

Social media feeds

Facial recognition

**Moderna and Pfizer
Covid vaccines!**

Machine Learning



Machine learning: Enables machines to learn from data and experience, allowing them to make decisions or predictions without being specifically programmed.

- **Personalized content prediction** such as Netflix's movie recommendations and Facebook's feed curation.
- **Email management** such as spam filtering, prioritization, and smart sorting.

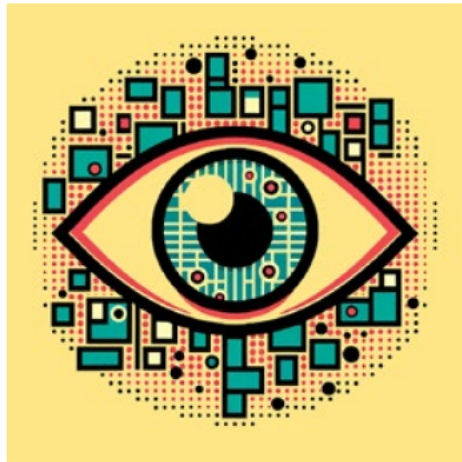
Natural Language Processing



Natural language processing: Enables machines to comprehend, interpret, and produce human language in meaningful ways.

- **Voice assistants** such as Amazon's Alexa and Apple's Siri.
- **Autocomplete and autocorrect** on search engines and messaging applications.

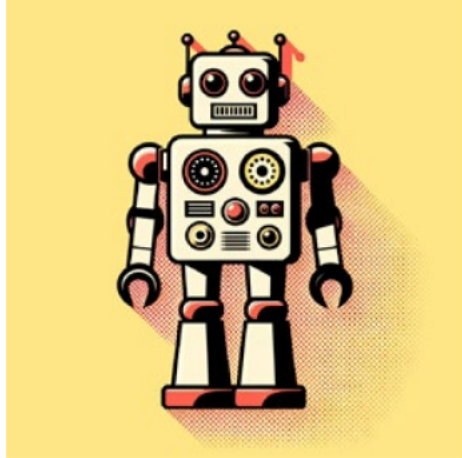
Computer Vision



Computer vision: Enables machines to interpret and act upon visual data, simulating human visual understanding.

- **Facial recognition** in smartphones and airport security systems.
- **Autonomous vehicle features** that assist in navigation and obstacle detection.

Robotics



Robotics: Enables machines to move and interact with the physical world, often automating tasks or enhancing human capabilities.

- **Industrial automation robots** used in settings like car assembly lines to speed up production processes and improve precision.
- **Household robotics** like iRobot's vacuum cleaning and mopping robots.

6: AI Is Often Used **Bundled**

E.g., the augmented reality feature in the Google Translate allows a user to point their camera at text on a sign or menu:

1. then using **computer vision** to detect and recognize the text
2. **natural language processing** to translate it
3. **machine learning** to improve translation accuracy over time based on feedback and context

7: You Cannot Avoid AI

Most companies **will not have a choice** but to adopt AI and adopt digital at the core functions.

8: AI is a General-Purpose Technology

Foundational innovations with extensive use cases.

They reshape economies, societies, geopolitics, and even our physical surroundings.

Other examples of general-purpose technology?

9: AI Has Transformed the Economy

The Internet drastically lowered the cost of **information transmission**.

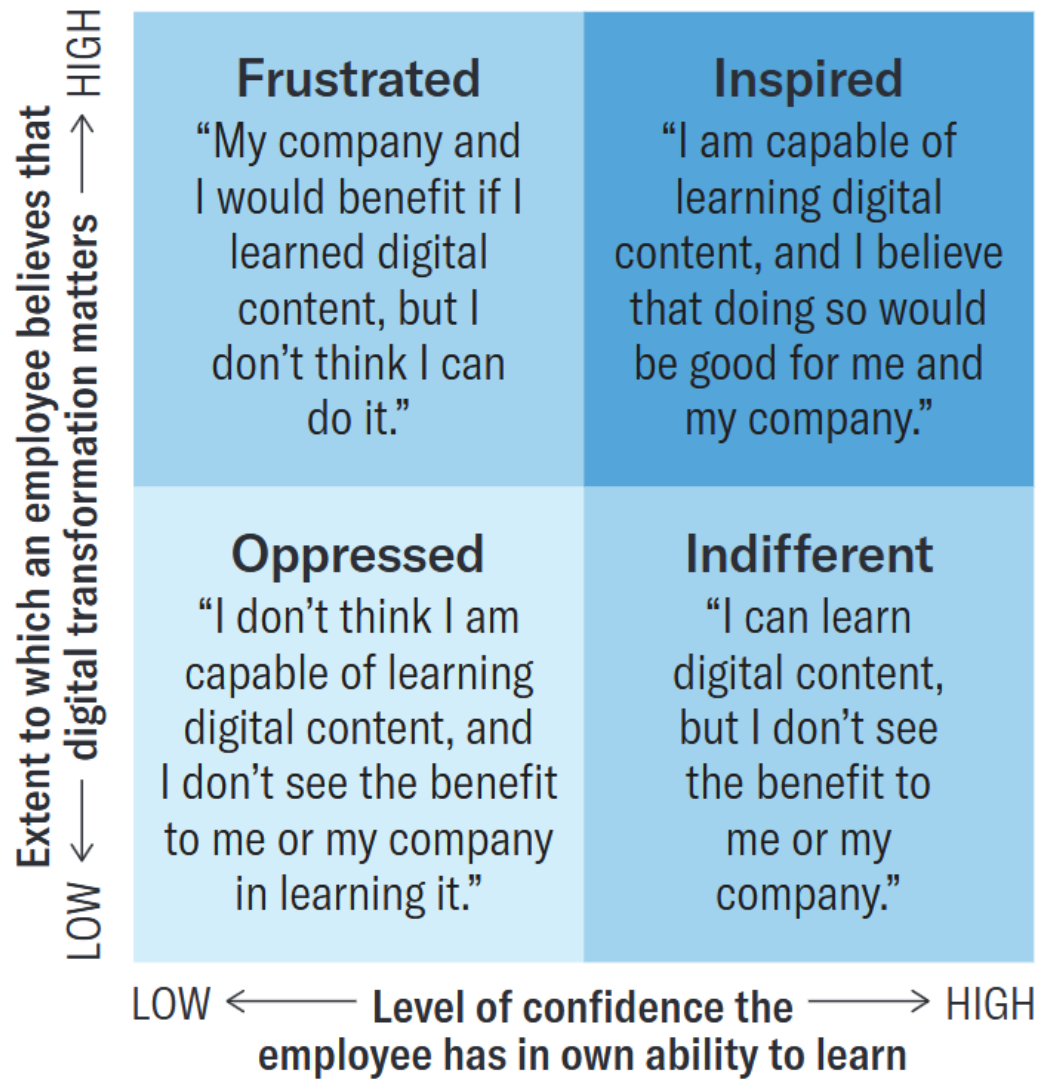
AI has drastically lowered the cost of **cognition**.

10: AI Should Do Most of the Work

In many of the largest companies today, AI run the show.

11: Everyone Needs a Digital Mindset

A digital mindset is a set of attitudes and behaviours that enable people and organisations to see how data, algorithms, and AI open up new possibilities and to chart a path for success in a business landscape increasingly dominated by data-intensive and intelligent technologies.



12: Preparation of University Graduates

Universities are only now getting started preparing students for a world with artificial intelligence.

In Conclusion ...

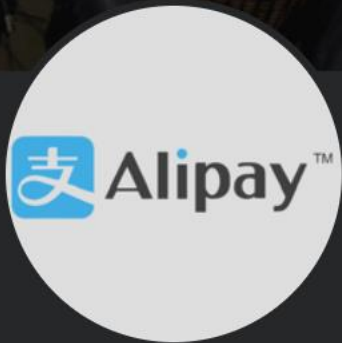
What kind of librarian do you want to be in the *Age of Artificial Intelligence*?

How do I want to equip myself? What AI competencies do I want to learn? What investments am I willing to put in?



Bringing Digital Payments to Melbourne's Buskers

No loose change? No problem.



Alipay Australia Buskers Program

843 likes • 834 followers

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Thank you

A decorative graphic featuring the words "Thank you" written in a black, elegant cursive font. The text is centered and surrounded by a cluster of overlapping circles in various colors, including yellow, light blue, pink, and green. The circles vary in size and are scattered around the text, creating a festive and celebratory feel.