FUTURE TRENDS

Report

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TRENDS
RESEARCH & ADVISORY

Future Trends Report

Future Trends Report, published in English and Arabic by TRENDS Virtual Office in Montreal, stands out as a distinctive publication dedicated to highlighting:
1. the most important forward-looking studies that aim to identify future trends, analyze various variables that may influence these trends, and determine the best future scenarios.
2. the most important applied studies that explore the application of knowledge, scientific theories, and information to solve current problems and overcome future challenges.
3. the most important illustrative and graphic forms that visually summarize significant studies, helping readers understand the trends and challenges of the future world.

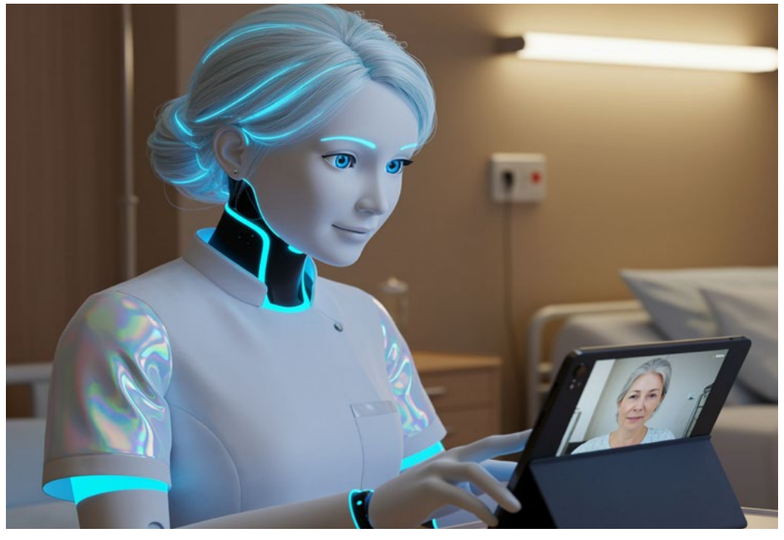
Contents

1 Prospective research

A Bilingual Arabic-English AI Scribe for Clinical Documentation

Khan, U. T., Khan, A. T., Aljaadi, W., Alhadlaq, R., Baqashmer, Z., Alsafi, Y., & Altamimi, S. A. S. (2026). A Bilingual Arabic-English Ambient AI Scribe for Clinical Documentation: Prospective Evaluation Study. JMIR Medical Informatics, 14, e83335.

This article explores the creation and assessment of a bilingual ambient AI scribe aimed at streamlining clinical documentation in both Arabic and English. It highlights a notable deficiency in current research, which has predominantly concentrated on English-language systems.



This focus overlooks the reality that in many Arabic-speaking regions, doctors often conduct consultations in Arabic while writing notes in English, leading to an increased cognitive load. The study presents "Sahl AI," a system designed to interpret spoken clinical interactions and produce organized medical records, with the goal of alleviating the burden of documentation and enhancing workflow efficiency.

The research employs a prospective, single-arm feasibility approach and is carried out in various clinical settings throughout Saudi Arabia, including outpatient, inpatient, and primary care facilities. The study is divided into two stages: the first involves the manual annotation of recorded consultations to train and improve the AI system, while the second phase assesses the system's performance in real-world clinical practice. To evaluate effectiveness, a modified version of the Physician Documentation Quality Instrument (PDQI-9) was utilized, along with surveys for physicians to gather feedback on their experiences and the perceived advantages of the system.

The results have shown that the system produced high-quality documentation outputs, as evidenced by high scores in various domains such as accuracy, internal consistency, and comprehensibility. During the implementation phase, the AI system produced high-quality results for both Arabic and English languages, though slightly higher for English. The physicians' experiences were mostly positive, as noted in the paper, emphasizing that the results were comprehensive, easy to use, and possibly time-saving. Moreover, most physicians were of the view that the system can alleviate cognitive burden and burnout, a recognized problem related to digital health systems.

However, the study has limitations, such as a small sample size, a lack of integration with electronic medical records, and a lack of a safety audit to assess the clinical risks associated with inaccuracy. Additionally, further research is necessary to assess the impact on other factors, such as time savings and the quality of patient interactions. The article concludes that the potential for bilingual ambient intelligent scribes such as Sahl AI to positively impact the quality and efficiency of clinical documentation is high while providing a foundation for further research and implementation in the context of global health.

Sahl AI is an ambient AI scribe that streamlines clinical documentation by interpreting spoken clinical interactions and generating organized medical records in both Arabic and English.

Prospective research

Conversational AI System for Medical Diagnosis: Assessment

Brodeur, P., Koshy, J. M., Palepu, A., Saab, K., Homiar, A., Ruparel, R., & Rodman, A. (2026). A prospective clinical feasibility study of a conversational diagnostic AI in an ambulatory primary care clinic.

This paper represents one of the first real-world assessments of a conversational artificial intelligence system intended for assistance in medical diagnosis through interaction with the patient.

It specifically examines the application of "AMIE," a large language model-based system for clinical conversation with the patient before the actual in-person visit in order to improve the quality of diagnosis.

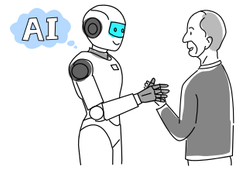
The study appears to address one of the major gaps in previous research on the application of artificial intelligence in medical diagnosis, which has thus far relied on simulated and retrospective experiences. In this study, about 100 patients in an ambulatory urgent care setting interacted with the AI system before being seen by a physician. During this interaction, the AI system gathered information from the patient, including histories and follow-up questions, and provided a series of outputs, including summaries and differential diagnoses, which were then given to primary care physicians before the actual visit.

The diagnoses were determined by follow-up and review of the patient charts to establish a reliable ground truth. The performance was evaluated by rating the AI system's performance in comparison to the human physicians in terms of the quality of communication, the quality of the diagnoses provided, and the overall clinical utility of the system.

The results of the study showed that the performance of the AI system was comparable to that of the human physicians in several areas. The lists of possible diagnoses provided by the system contained the actual diagnosis in the top spot quite frequently. The quality of the performance was even better if the actual diagnosis was considered in the top few possibilities. The system was also able to communicate well with the patient by identifying the patient's concerns and structuring the clinical information in a useful way for the human physicians. Both the patients and the human physicians were positive about the system.

The main contribution of the research lies in the fact that the authors have demonstrated the end-to-end integration process, ranging from the interaction between the patient and the AI to the physician and the decision-making process. Unlike other research on chatbots, the authors have also evaluated the impact of the information generated by the AI on the process. According to the authors, the research has demonstrated the potential for the use of a conversational AI system in the preparatory process in the field of healthcare.

The AI system's performance is comparable to the human physicians in several areas.



The quality of the AI system's performance is even better if the actual diagnosis is considered in the top few possibilities.

Prospective research

The Promise and Peril of AI in MENA's Transregional Future

Dguidegue, Y. (2026). The Promise and Peril of AI in MENA's Transregional Future: Solidarity or Further Disparities?. Middle East Critique, 1-22.

This article discusses the rising trend of the use of conversational artificial intelligence in health communication, with specific attention to both the revolutionary possibilities and the ethical, social, and structural risks involved.

The authors place the recent developments in large language models in the larger context of the move toward digitally mediated healthcare, in which AI-powered chatbots increasingly facilitate the provision of health-related information and direct patient interaction. The capacity of these technologies to produce human-like responses in real-time makes them the new intermediaries between patients and health care services.

The author observes that the use of conversational AI in both clinical and non-clinical health communication domains is rapidly expanding. The use in clinical domains ranges from triage and patient monitoring to diagnostic assistance. The use in non-clinical domains ranges from health-related educational services to translation and administrative assistance. The expansion of the use of conversational AI in health communication reflects the general move toward efficiency and ease of access in healthcare systems, especially in systems where resources are limited.

Another important issue raised in the article is the accuracy and reliability of information provided by AI technology. This is mainly due to the large amounts of data used in training these systems, which may be unreliable or too general. This can have negative effects in the medical field, as providing false information can have significant consequences. According to the authors, these issues are not random and may disproportionately affect those with lower digital or healthcare literacy.

Another important issue raised in the article is the ethics of AI technology. This mainly involves issues of privacy, responsibility, and trust, particularly due to the integration of conversational AI technology into patient interactions. This integration has blurred the lines between human beings and AI technology, raising questions regarding responsibility for providing medical information and obtaining informed consent. Ethical theories based on beneficence, non-maleficence, autonomy, and justice are important in evaluating AI technology.

Most notably, the author highlights that while innovation is not enough to guarantee a successful outcome, it is imperative to ensure that design is inclusive and takes into consideration issues related to language, culture, and socioeconomic factors. It is also important to have stronger regulation to ensure accuracy and safety. Overall, the article concludes that while conversational AI is promising with regard to improving healthcare communication and access, it is important to consider the ethical implications.

AI tools' ability to generate human-like responses in real time makes them new intermediaries between patients and healthcare services.

While innovation alone does not guarantee success, inclusive design remains essential, with careful attention to language, culture, and socioeconomic factors.

Prospective research

Geopolitics of Interconnectivity

Aminjonov, F. (2026). Geopolitics of interconnectivity: Central Asia's strategic pivot to the South. Third World Quarterly, 1-20.

In this article, the author seeks to analyze the implications of artificial intelligence, and conversational AI in particular, within the wider context of global development, focusing on how these technologies affect power relationships, knowledge production, and socio-economic inequalities between the Global North and the Global South.

The author contends that while AI technologies are seen as solutions for accelerating development, enhancing efficiency, and improving access to services and information, their deployment is often viewed as reinforcing inequalities. Much of the underlying infrastructure for AI development is seen as centered in high-income countries, thereby creating dependencies for countries in the Global South. This is perceived as potentially reinforcing forms of "digital colonialism," where data collected from marginalized communities is used to develop solutions that are mostly beneficial to actors in the Global North while limiting control and agency for those in the Global South. A major aspect discussed in the article is the role of conversational AI as an interface for users and institutions. Such interfaces are increasingly utilized in development environments for service delivery, information dissemination, and even engagement with citizens. Although these interfaces can play an important role in facilitating access in resource-scarce environments, particularly in areas with limited human resources, there are concerns over their suitability and appropriateness. The main reason for such concerns is that AI interfaces, particularly those based on data from Western cultures, often do not take into account linguistic, cultural, and social variations, thereby providing outputs that are unsuitable for diverse populations. The article also emphasizes governance-related concerns, which are pertinent to developing environments. The regulatory landscape in most developing regions is constantly evolving and is often unable to cope with the pace of technological advancements. This has raised concerns over various aspects, such as accountability, data privacy, and ethical issues, particularly when such technologies are deployed for critical applications such as healthcare, education, and governance.

Significantly, the author highlights that the impact of AI in development is not fixed or predetermined; it is instead shaped by the way in which these technologies are developed, delivered, and governed. Digital sovereignty is emphasized as one of the key ways in which more equitable development can be achieved. In the end, the article concludes that the potential of conversational AI and generative AI in achieving development is significant; however, the realization of these benefits will not be equitable unless the issue of inequality is addressed.

> **While AI technologies may accelerate development and improvement, their deployment can also reinforce inequalities.**

> **AI's impact on development is not predetermined; it depends on how these technologies are developed, deployed, and governed.**

Prospective research

AI Systems and Cognitive Skills

George, A. S. (2026). The Agent Economy: How Autonomous AI Systems Are Restructuring Knowledge Work, Capital Allocation, and the Architecture of Enterprise Value. Partners Universal Innovative Research Publication, 4(1), 1-41.

This article explores the effects of increased dependency on digital technology on human cognitive skills, with emphasis on the influence of technology such as smartphones, computers, calculators, and artificial intelligence.

Despite the obvious advantages of technology in terms of efficiency, ease of use, and access to information, the authors contend that increased dependency on technology has led to a gradual deterioration of human cognitive skills in critical thinking, problem-solving, and creativity.

One of the main ideas presented in the article is the concept that as technology assumes responsibility for cognitive processes such as memory recall, navigation, and other basic calculations, individuals engage in fewer and fewer mental processes. While the idea of engaging in fewer mental processes might be seen as a positive thing in the short term, the long-term effects on the brain's neural pathways associated with higher-order cognitive processes have the potential to weaken those pathways. By using neuroscientific metaphors, the authors compare the weakening of cognitive processes to the concept of muscle atrophy. Just as muscles will begin to weaken if they are not used, cognitive processes will also weaken if they are not exercised.

In addition to critical thinking, the article also explores the implications for creativity. In this case, creative processes require full involvement as well as independent idea generation. This aspect has seen significant influence from existing templates and technology-driven solutions. As people increasingly rely on technology-driven solutions for content generation, there is a possibility of stagnation in human-driven creativity, as they may become more inclined to apply existing ideas.

The article also examines the implications for education and society in general. For instance, the reduced emphasis on independent thinking and problem-solving may have significant effects on various aspects of human cognition. Furthermore, the article implies that technology-driven solutions might negatively affect human cognition, as they could render individuals incapable of performing in situations where technology is absent.

However, it is worth noting that the authors do not suggest completely discarding this technology. Rather, it is imperative to take a more balanced approach to both its advantages and disadvantages. The authors stress the need to develop cognitive skills through education, practice, and critical consumption of information. This involves creating an atmosphere where critical thinking, creativity, and independent thinking can thrive, even through technological means.

Dependence on technology has gradually eroded human cognitive skills, particularly critical thinking, problem-solving, and creativity.

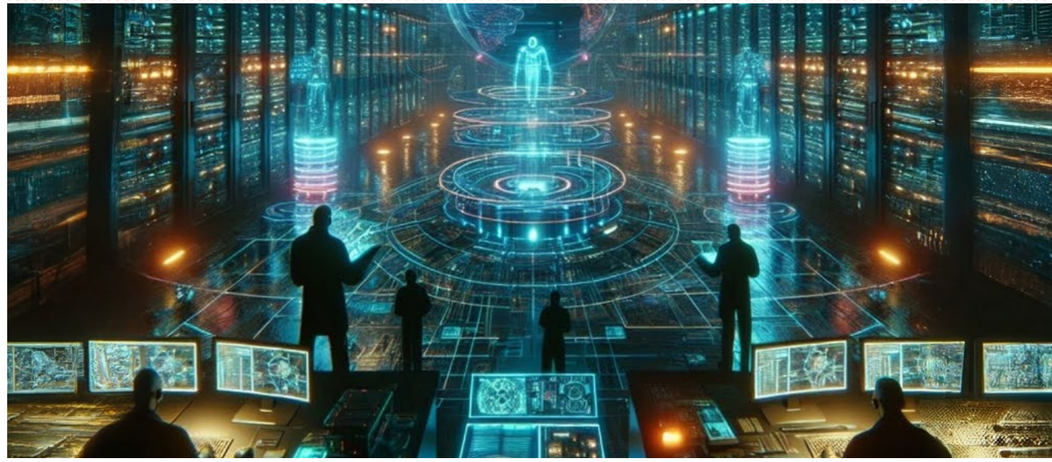
Technology-driven solutions may negatively affect human cognition by leaving individuals less able to function when technology is unavailable.

2 Applied research

AI in National Security: An Experts' Perspective

Hynek, N., Gavurova, B., Kubak, M., & Senk, M. (2026). Expert views on integrating robots, drones, cameras, and AI into critical infrastructure protection and national security: an opportunity for sustainable entrepreneurship. International Entrepreneurship and Management Journal, 22(1), 37.

The article presents experts' views on the role and potential of artificial intelligence-based technologies, including drones, ground robots, AI-based cameras and sensors, and integrated systems, in critical infrastructure protection and national security, with a special emphasis on their sustainability and entrepreneurial potential.



The research is based on a survey among 130 Czech experts from academia, government, and industry and aims to explore the role of socio-demographic factors in shaping attitudes toward these technologies and their potential impact on critical infrastructure protection.

The research is set against the backdrop of the transformation of modern society, which is characterized by the growing importance and interconnectedness of physical and virtual infrastructures, including energy, transportation, and communication infrastructures. In this context, AI-based technologies are introduced as critical tools to enhance monitoring, detection, and response capabilities. Drones provide fast and agile surveillance capabilities, especially in difficult terrain; ground robots allow for safe and controlled inspection and intervention; and AI-based cameras enable real-time detection of anomalies and suspicious behavior.

The results show significant differences in the perception of these technologies among experts based on gender, education, and employment sectors. In general, men tended to have higher confidence in the efficiency and appropriateness of these technologies, while women took a more cautious and even critical attitude. Education has also played an important role in shaping attitudes toward these technologies. Experts with technical and engineering education have shown stronger support for the idea that AI-based technologies would be beneficial for infrastructure protection, especially those technologies that combine two or more technologies.

Despite the overall positive attitudes toward AI-based security technologies, there have been significant reservations among the participants, especially regarding pervasive surveillance technologies in public spaces. Experts have expressed considerable concerns about privacy, ethical issues, and potential misuse, particularly in relation to facial recognition and surveillance. Nevertheless, there have been significant increases in support for their application in high-risk and strategic situations, particularly concerning military installations, borders, and infrastructure protection.

Overall, the authors of this study conclude that, while there is considerable promise for AI-driven security technologies to improve resilience and support sustainable development, there is also a need to balance technological optimism with ethical considerations, socio-demographic variations in perception, and inclusive and well-regulated strategies for implementation

AI-based technologies are introduced as critical tools to enhance monitoring, detection, and response capabilities.

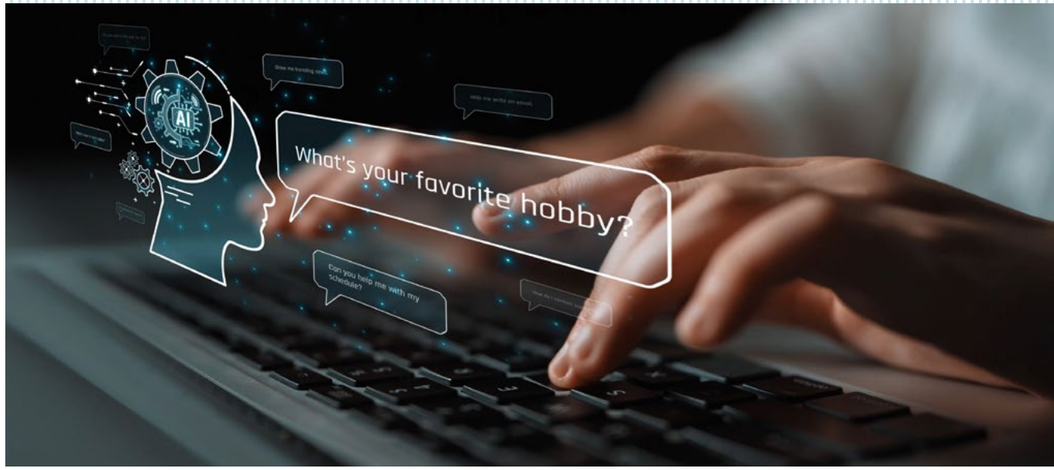
Experts raise strong concerns about privacy, ethics, and misuse of facial recognition and surveillance technologies.

Applied research

AI-Powered Threats and Solutions

Sarkar, A., Goswami, S. S., & Sahoo, S. K. (2026). AI-Powered Threats and Solutions: A Theoretical Analysis of Risks, Governance, and Ethical Safeguards. Applied Research Advances, 1-23.

This article examines the impact of conversational artificial intelligence in redefining the relationships between organizations, technologies, and users through the lens of network-based analytical perspectives.



The specific aspect under consideration is the impact of AI-based conversational agents in redefining the value creation process between organizations and users by facilitating interactions between them and redefining the associated resources. The key idea is not to consider AI as an agent in the value creation process between organizations and users; instead, it is seen as an active participant in the process.

The specific idea is that it can enable the creation of new value co-creation between users and organizations. The main idea is that the introduction of natural language-based interaction between users and organizations can facilitate continuous engagement between the two. It can be seen as different from the introduction of digital tools in the value creation process between organizations and users.

The article points out that this is achieved through the integration of various resources, including technological infrastructure, data, organizational capabilities, and human inputs. This is where conversational AI comes in, defined as an intersection where these resources are integrated to achieve various results, including improving customer service and increasing organizational efficiencies. However, this is a complex and often difficult process to reverse, especially as organizations become increasingly dependent on AI-based resources.

It is noted that while the value generated by conversational AI is clear, it is not entirely consistent. This is because it is defined as context-dependent, evolving, and often ambiguous. Various stakeholders, including providers and organizations, have different perceptions and understandings of the value generated by conversational AI. This is an important point to note, as it is not only the performance of the system that is considered but also social factors.

In the overall context of the above, the article concludes that the potential of the technology is such that it brings about a significant shift in the way value is created in the digital environment. It is not limited to how it can improve processes; it is more about how it can reconfigure the relationships between the different entities involved in the process. To fully tap the potential of the technology, it is necessary to adopt a holistic perspective that considers the complexities involved in the value creation process facilitated by AI.

Natural language interactions between users and organizations foster continuous engagement.

Technology's potential is transforming how value is created in the digital landscape.

Applied research

Towards a National AI Security Framework

Mehta, R., Patwar, N., Wei, X., Saunders, E., Zhu, X., & Liu, J. (2026). Towards a National AI Security Framework for Financial Infrastructure Protection. International Journal of Advance in Applied Science Research, 5(2), 39-50.

In this paper, the authors explore the increasing trend of integrating artificial intelligence technologies, especially those related to conversational AI, into the realm of digital marketing and service infrastructures, with specific emphasis on their role and impact on consumer decision-making and business models.

One of the major arguments is that conversational AI and other related technologies, including chatbots, voice search, dynamic pricing, and visual search, have a significant role to play in shaping consumer purchasing decisions. This is because these technologies allow businesses to have a much more interactive and personalized means of communication with their consumers, beyond the traditional and static means of marketing and engaging with their audiences.

The article focuses on the fact that the effectiveness of these technologies is based not only on their individual potential but also on their integration into the wider context of the "virtual customer experience" ecosystem. This means that these technologies are used in conjunction with each other in a digital environment that affects the way in which consumers receive them. This is proven by the study, which shows that the impact of these technologies on decision-making is greatly increased when they are used in conjunction with each other, thereby accounting for a large percentage of the variation in consumer purchasing behavior.

The authors also point out some of the most important thematic areas in the research, which include consumer engagement, sentiment analysis, trust in AI systems, predictive analytics, and big data. These thematic areas demonstrate the complexity of conversational AI, which is at the same time a tool for communication, analysis, and decision-making. This, according to the article, allows businesses to move from a reactive approach to a proactive approach.

At the same time, there are some challenges and gaps identified in the literature and practice. For example, trust, transparency, and data privacy are still significant issues, as users may be unwilling to trust AI-based recommendations without proper understanding of how these recommendations are developed.

Overall, the article reveals that conversational AI is revolutionizing digital marketing and consumer behavior in a fundamental way. However, the potential of conversational AI can be realized only if organizations are able to integrate these technologies into a coherent whole, while at the same time addressing challenges related to ethics, regulations, and trust in the digital world characterized by AI.

AI and other related technologies have a significant role to play in shaping consumer purchasing decisions.

Trust, transparency, and data privacy are still significant issues.

Applied research

AI in Applied Linguistics

Wang, C. (2026). A Critical Review of Exploring AI in Applied Linguistics.

The article provides a critical review of Exploring AI in Applied Linguistics, examining how generative AI is reshaping teaching, learning, assessment, and research in linguistics. It situates tools such as ChatGPT within a broader historical trajectory in which technological innovations have repeatedly influenced applied linguistics.

The book is structured into four thematic sections, each addressing different dimensions of AI integration, and is praised for offering a comprehensive overview of both the opportunities and challenges associated with these tools. A central theme is the role of AI in language acquisition. AI-powered tools—such as writing assistants, translation systems, and conversational agents—are presented as offering new forms of support for learners. These tools can facilitate vocabulary development, generate practice content, and simulate dialogue, making language learning more accessible and interactive. However, the review highlights important limitations. While AI can produce fluent and coherent text, it often struggles with accuracy, deeper interpretation, and contextual nuance.

The article also examines the growing use of AI in language assessment, including automated grading, feedback generation, and test design. AI systems can replicate certain aspects of human evaluation, particularly in written tasks, and may offer consistency across different assessments. Nonetheless, significant limitations remain. AI is less effective in evaluating complex language use, such as oral communication, pragmatic appropriateness, and adherence to task instructions. Additionally, the evolving nature of AI systems introduces variability in assessment outcomes, raising concerns about reliability.

Another important contribution of the article is its discussion of prompt engineering. The review emphasizes that the quality of AI outputs depends heavily on how users formulate prompts. This underscores the importance of AI literacy for both students and educators, as effective interaction with AI tools requires specific skills. The article also touches on the integration of AI into immersive learning environments, such as virtual reality, suggesting new possibilities for experiential language learning.

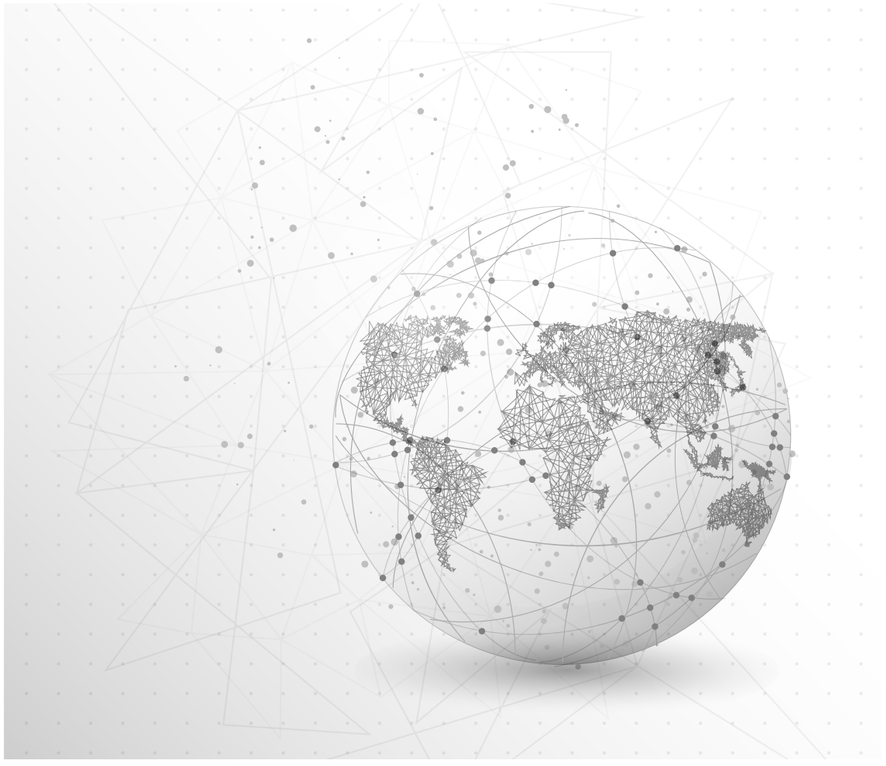
The implications for teachers are significant. Educators must develop new forms of technological and pedagogical knowledge to integrate AI effectively. While AI enables personalization and innovation, its use must be guided by clear pedagogical principles to ensure meaningful learning outcomes. The review also notes that current research remains largely exploratory, with limited empirical evidence regarding long-term effects on language proficiency.

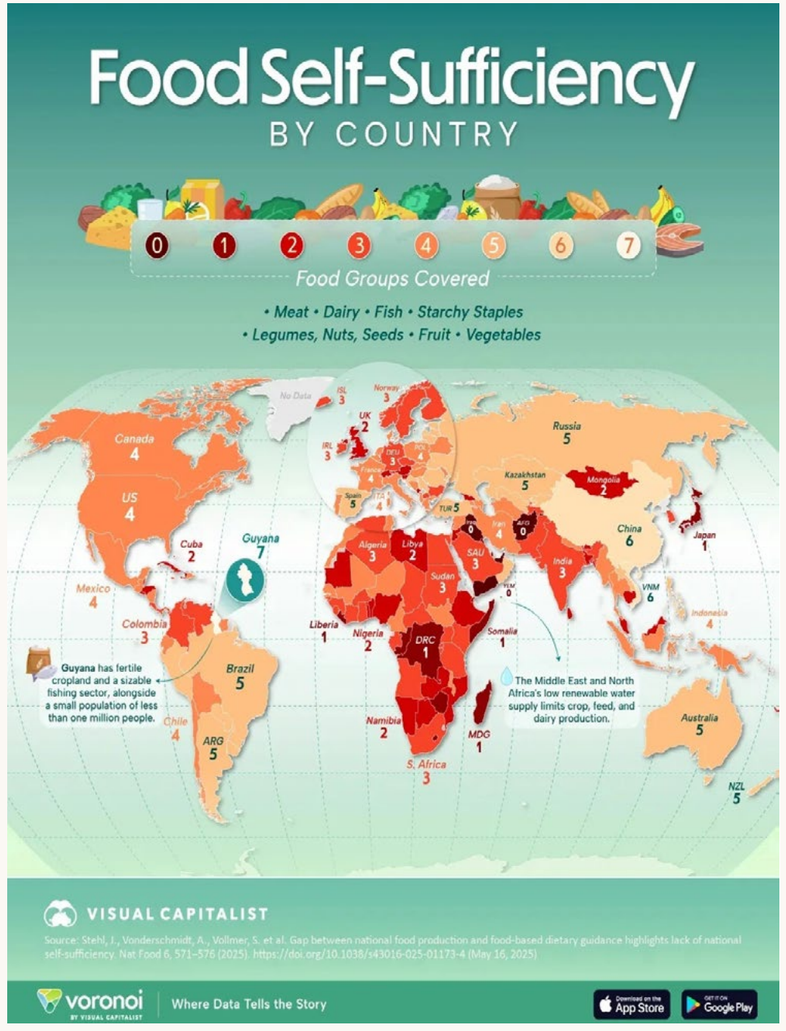
Overall, the article concludes that generative AI represents a major shift in applied linguistics, offering transformative potential while raising important pedagogical, methodological, and ethical challenges.

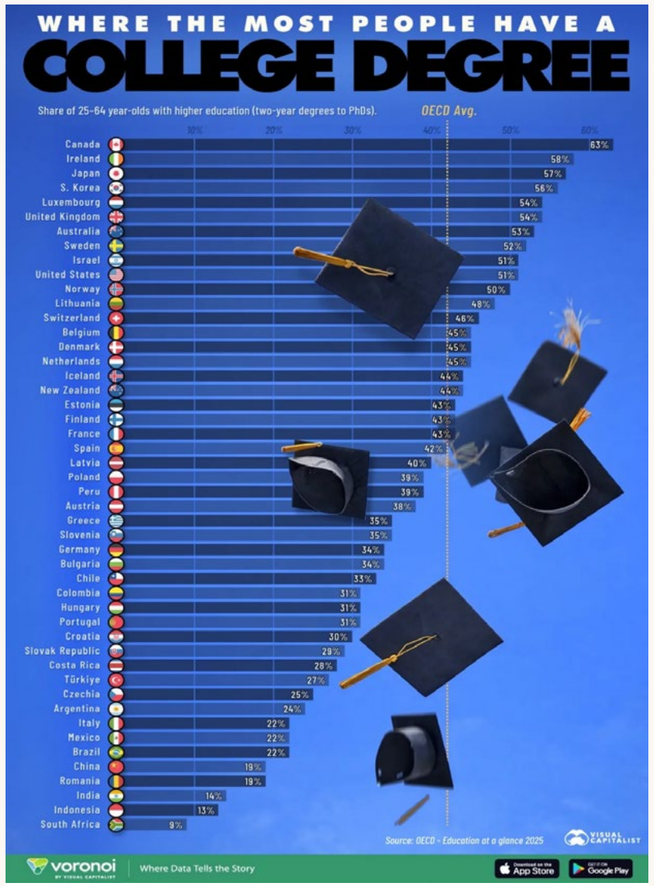
A key concern is that learners may overestimate AI and rely on generated content without critical evaluation or personal input.

AI marks a major shift in applied linguistics, offering transformative potential while raising key pedagogical, methodological, and ethical challenges.

3 The future in numbers






WHERE THE MOST PEOPLE HAVE A
COLLEGE DEGREE
Share of 25-64 year-olds with higher education (two-year degrees to PhDs).
OECD Avg.
10%
20%
30%
40%
50%
60%
Canada 63%
Ireland 58%
Japan 57%
S. Korea 56%
Luxembourg 54%
United Kingdom 54%
Australia 53%
Sweden 52%
Israel 51%
United States 51%
Norway 50%
Lithuania 48%
Switzerland 46%
Belgium 45%
Denmark 45%
Netherlands 45%
Iceland 44%
New Zealand 44%
Estonia 43%
Finland 43%
France 43%
Spain 42%
Latvia 40%
Poland 39%
Peru 39%
Austria 38%
Greece 35%
Slovenia 35%
Germany 34%
Bulgaria 34%
Chile 33%
Colombia 31%
Hungary 31%
Portugal 31%
Croatia 30%
Slovak Republic 29%
Costa Rica 28%
Türkiye 27%
Czechia 25%
Argentina 24%
Italy 22%
Mexico 22%
Brazil 22%
China 19%
Romania 19%
India 14%
Indonesia 13%
South Africa 9%
Source: OECD - Education at a glance 2025
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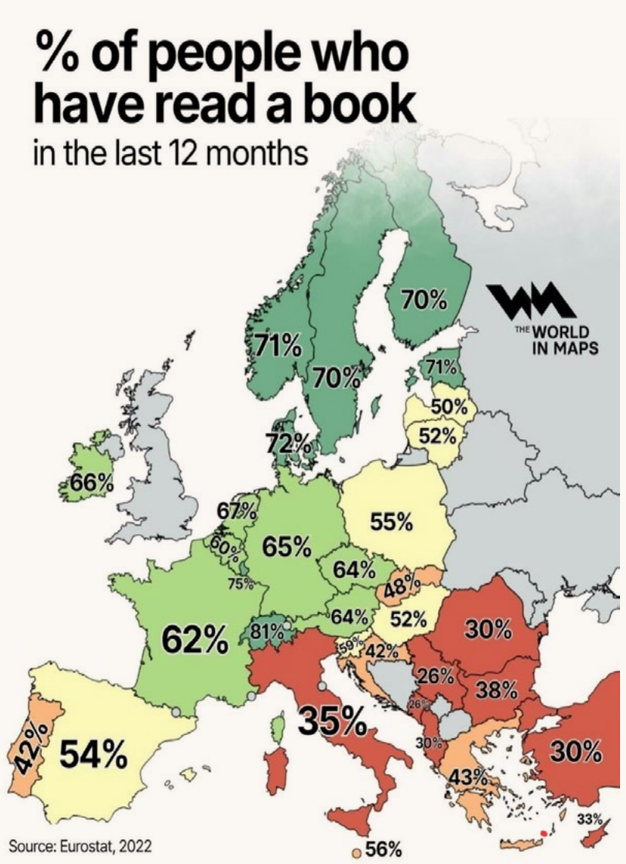
% of people who have read a book
in the last 12 months
THE WORLD IN MAPS
70%
71%
70%
71%
50%
52%
72%
66%
67%
55%
60%
65%
64%
75%
48%
64%
52%
30%
62%
81%
59%
42%
26%
38%
35%
42%
54%
30%
43%
30%
33%
56%
Source: Eurostat, 2022


LARGEST TRADE PARTNERS
Germany
China
U.S.
Netherlands
Italy
Greece
Russia
Sweden
Finland
Lithuania
Poland
Romania
Serbia
Spain
Switzerland
France
VISUAL CAPITALIST
Source: International Monetary Fund
Most recent available figures from 2025. Based on total trade (imports and exports)
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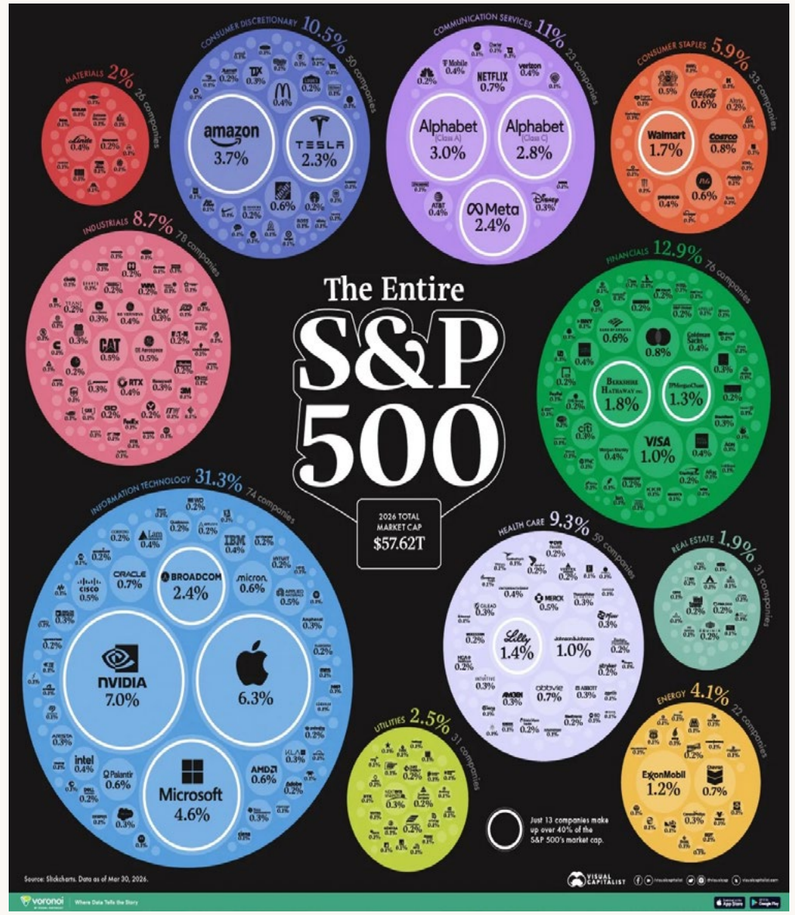
App Store
Google Play


The Entire S&P 500
2026 TOTAL MARKET CAP
$57.62T
CONSUMER DISCRETIONARY 10.5% 50 companies
amazon 3.7%
TESLA 2.3%
COMMUNICATION SERVICES 11% 23 companies
Alphabet (Class A) 3.0%
Alphabet (Class C) 2.8%
Meta 2.4%
NETFLIX 0.7%
CONSUMER STAPLES 5.9% 35 companies
Walmart 1.7%
Costco 0.8%
MATERIALS 2% 26 companies
INDUSTRIALS 8.7% 78 companies
CAT
FINANCIALS 12.9% 76 companies
Berkshire Hathaway B 1.8%
JPMorgan Chase 1.3%
VISA 1.0%
INFORMATION TECHNOLOGY 31.3% 74 companies
NVIDIA 7.0%
6.3%
Microsoft 4.6%
BROADCOM 2.4%
ORACLE 0.7%
micron 0.6%
IBM 0.4%
AMD 0.6%
HEALTH CARE 9.3% 59 companies
Lilly 1.4%
Johnson & Johnson 1.0%
MERCK 0.5%
REAL ESTATE 1.9% 31 companies
ENERGY 4.1% 22 companies
ExxonMobil 1.2%
UTILITIES 2.5% 31 companies
Just 13 companies make up over 40% of the S&P 500's market cap.
Source: Stockcharts. Data as of Mar 30, 2026.
VISUAL CAPITALIST
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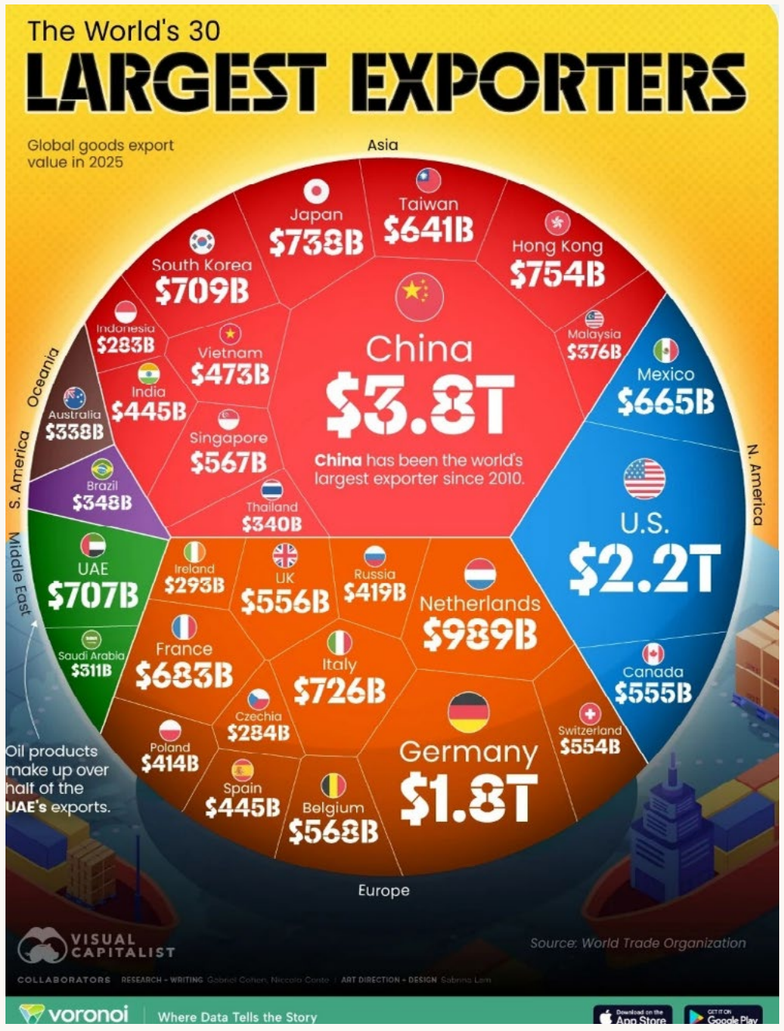
Where Data Tells the Story


The World's 30
LARGEST EXPORTERS
Global goods export value in 2025
Asia
Europe
N. America
S. America
Oceania
Middle East
China
$3.8T
China has been the world's largest exporter since 2010.
U.S.
$2.2T
Germany
$1.8T
Japan
$738B
Taiwan
$641B
South Korea
$709B
Hong Kong
$754B
Malaysia
$376B
Mexico
$665B
Indonesia
$283B
Vietnam
$473B
India
$445B
Australia
$338B
Singapore
$567B
Brazil
$348B
Thailand
$340B
UAE
$707B
Ireland
$293B
UK
$556B
Russia
$419B
Netherlands
$989B
Saudi Arabia
$311B
France
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Italy
$726B
Canada
$555B
Czechia
$284B
Switzerland
$554B
Poland
$414B
Spain
$445B
Belgium
$568B
Oil products make up over half of the UAE's exports.
Source: World Trade Organization
VISUAL CAPITALIST
COLLABORATORS RESEARCH + WRITING Gabriel Cohen, Niccolo Conte | ART DIRECTION + DESIGN Sabrina Lim
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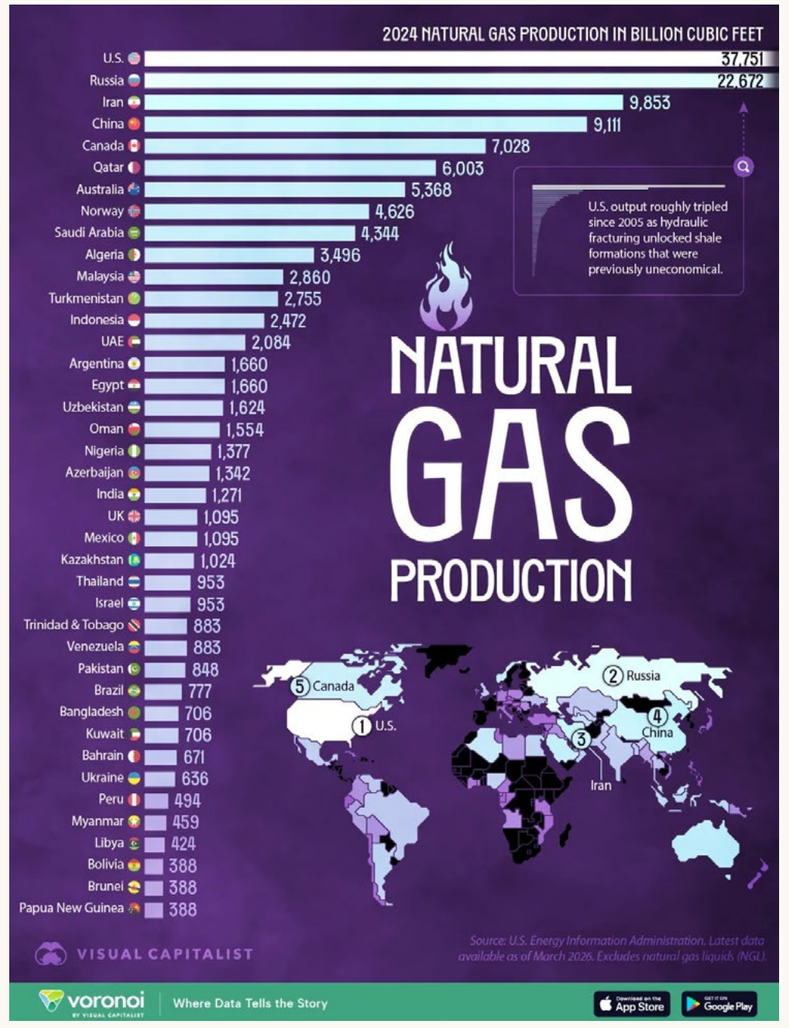
2024 NATURAL GAS PRODUCTION IN BILLION CUBIC FEET
U.S. 37,751
Russia 22,672
Iran 9,853
China 9,111
Canada 7,028
Qatar 6,003
Australia 5,368
Norway 4,626
Saudi Arabia 4,344
Algeria 3,496
Malaysia 2,860
Turkmenistan 2,755
Indonesia 2,472
UAE 2,084
Argentina 1,660
Egypt 1,660
Uzbekistan 1,624
Oman 1,554
Nigeria 1,377
Azerbaijan 1,342
India 1,271
UK 1,095
Mexico 1,095
Kazakhstan 1,024
Thailand 953
Israel 953
Trinidad & Tobago 883
Venezuela 883
Pakistan 848
Brazil 777
Bangladesh 706
Kuwait 706
Bahrain 671
Ukraine 636
Peru 494
Myanmar 459
Libya 424
Bolivia 388
Brunei 388
Papua New Guinea 388
U.S. output roughly tripled since 2005 as hydraulic fracturing unlocked shale formations that were previously uneconomical.
NATURAL GAS PRODUCTION
1 U.S.
2 Russia
3 Iran
4 China
5 Canada
Source: U.S. Energy Information Administration. Latest data available as of March 2026. Excludes natural gas liquids (NGL).
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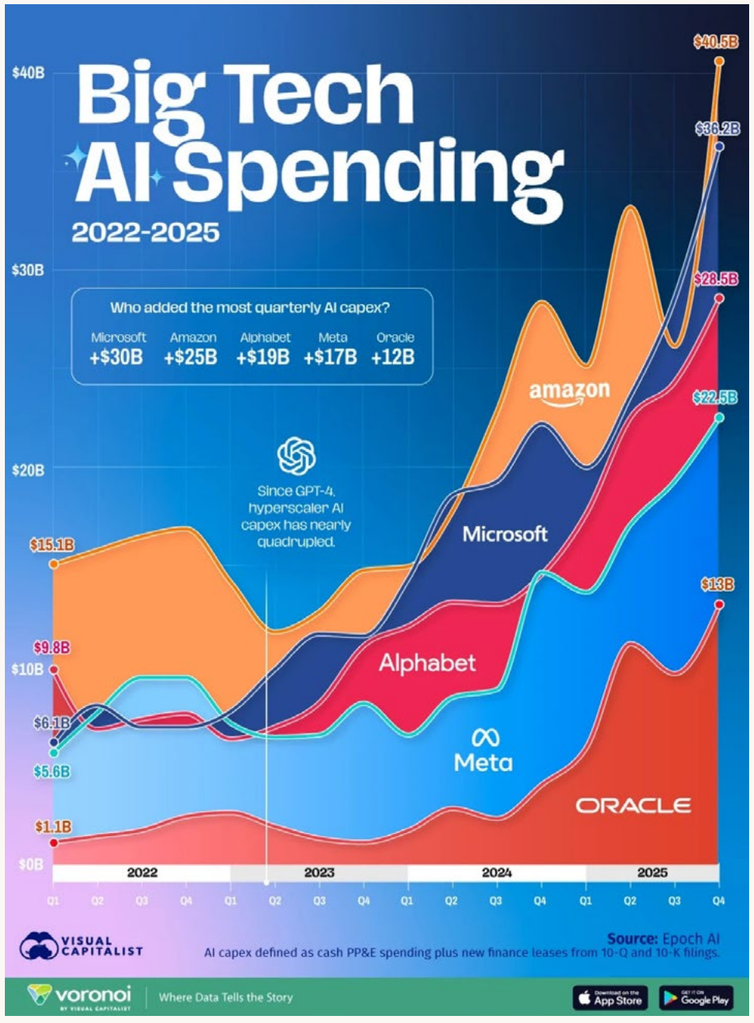
Big Tech AI Spending
2022-2025
$40B
$30B
$20B
$10B
$0B
Who added the most quarterly AI capex?
Microsoft +$30B
Amazon +$25B
Alphabet +$19B
Meta +$17B
Oracle +12B
Since GPT-4, hyperscaler AI capex has nearly quadrupled.
$40.5B
$36.2B
$28.5B
$22.5B
$15.1B
$9.8B
$6.1B
$5.6B
$1.1B
$1.3B
amazon
Microsoft
Alphabet
Meta
ORACLE
2022
2023
2024
2025
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
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Source: Epoch AI
AI capex defined as cash PP&E spending plus new finance leases from 10-Q and 10-K filings.
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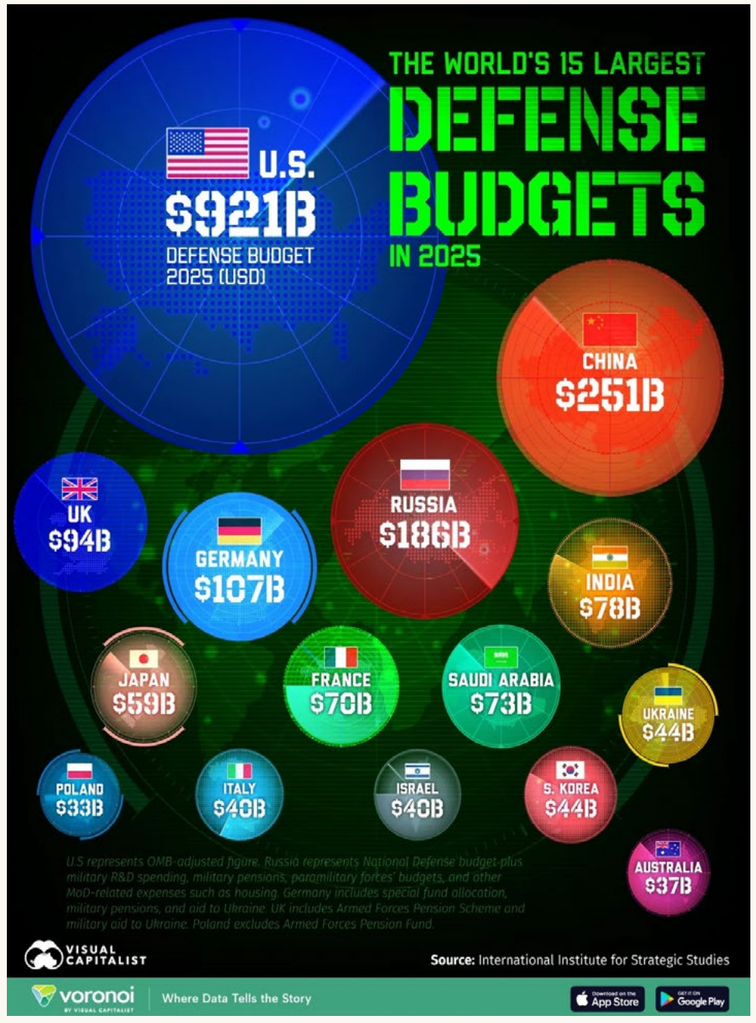
THE WORLD'S 15 LARGEST
DEFENSE BUDGETS
IN 2025
U.S.
$921B
DEFENSE BUDGET 2025 (USD)
CHINA
$251B
RUSSIA
$186B
UK
$94B
GERMANY
$107B
INDIA
$78B
JAPAN
$59B
FRANCE
$70B
SAUDI ARABIA
$73B
UKRAINE
$44B
POLAND
$33B
ITALY
$40B
ISRAEL
$40B
S. KOREA
$44B
AUSTRALIA
$37B
U.S represents OMB-adjusted figure. Russia represents National Defense budget-plus military R&D spending, military pensions, paramilitary forces' budgets, and other MoD-related expenses such as housing. Germany includes special fund allocation, military pensions, and aid to Ukraine. UK includes Armed Forces Pension Scheme and military aid to Ukraine. Poland excludes Armed Forces Pension Fund.
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Source: International Institute for Strategic Studies
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