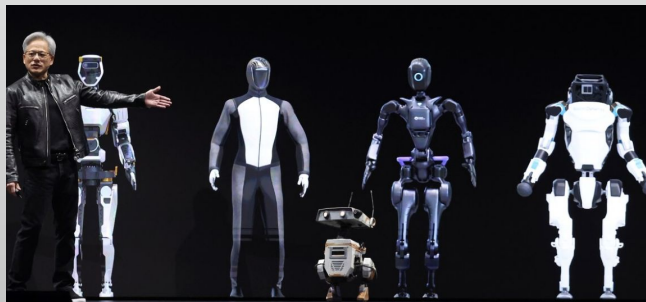


企業AI賦能與未來人才

成為AI 的指揮家，而非失落的一代！

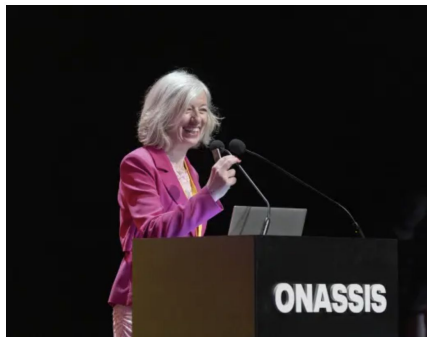
簡立峰



Nvidia

聯合國：我們都是AI世代！

We are all “Generation AI” !



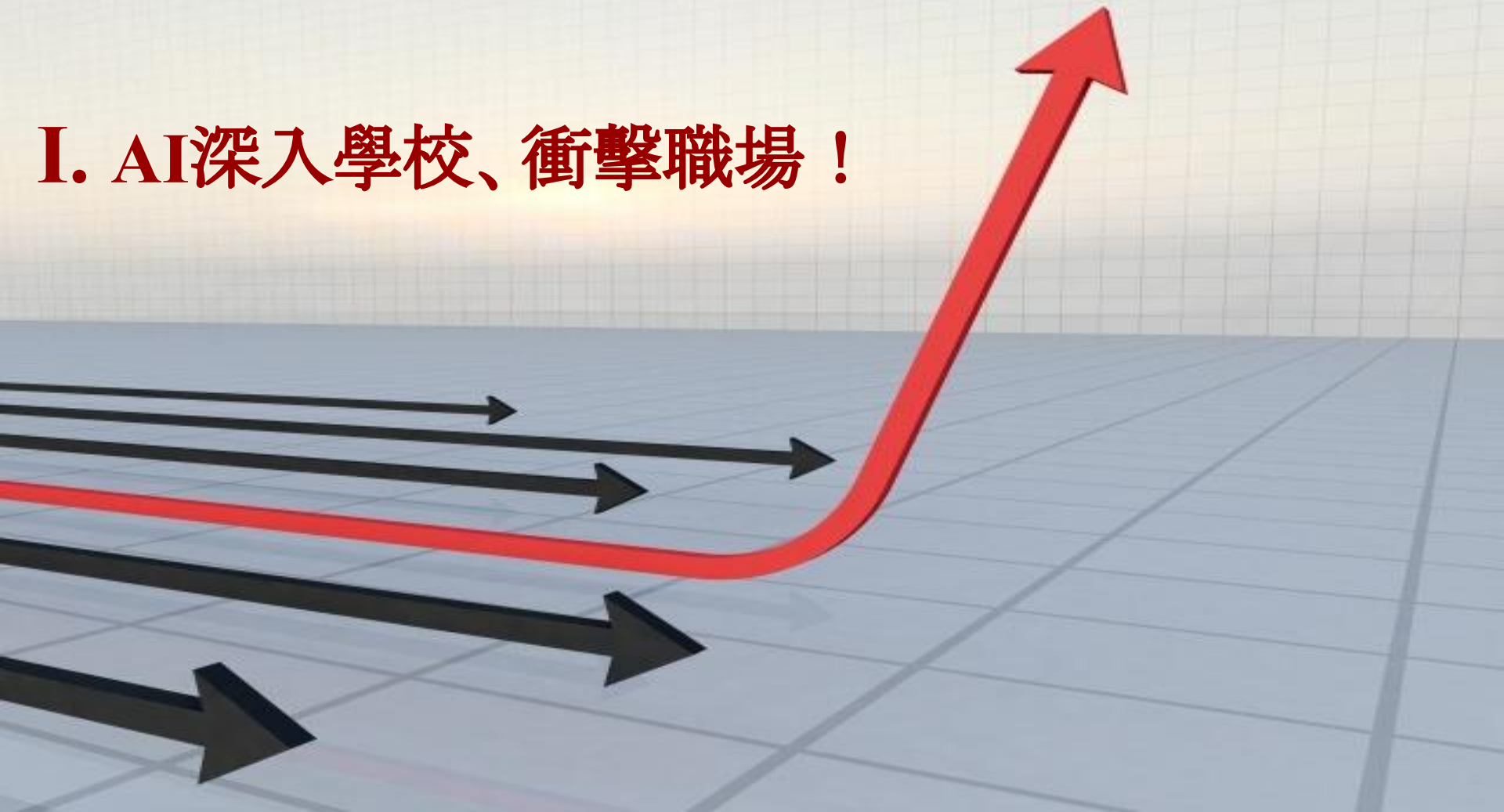
© Margarita Yoko Nikitatu/Onassis Stegi

Stefania Giannini
聯合國科教文組織主管
前義大利教育部長
2024/07/04

Generation AI: Navigating the Opportunities and Risks of Artificial Intelligence in Education

<https://www.unesco.org/en/articles/generation-ai-navigating-opportunities-and-risks-artificial-intelligence-education>

I. AI深入學校、衝擊職場！



ChatGPT 震撼：電腦說人話

Computers Understand Human Language

- Computer 變成電腦，開始有學習能力
Computer has learning ability
- 開始說人話，以母語溝通
Computer speaks/understand language
- 自動生成內容，只要訓練資料足夠
可生文章、圖案、表格、程式 ...
Computer can generate contents



Please help translate and rewrite the concept "AI創新驅動製造業新發展" into an English speech title.



"AI Innovation Driving New Horizons in Manufacturing"



Great. Please give 3 more different titles with similar concept for selection

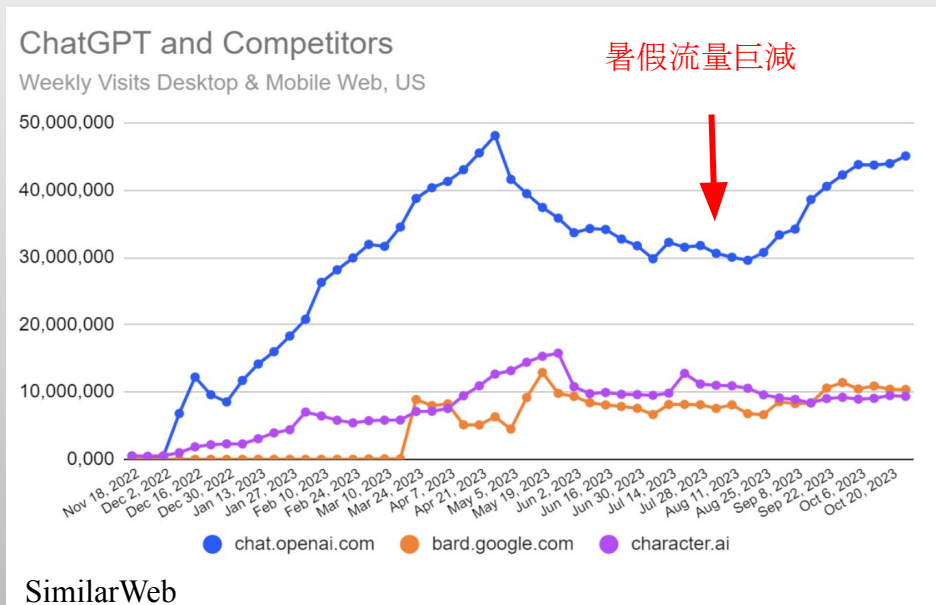


Certainly, here are three more titles with a similar concept:

1. "Transforming Manufacturing through AI Innovation"
2. "AI-Driven Innovations Reshaping the Manufacturing Industry"
3. "The Evolution of Manufacturing: AI's Impact on Innovation"

ChatGPT vs Edu in 2024

(在校師生使用比例高)

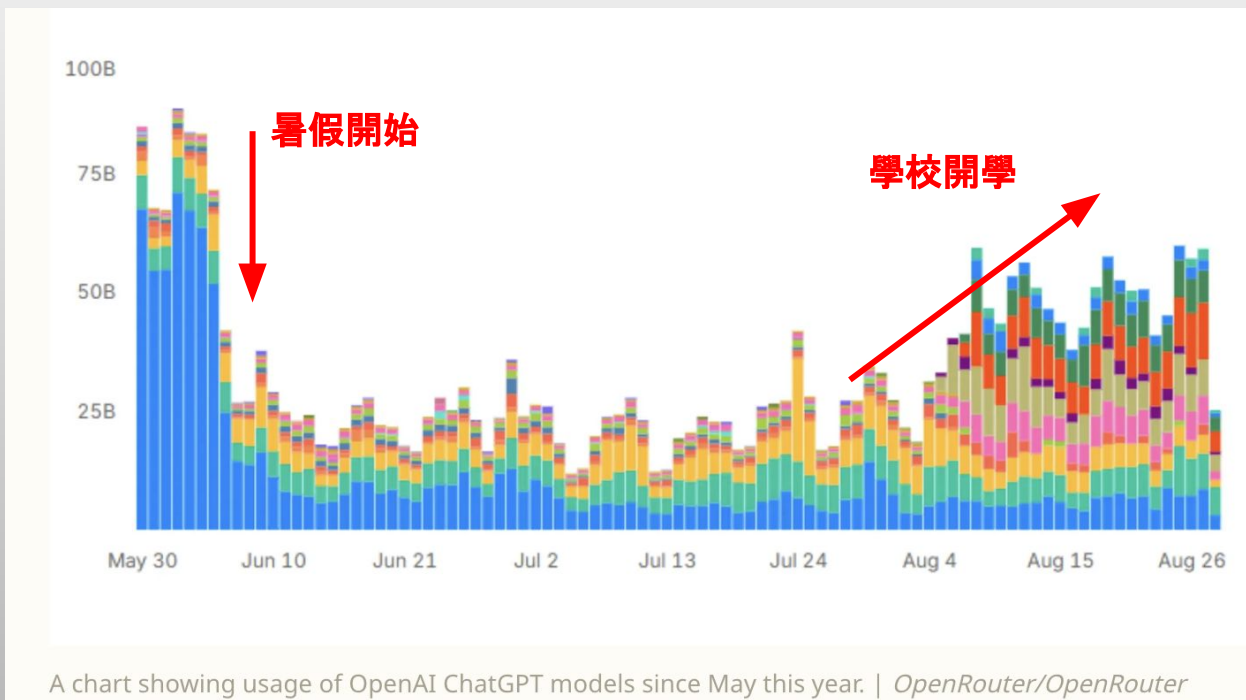


Age Group	Share of Users
18-24	30.09%
25-34	34.44%
35-44	17.65%
45-54	9.37%
55-64	5.34%
65+	3.11%

<https://www.demandsage.com/chatgpt-statistics/>

ChatGPT Traffic Drops by 70% in 2025

(在校師生使用急速升高)



個人能力提升新標竿

程式: +20~30%, 文字工作: +30%, 美工: +20%

白領外包職缺減少:

Source: HBR, 11/11/2024

AI steals **21%** of freelance jobs.

. **Writing jobs:** 30.37% decrease

. **Software:** 20.62%

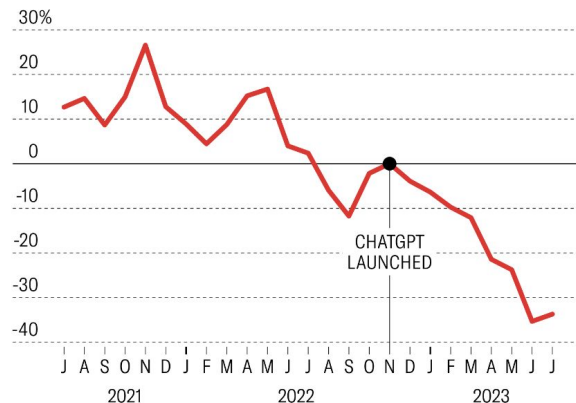
. **Graphic design and 3D:** 17.01%

...

. **Engineering:** 10.42%

hbr.org/2024/11/research-how-gen-ai-is-already-impacting-the-labor-market

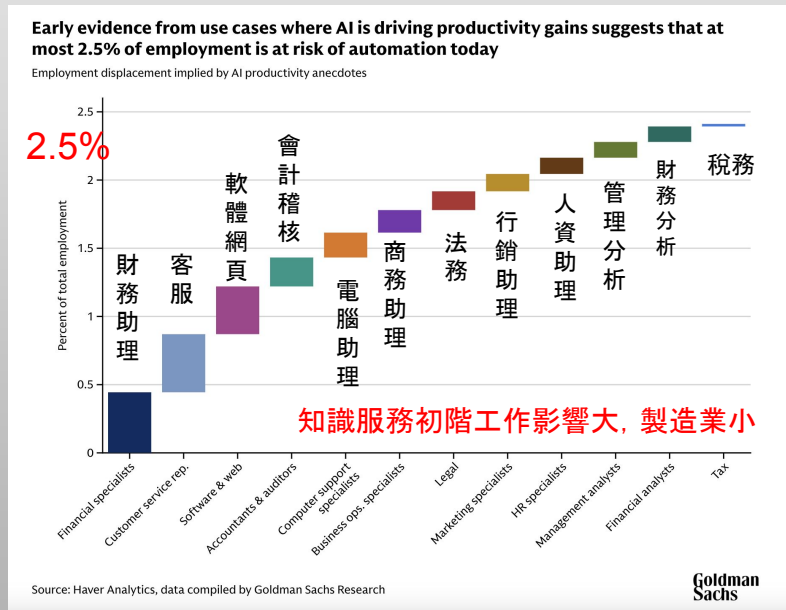
Change in number of posts for automation-prone jobs,
compared to manual-intensive jobs
Relative to launch of ChatGPT



Source: Ozge Demirci, Jonas Hannane, and Xinrong Zhu

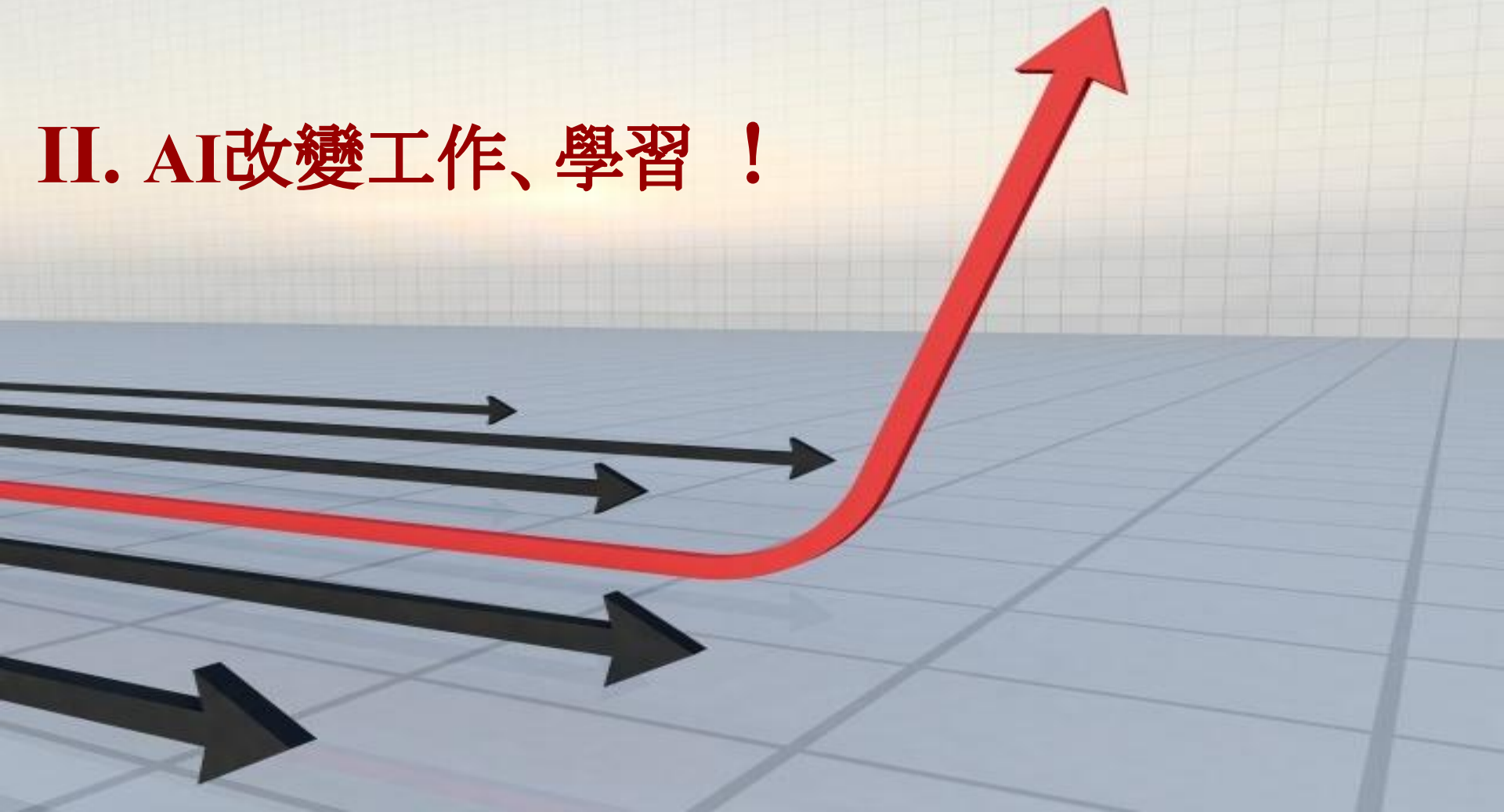
HBR

AI賦能：2.5%白領工作受影響 (8/13/2025)



<https://www.goldmansachs.com/insights/articles/how-will-ai-affect-the-global-workforce>

II. AI改變工作、學習 ！



AI 改變工作方式

AI Changes the Way We Work

AI同事出現

- AI 司機
- AI 搬運工
- AI 翻譯、美編 ...

與AI同事共創

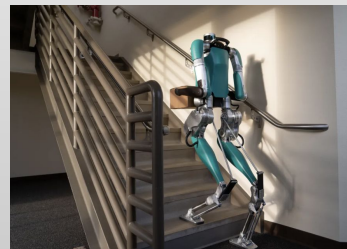
- 調整工作流程
- 導入AI服務
- 員工賦能
- 企業AI轉型

舊金山/LA
WayMo 無人計程車
每週15萬增加到**25萬**人次付費



Waymo

Amazon 人型機器人
庫房搬箱 (Q1) 到府卸貨 (Q2)

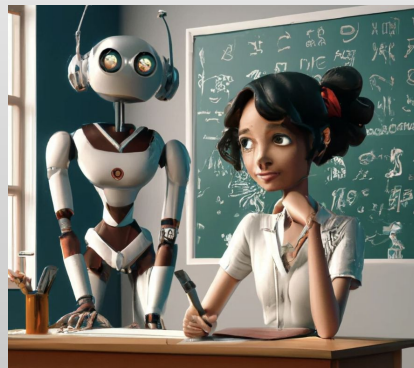


Amazon Digit

AI改變學習方式

AI Changes the Way We Study

- 現況
 - AI高分通過美國醫師、律師考試
 - 台灣指考可以上台大醫科 (英數物化生物)
- AI 家教 (EX: Notebooklm)
 - 課程影音逐字稿: 摘要、問答
 - 課後複習、考前猜題
 - 個人學習模型, 長時間累積
- 未來
 - 教科書? 未來老師? 學生大腦外包?

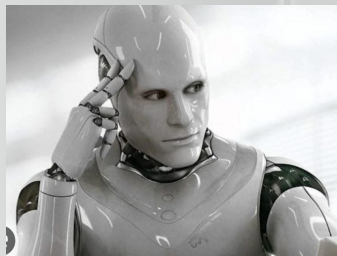


Source: The-Decoder

AI Keeps Getting Smarter!

2024: 語言理解、閱讀、問答、數學 → 2025: 推理、規劃、代理 ...

2024: Gemini達到奧林匹亞數學銀牌



towardsdatascience.com

2025: Gemini/GPT5 達到奧林匹亞數學金牌

2025: Gemini/GPT5達到 世界程式大賽金牌 (ICPC)

2025: Gemini 3 宣稱: 每項能力都是博士級、讓你實現夢想

5年內出現 AI 愛因斯坦、AI 牛頓 (Google 前董事長 Eric Schmidt)

1%超級人才: 1 Hour vs 1 Year

Google engineer says Claude Code built in one hour what her team spent a year on

 Matthias Bastian  Jan 4, 2026



Rapid Evolution of AI-Assisted Programming:

In 2022, systems could complete **individual lines**.

In 2023, they handled **entire sections**.

In 2024, they could work across **multiple files**
and build simple apps.

In 2025, they can create and
restructure **entire codebases**.

<https://the-decoder.com/google-engineer-says-claude-code-built-in-one-hour-what-her-team-spent-a-year-on/>

AI時代人才競爭力:人機協作能力

Human-AI Collaboration in Action

Top 1% 人才的人機協作力:

- 藥物發現週期壓縮 50%
- 罕見病預警診斷提前 1.2 年
- 建築設計時間從2週縮減至 6 小時
- 數小時內完成的全球市場銷售反應模擬

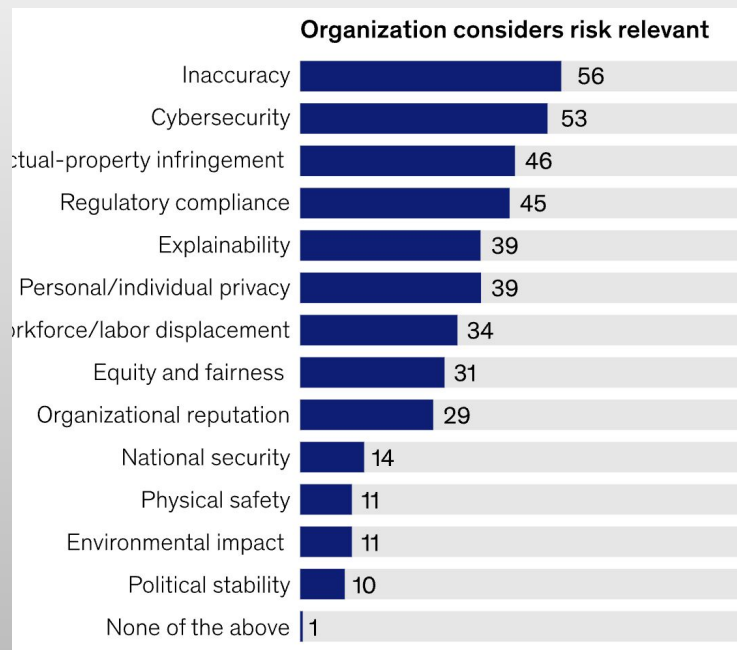
Answer by Gemini



Generated by Gemini

AI 是機會，也是風險

(AI comes at a Cost, not a Free Lunch)



Source: Mckinsey & Company

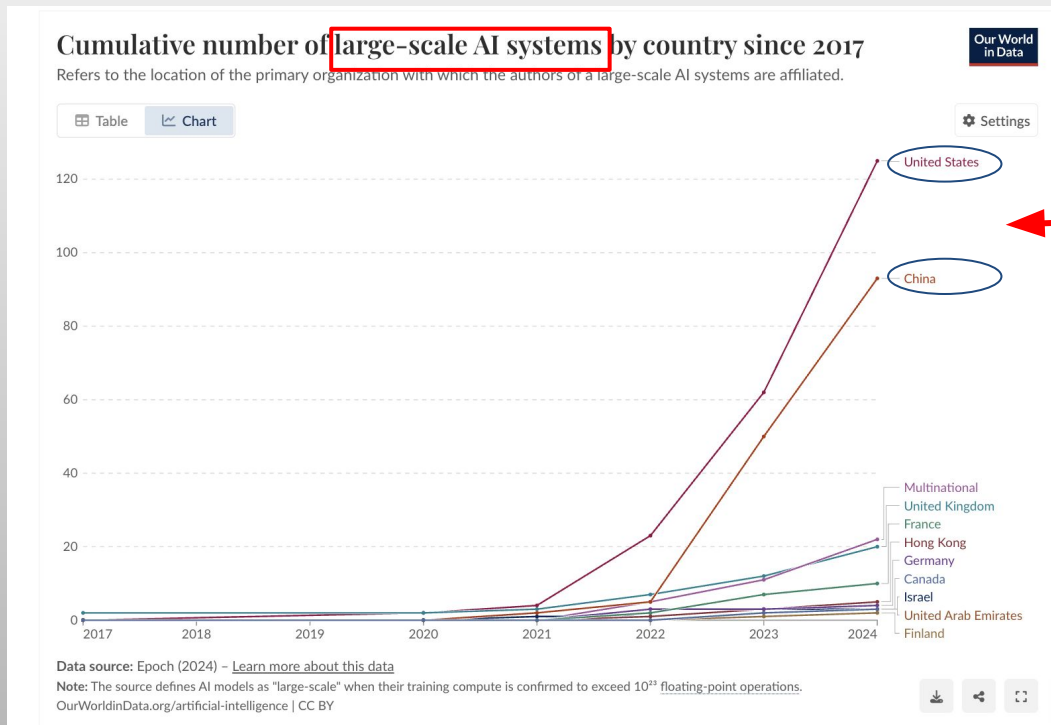
網路內容: AI Content Has Surpassed Human Content



(Image credit: Graphite)

AI Development is Centralized

AI 發展集中美、中兩國少數公司 (G2)



少數企業主導 AI:資源大於國家

Big 7 @ 21T
> China@19T

NV > UK

TSMC > TW



Country GDP Ranking

	Country/Territory	Forecast	Year
	World	113,795,678	2025
1	United States	30,507,217	2025
2	China	19,231,705	2025
3	Germany	4,744,804	2025
4	India	4,187,017	2025
5	Japan	4,186,431	2025
6	United Kingdom	3,839,180	2025
7	France	3,211,292	2025
8	Italy	2,422,855	2025
9	Canada	2,225,341	2025
10	Brazil	2,125,958	2025
11	Russia	2,076,396	2025
12	Spain	1,799,511	2025
13	South Korea	1,790,322	2025
14	Australia	1,771,681	2025
15	Mexico	1,692,640	2025
16	Turkey	1,437,406	2025
17	Indonesia	1,429,743	2025
18	Netherlands	1,272,011	2025
19	Saudi Arabia	1,083,749	2025
20	Poland	979,960	2025
21	Switzerland	947,125	2025
	Taiwan	804,889	2025
22	Belgium	684,664	2025

Company Market Cap Ranking

Rank	Name	Market Cap
1	NVIDIA NVDA	\$4.066 T
2	Microsoft MSFT	\$3.679 T
3	Apple AAPL	\$3.557 T
4	Alphabet (Google) GOOG	\$2.843 T
5	Amazon AMZN	\$2.477 T
6	Meta Platforms (Facebook) META	\$1.890 T
7	Broadcom AVGO	\$1.575 T
8	Saudi Aramco 2222.SR	\$1.512 T
9	TSMC TSM	\$1.262 T
10	Tesla TSLA	\$1.131 T

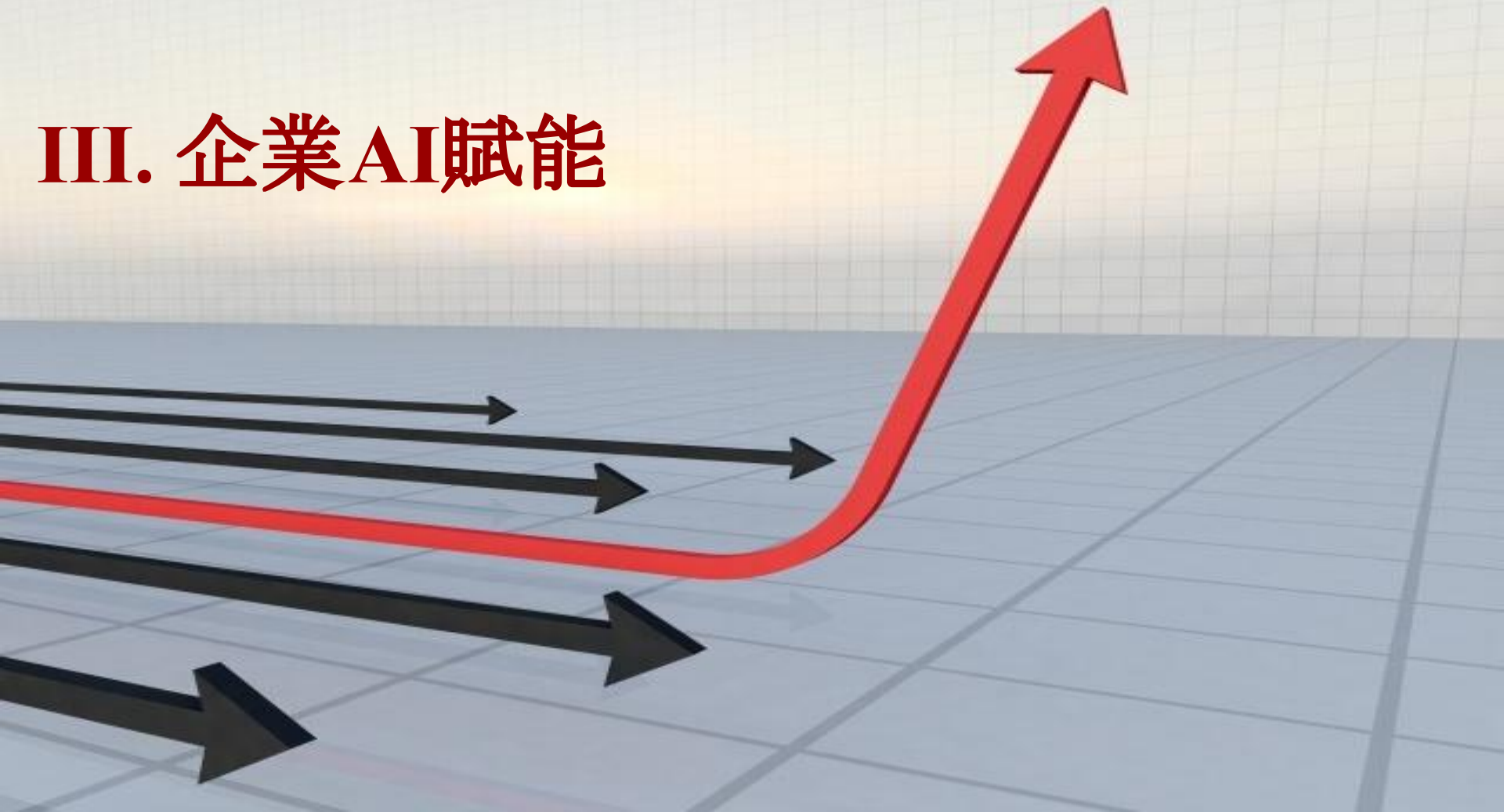
1:99的競爭

1% 的人/企業/國家贏得99%的能力與機會？



2024 行政院內閣AI訓練

III. 企業AI賦能



A New Era of Intelligence with Gemini 3

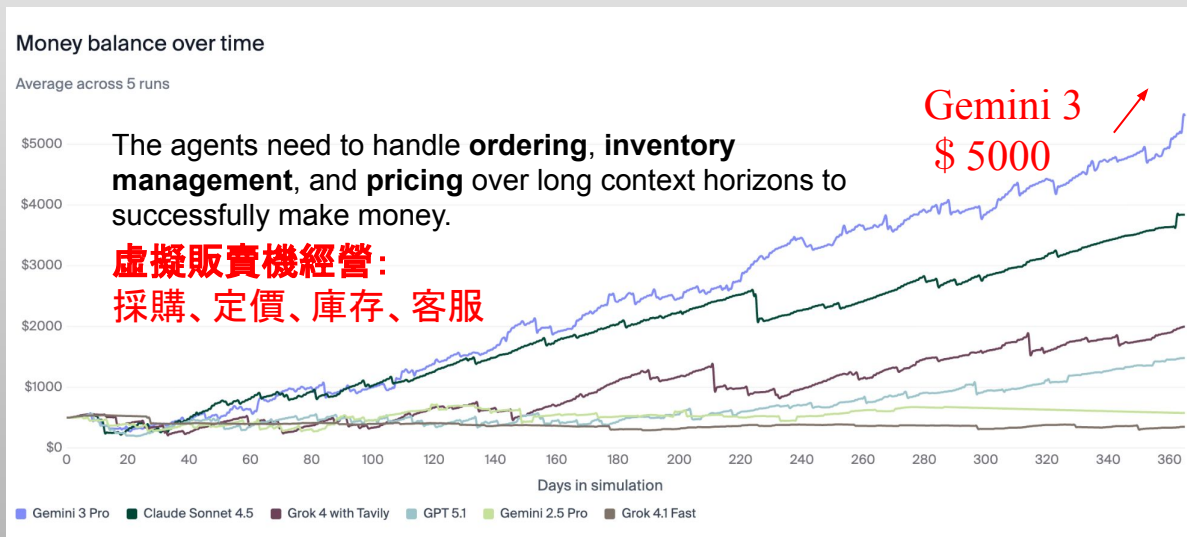
辨識意圖 (Intent), 深度思考 (Deep Thinking)

Benchmark	Description		Gemini 3 Pro	Gemini 2.5 Pro	Claude Sonnet 4.5	GPT-5.1
Humanity's Last Exam	Academic reasoning	No tools	37.5%	21.6%	13.7%	26.5%
		With search and code execution	45.8%	—	—	—
ARC-AGI-2	Visual reasoning puzzles	ARC Prize Verified	31.1%	4.9%	13.6%	17.6%
GPQA Diamond	Scientific knowledge	No tools	91.9%	86.4%	83.4%	88.1%
AIME 2025	Mathematics	No tools	95.0%	88.0%	87.0%	94.0%
		With code execution	100%	—	100%	—
MathArena Apex	Challenging Math Contest problems		23.4%	0.5%	1.6%	1.0%
MMMU-Pro	Multimodal understanding and reasoning		81.0%	68.0%	68.0%	76.0%
ScreenSpot-Pro	Screen understanding	多模態	72.7%	11.4%	36.2%	3.5%

Credit by Google

From Utility Problems to Real-World Economy Tasks

從開發者/使用者視角, 到營運經理視角



<https://andonlabs.com/evals/>

AI從問答到代理

推理、規劃能力提昇, 任務型代理可行



B2C:
購物、找工作、找房子、填資料 ...

B2B:
做紀錄、排行程、分析、稽核、預警 ...

<https://medium.com/@jinglin.lee/at-your-service-how-ai-agents-are-redefining-the-future-e594ac4bd215>

前進通用AI道路？

通用 AI : Artificial General Intelligence (AGI)

Stages of Artificial Intelligence



Level 1	聊天	Chatbots, AI with conversational language
Level 2	推理	Reasoners, human-level problem solving
Level 3	代理	Agents, systems that can take actions
Level 4	創造	Innovators, AI that can aid in invention
Level 5	管理	Organizations, AI that can do the work of an organization

Source: Bloomberg reporting

AI Takes over Coding

Programmer from Writing Code to **Edit** Code

35%+

GOOGLE'S SHOCKING MOVE: 25% OF ITS CODE IS NOW AI-GENERATED!



Software Industry: 2011 vs 2025

2011: “Software is Eating the World”

軟體正在吞噬世界！

- Winners: digital platforms
 - 書店：Amazon, bookseller
 - 影視：Netflix, video service
 - 音樂：Apple's iTunes, music site
 - 電影：Pixar, movie production
 - 行銷：Google, marketing platform
 - 電信：Skype, telecom
 - 招聘：LinkedIn, recruiting firm
 - 旅店：Airbnb, hotel
 - 運輸：Uber, taxi
- 都是軟體公司 (All software/internet companies)

所有產業 → 軟體企業

2025: “AI is Transforming the Software Industry”

- 搜尋: Search Engine to Answer Engine, Action Engine (Agent)
- 內容: Human-Created to AI-Generated
- 程式: Write Code to Edit Code, Coding by AI
- 廣告: SEO to Generative Engine Optimization (GEO)
- 商務: E-Commerce to A-Commerce
- 瀏覽: Web Browser to AI Browser, Personal AI Assistant
- Web: Design for “human reading” to “machine reading”
- 網路: Web to Agentic Web

軟體企業 → AI企業

AI Shopping: a New Game Changer

Salesforce estimates that AI will drive over **20%** of holiday sales this year.

Shopping inside Answer Engine

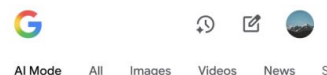
- . Gemini Shopping
- . ChatGPT's Instant Checkout + Walmart
- . Perplexity's Buy with Pro

AI Shopping Features

- . Conversational Search
- . AI Recommendation
- . Agentic Checkout

代理結帳

71% of consumers want generative AI integrated into their shopping experiences, both in digital and physical stores (Capgemini's 2025 report).



can you recommend a face cream to fight winter chapped skin

10 sites

推薦

For winter chapped skin, **dermatologists recommend rich, thick creams and balms with hydrating, protective ingredients like ceramides and hyaluronic acid.** These moisturizers help to replenish and strengthen the skin's moisture barrier, which is weakened by cold temperatures and dry air.

Here are some top-rated options at different price points:

Heavy-duty winter balms



La Roche-Posay Cicaplast Balm B5
\$18.99
4.8 ★ (9K+) · Ulta Beauty & more

This versatile balm soothes and hydrates cracked and chapped skin with ingredients like vitamin B5 (panthenol), shea butter, and glycerin. Its thick consistency can feel like a "slugging" routine without the greasiness, making it ideal for treating very dry patches.

Results for illustrative purposes and may vary. Available in the US. In English. To users 18+.

Image Credit: Google



La Roche-Posay...

compare these two for sensitive skin

lightweight daily moisturizer for maintaining a healthy barrier.

Feature comparison

比較



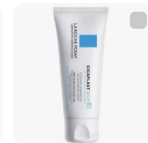
La Roche-Posay Toleriane Double Repair...
\$25.99
4.1 ★ (4K+)

Primary purpose

Replenishes moisture and restores the skin's protective barrier.

Key ingredients

Ceramide-3,
Niacinamide (Vitamin



La Roche-Posay Cicaplast Balm B5...
\$18.99
4.8 ★ (9K+)

Primary purpose

Soothes, protects, and repairs chapped, dry, and irritated skin.

Key ingredients

Panthenol (Vitamin B5),
Marlacassonide Zinc.

Results for illustrative purposes and may vary. Available in the US. In English. To users 18+.

Image Credit: Google

“Human-AI Teaming” in the Workforce

職場出現人機協作、自然對話工作模式

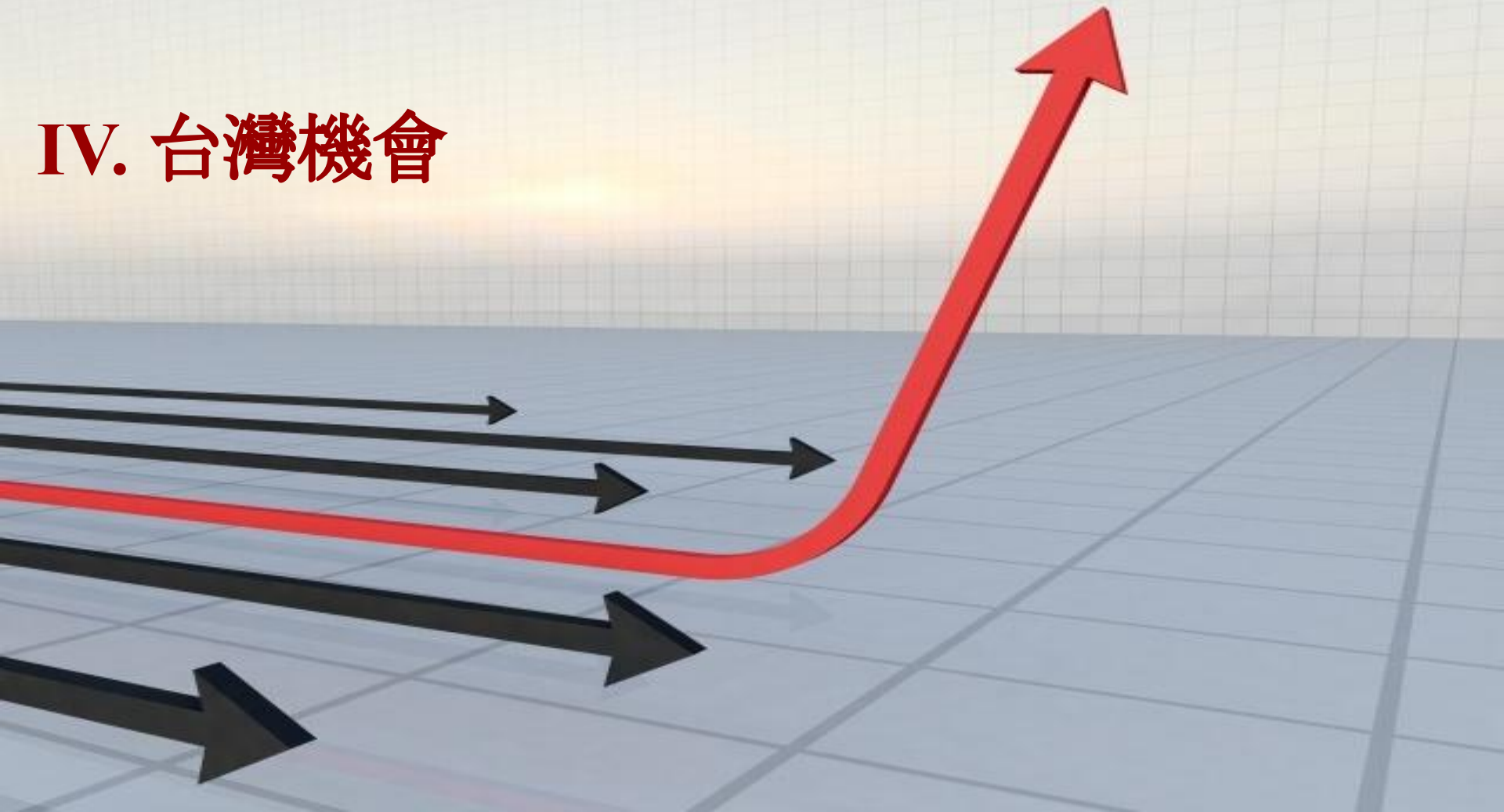
人機協同服務

- 客服：
 - 客服 + AI代理資料庫查證
- 廣告投放：
 - 行銷經理 + AI代理數據分析
- 招聘：
 - HR, AI 代理收集履歷、評估



Generated by Gemini

IV. 台灣機會



台灣股市受惠 AI (9th-11th)

Taiwan Stock Market Benefits from AI



<https://en.macromicro.me/series/8098/tw-market-cap-usd>

Countries ranked by Market Cap		
↑	Name	Market cap ↓
1	United States	\$67.555 T
2	China	\$10.754 T
3	Japan	\$6.226 T
4	India	\$4.395 T
5	United Kingdom	\$4.125 T
6	Canada	\$3.559 T
7	France	\$3.193 T
8	Germany	\$2.902 T
9	Switzerland	\$2.673 T
10	Taiwan	\$2.379 T
11	Saudi Arabia	\$2.289 T
12	Australia	\$1.867 T
13	South Korea	\$1.564 T
14	Netherlands	\$1.536 T

<https://companiesmarketcap.com/all-countries/>

台灣角色:看不見的 AI (Invisible AI)

Amazing Hardware, Software is Terrible!



Google's Former CEO Eric Schmidt, 2024/08 @ Stanford

AI in Taiwan?

三優勢

- 美國AI需要台灣**半導體、硬體製造**
 - 半導體、AI Servers、AI Edge Devices
- 美國製造需要**切割紅色供應鏈**
 - 無人機、機器人
- **高齡社會**黃金十年:缺工商機



<https://elderlawadvocates.net/2023/06/22/the-impact-of-artificial-intelligence-on-aging-populations/>

AI in Taiwan?

三挑戰

- 沒有自己**AI軟體**行嗎？
 - 繁中模型優化：法律、政府、教育文化差距大
- 沒有**使用AI**行嗎？
 - 生產力提高？競爭者彎道超車？
- **軟體人才**不足怎麼辦？
 - AI世代面臨少子化、M型化



<https://elderlawadvocates.net/2023/06/22/the-impact-of-artificial-intelligence-on-aging-populations/>

AI 救台灣？個人賦能、延緩缺工、機器人到來

圖表 6：1970 年代至 2070 台灣出生率及預測出生率



- 1971 年（含）以前資料不包含金門縣及連江縣。
- 2025 年（含）以後為推估值。

資料來源：國家發展委員會人口推估調查系統

https://pop-proj.ndc.gov.tw/Custom_Fast_Statistics_Search.aspx?d=H08&m=81&n=235&sms=10365&Create=1

Edge AI: Various & Emerging

智慧汽車、無人機、工業機器人、醫療儀器

- **Autonomous Driving:** Cars process data locally for immediate decision-making, where latency is a major concern.
- **Industrial Automation:** For real-time monitoring and predictive maintenance in factories.
- **Consumer Electronics:** Smartphones, smartwatches, and other wearables are increasingly using on-device AI for enhanced user experience and privacy.
- **Healthcare:** Wearable health monitoring devices and other medical equipment use local processing to ensure data privacy and provide instant feedback.

舊金山/LA
WayMo 無人計程車
每週15萬增加到25萬人次付費

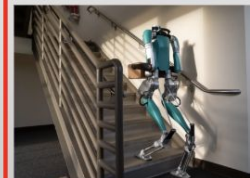


Waymo

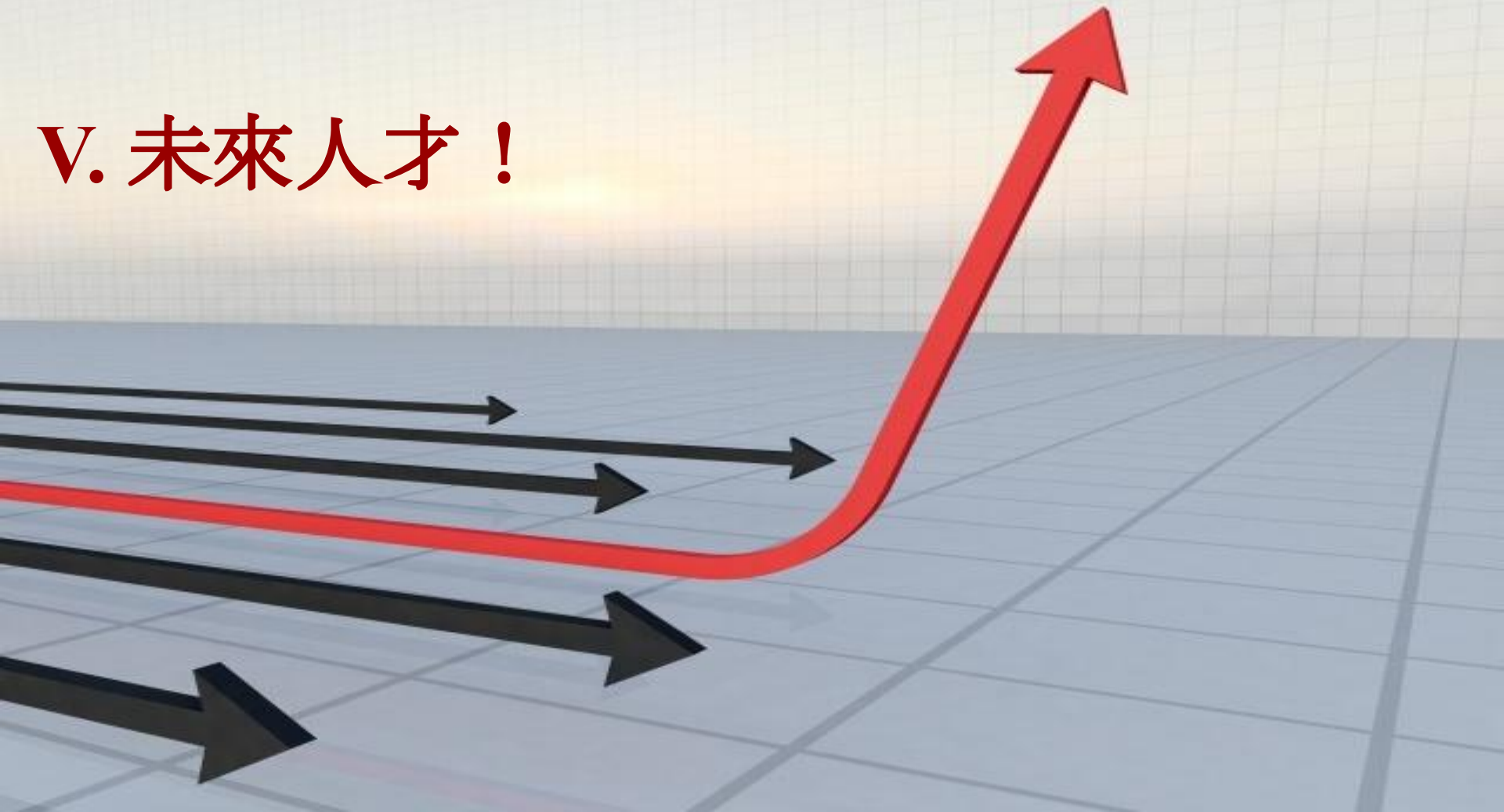
Amazon 人型機器人
庫房搬箱 (Q1) 到府卸貨 (Q2)



Amazon Digit



V. 未來人才！



AI並非萬能

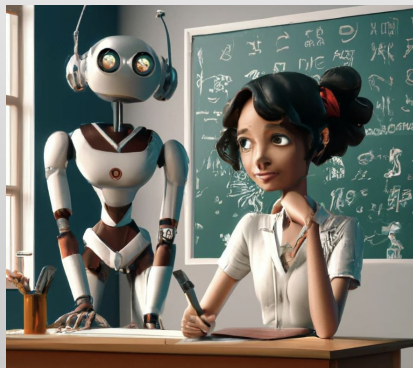
“AI beats humans on some tasks, but not on all.” (Stanford AI Index 2024)

基礎：一億本書(40T)

擅長：閱讀、摘要、回答

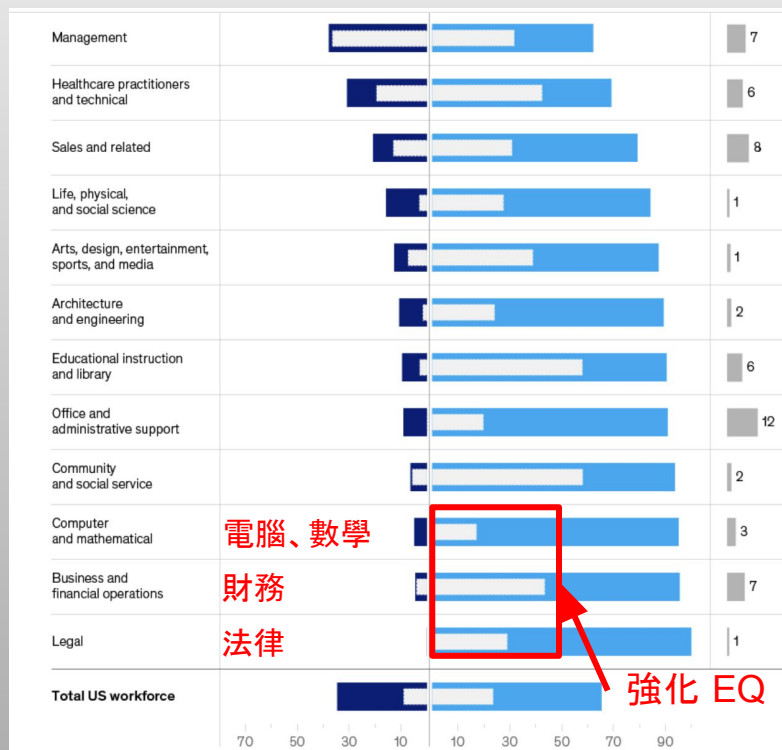
弱項：

- . 真實世界連結
- . 企業內隱知識
- . 物理世界知識
- . 人類靈巧、同理心



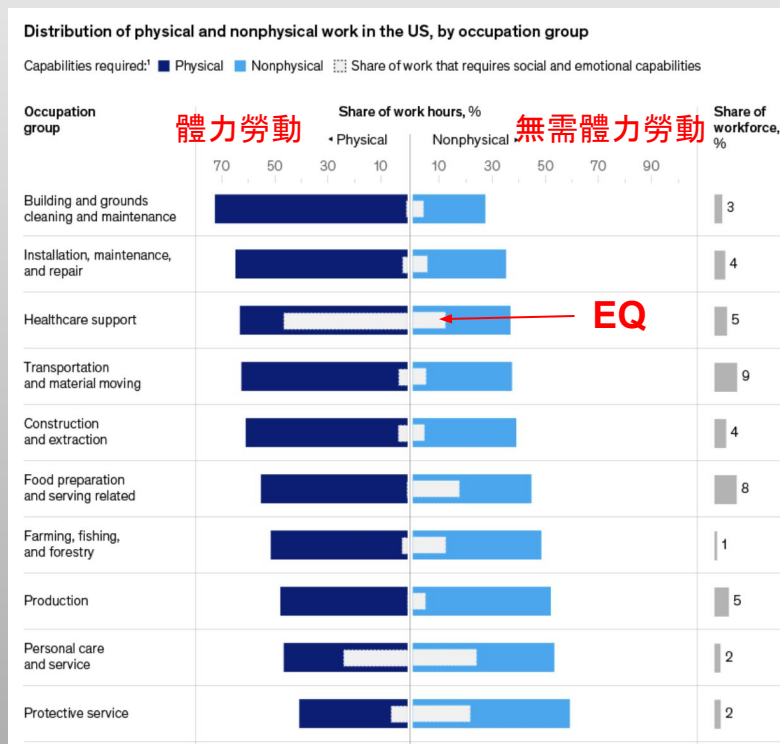
Source: The-Decoder

受影響少的工作：需要實體勞動、人際互動



受影響少的工作：需要實體勞動、人際互動

安裝修理
健康照護



軟實力重於硬實力

Soft Power is more Important

- 軟實力更加重要

- 德智體群美

- AI 輔助學習

- 80分才算及格
- 問對問題, 比解題重要

- 更高資訊素養

- 資訊運用與正確性判斷

未來人才需要的技能

- 提問表達

Why (發掘問題), 比How 重要

- 同理心

關懷、了解需要、幫助別人

- 思考、判斷

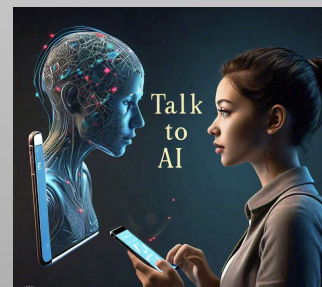
思辨/批辦, 質疑的勇氣

- 合作、協商

- 領導力

問問題：解決問題，問問題：直接學習

- AI is Your Personal Tutor
 - 不要浪費24小時陪伴的AI愛因斯坦、AI牛頓
 - 學習透過AI教自己
- From Teacher/System Initiative to Student/User Initiative
 - 以前：老師主導講授、學生聽
 - 未來：學生主導提問、AI老師回答
- 培養學習慾望、建立系統性思考(Systematic Thinking)



從問好問題開始

(Good Answers Come from Smart Asks)



可以告訴我如何問chatgpt好問題, to create effective prompts ?



確實，提問ChatGPT好問題需要一些技巧。以下是一些建議，可幫助您創建有效的提示：

1. **具體性**：提問時要盡量具體。明確指定您想要的信息或回答的細節。例如，不要問"告訴我有關太陽的信息"，而應該問"太陽的結構和作用是什麼？"
2. **清晰性**：語言要清晰明瞭，避免模糊或含糊不清的提問。確保您的問題容易理解，不會引起混淆。
3. **上下文**：提供足夠的上下文信息，以幫助ChatGPT理解您的問題。您可以提供有關主題、時間背景、地點等的背景信息。
4. **禮貌**：以禮貌和尊重的方式提問。儘量使用禮貌詞語，這樣ChatGPT也會以同樣的方式回應。
5. **單一主題**：避免一次性問太多問題或包含多個主題，因為這可能會導致混亂的回答。
6. **打破大問題**：如果您的問題很大或很複雜，考慮將其分解為幾個較小的問題，然後逐個提問。
7. **詢問具體事實**：如果您想獲得特定事實或數據，請明確詢問。例如，"美國的人口數是多少？"
8. **引導性問題**：使用引導性問題來引導ChatGPT提供更深入的回答。例如，"為什麼太陽會發光？"然後再問"太陽的能量來自哪裡？"
9. **反問法**：使用反問法來引起更深入的思考。例如，"你認為.....嗎？"這樣可以鼓勵ChatGPT提供更多見解。
10. **檢查回答**：在接受ChatGPT的回答之前，檢查是否回答了您的問題，如果需要，可以進一步追問或澄清。

● 提問舉例

Q: 我如何準備跑馬拉松？

Better Q: 你是運動教練，我是一名初學者跑步者，從未參加過馬拉松比賽，但我想在六個月內完成一場。我該如何為馬拉松做好準備？

小心大腦外包 (Outboard Brain)

拇指姑娘：頭手分離 (Serres, Michel ; 塞荷, 米榭)

- 計算外包
- 記憶外包
- 閱讀外包
- ...
- 學習外包
- 決策外包
- 思想外包



西元250年前後，巴黎主教聖德尼在羅馬皇帝德西烏斯迫害基督教時殉教。傳聞他被斬首後仍拾起頭顱邊走邊講道，長達十公里。（木刻版畫〈聖德尼帶著他的頭〉
St. Denis Carrying His Own Head, 1826.）

讓自己成為 π 型人才



★ CEO Stars

But I Don't Want to be a Giant Killer

能成為AI的指揮家！

能協助AI與人溝通！

能管理AI與人類同事！

“Knowledge Economy is on the Way out”

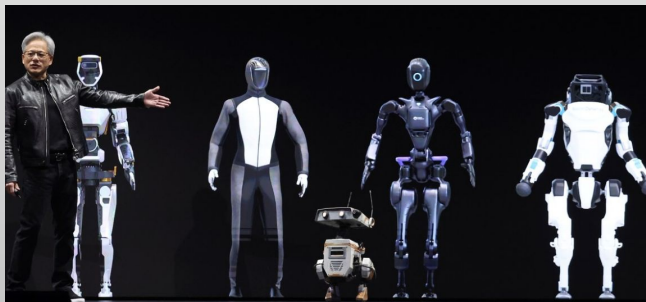
知識經濟到 創新經濟

The “knowledge economy is on the way out” as artificial intelligence disrupts global workforces, says Aneesh Raman, chief economic opportunity officer at LinkedIn.

Instead, we are entering the “**innovation economy**” where human skills such as **creativity**, curiosity, courage, compassion and **communication** will be key, he said.

成為 *AI* 的指揮家！

Becoming the Conductor of AI



Nvidia

繫好安全帶，準備起飛！

Thanks!

