

Public Attention of Emerging Global AI
Technology Players:

THE CASE BETWEEN OPENAI-CHATGPT AND DEEPSEEK





Author

Tjok Istri Sintawati

Data Scientist

Annisa Sekartierra Mulyanto

Editor

Ayom Mratita Purbandani

Designer & Layouter

Ahmad Nur Hasan

INTRODUCTION

AI technology continues to develop over time and is increasingly being used in various aspects of human life. Recently, the public was shocked by the presence of DeepSeek R1, an AI chatbot, which was said to be able to shift the popularity of ChatGPT. This moment was then followed by the collapse of Nvidia shares by 593 billion USD, which was also recorded as the biggest market loss in history.¹ This condition reflects how AI has a major role in the world economy today.

The presence of AI also has further political implications for countries' position in the global landscape. AI in this case is seen not only as crucial for national defense and security such as the development of autonomous weapons, but also in the creation and distribution of information.² The political interests underlying the development of AI are also said to be reflected in a country's agenda in formulating global AI policies.³ This condition strengthens the vital role of AI globally and encourages an increasingly competitive climate for countries to optimize their potential.

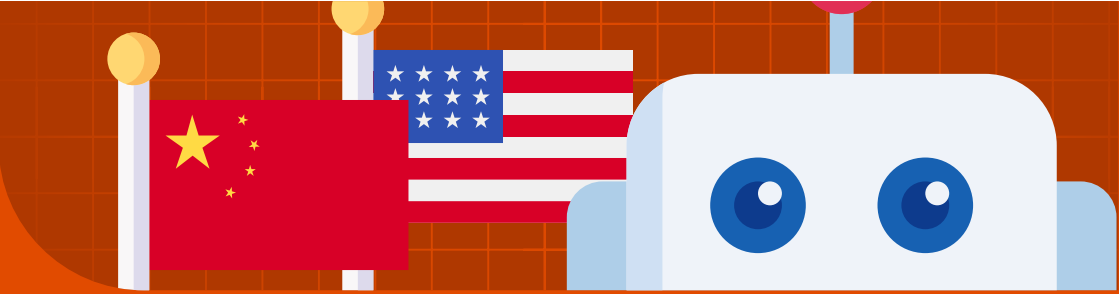
In a research released by Digital Planet⁴ in 2023, of 25 leading countries in terms of AI development, the United States and China are the main countries that dominate this sector with the Top-Ranked AI Nations (TRAIN) Score 90.7 and 68.5 respectively. These countries are evaluated based on four indicators, namely innovation (advances in AI models, techniques, creative sourcing of data and new applications), capital (the human, financial, diversity, and digital foundations for building AI), rules (how data can be accessed), and data (volume and complexity of the core resource used to train and improve algorithms).⁵

Since 2017, the Chinese government itself has made AI a priority as shown through the release of The Plan of Next Generation AI Development 2017 (2017 Plan),⁶ where this document contains an overview of future AI policies. Meanwhile, the US government has already initiated AI development under Obama's leadership through The National Artificial Intelligence Research and Development Strategic Plan⁷ in 2016 which emphasizes investment on AI research while addressing societal implications of AI. In the following years, these two countries have proven to demonstrate their superiority in the field of AI including generative artificial intelligence (GenAI).

A survey conducted by McKinsey & Company⁸ in 2023 states that GenAI technology has attracted the attention of business people to utilize it within the work realm—for marketing and sales, product and service development, service operations, and back-office support—and everyday practices. GenAI's potential is also increasingly being eyed in the health sector⁹ and education.¹⁰

The rapid advancement of GenAI has intensified global competition, particularly between the US and China. In November 2022, the emergence of ChatGPT, a GenAI-powered chatbot developed by OpenAI and based in San Francisco, California, received great public attention for its ability to automate various tasks, often hailed as a 'revolutionary model' in the field of AI.¹¹ More recently, China released the GenAI chatbot, DeepSeek R1 in January 2025. DeepSeek is even said to be able to beat ChatGPT because it was developed by using a much lower cost.¹² The presence of DeepSeek—which has shifted OpenAI's dominance in this area—has geopolitical implications between the US and China.





In terms of functionality, both ChatGPT and DeepSeek seem to demonstrate comparable strengths, making them the primary option for many users seeking AI-powered solutions. In terms of its usefulness as writing assistance, for example, both chatbots can summarize information accurately and clearly.¹³ However, when tasked to explain complex historical phenomena, ChatGPT could provide more detailed information than DeepSeek. Conversely, in coding tasks, DeepSeek could actually complete tricky and complex tasks better than ChatGPT.¹⁴ Controversy has arisen over the political biases of both chatbots. ChatGPT is said to lean toward a pro-environmental and left-libertarian orientation.¹⁵ On the other hand, DeepSeek—under direct state control—is reluctant to answer topics that are considered sensitive and politically taboo in China.¹⁶

Indonesia itself is a country with a fairly high level of awareness and usage of GenAI-powered chatbots. According to a survey conducted by the Boston Consulting Group in 2024,¹⁷ 83% of consumers in Indonesia are aware of the potential of ChatGPT and 32% have used ChatGPT. Amid on-going debates between ChatGPT and DeepSeek, the perception of the Indonesian public as users and the global community can be an important consideration in shaping the future of GenAI-powered chatbot technology. From the geopolitical aspect, Indonesia has a close strategic partnership with both China and the US—which is supported by the free and active principle—especially in the economic realm. Public sentiments in the rising tensions between the US and China—or in this case specifically on the AI technology race—might reflect people's concerns in 'non-aligned' country. Therefore, this study aims to determine the crucial aspects that are of concern to the public in Indonesia regarding the development of ChatGPT and DeepSeek technology.



RESEARCH METHODOLOGY

This study used data from social media X with the search keyword "DeepSeek ChatGPT." Data retrieval was carried out by filtering popular tweets uploaded between January 1 and February 22, 2025. To ensure the relevance of the analysis, this study excluded tweets from popular news media accounts and limited the data to tweets in Indonesian. After the filtering process, 169 tweets were collected, which were then further analyzed to understand discussion patterns and public sentiment towards DeepSeek and ChatGPT on the platform.

This study aims to identify topics and discussions discussed by social media users X related to DeepSeek and ChatGPT. From the collected tweet data, this study applies the BERTopic topic modeling technique, utilizing the clustering method and class-based TF-IDF variations to produce a coherent topic representation.¹⁸ BERTopic works by converting text into numeric representations using a trained language model, reducing dimensions, and extracting topic representations from the clustering results. Specifically, this study uses multilingual BERTopic to be able to process tweets in Indonesian according to the characteristics of the data collected.



DISCUSSION

A.

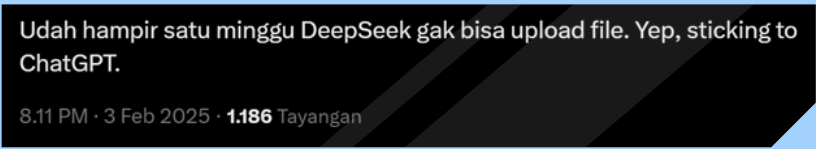
DeepSeek: The Emerging Competitor from the US 'ChatGPT' Domination?

When OpenAI was founded in December 2015 by Sam Altman, Greg Brockman, Elon Musk, Ilya Sutskever, Wojciech Zaremba, and John Schulman, they were determined to form an organization focused on developing AI in a way that could benefit humanity.¹⁹ This mission seemed to be starting to come true when ChatGPT was finally released to the public on November 30, 2022. ChatGPT can perform various assistance that makes human tasks easier, and responding to complex search queries in concise results.²⁰ As of January 2023, two months after ChatGPT was released, ChatGPT's monthly active users were estimated to have reached 100 million, making ChatGPT the fastest-growing consumer application in history.²¹ This data shows that ChatGPT has at least succeeded in providing an alternative that is widely used by the community.

In a study conducted by Xing & Jiang,²² user experience of the ChatGPT chatbot itself is influenced by usefulness, accuracy, logical inference, interactivity, growth, anthropomorphism, convenience, credibility, ease of use, creativity, and security. In other words, the performance that can be performed by a chatbot is crucial for users. This condition is in line with the findings in this study on the topic of comparing ChatGPT and DeepSeek, there are several main representative words such as 'compare (banding),' 'server,' and 'superior (unggul)' (Fig. 1). In this case, users compare ChatGPT and DeepSeek based on the ability of the two chatbots to complete tasks.

In addition, DeepSeek is also favored by its users because in terms of manufacturing costs it is cheaper compared to ChatGPT. DeepSeek is more efficient than ChatGPT in terms of training time, inference speed, energy consumption, and hardware requirements which have implications for the costs incurred in developing this technology.²⁴ DeepSeek can reduce the amount of costs required in AI development by applying several technological tricks, thus reducing raw computing power to only around USD 6 million or around one-tenth of what Meta spent to build its latest AI technology.²⁵

Although the presence of DeepSeek shocked the public through advantages such as low manufacturing costs and superiority in providing answers in certain fields, the majority of the public in the findings of this study favor ChatGPT because it can provide faster responses and minimal technical constraints compared to DeepSeek. In a comparative study between DeepSeek, ChatGPT, and Google Gemini conducted by Rahman et al.,²⁶ ChatGPT models 4o and o3 were also proven to be the fastest among the three. On the other hand, technical constraints such as errors and busy servers encountered by users when accessing DeepSeek make them continue to rely on ChatGPT in their daily use as can be seen in representative tweet (Fig. 2). Meanwhile, issues that are currently topics in global discourse such as data privacy and security against AI technology still lack appearance in public discussion.



Udah hampir satu minggu DeepSeek gak bisa upload file. Yep, sticking to ChatGPT.

8.11 PM · 3 Feb 2025 · 1.186 Tayangan

Fig. 2 Representative Tweet Shows User Problem When Accessing DeepSeek



Even though ChatGPT currently seems to still be the public's favorite, the presence of DeepSeek cannot be underestimated at all. The presence of DeepSeek, that was founded by Liang Wenfeng in July 2023 in Hangzhou, Zhejiang, not only marks the growth of this industry but also reveals China's potential and resistance in developing AI technology. China's determination to catch up in the AI technology industry itself began in the late 1970s through the Deng Xiaoping government which then gave birth to various research initiatives focused on AI and human resource development in AI technology.²⁷ China's efforts are mainly based on the setting and strengthening of the national innovation system (NIS), namely interactive and collaborative efforts between various actors (companies, governments, and universities).²⁸ As a result, China currently has large global-scale companies that are also AI developers such as DJI, Ubtech Robotics, SenseTime, and DeepSeek. The presence of DeepSeek is even considered a 'wake up call for America'.²⁹

B.

Other Chatbots and Affiliation with 'Big Tech'

The public does not only rely on ChatGPT and DeepSeek when they need AI assistance, there are other alternatives that are also widely used. Based on the findings in this study, there are representative words such as 'Grok' and 'Gemini' that appear in the topic of comparison between ChatGPT and DeepSeek with other AI (Fig. 3). One user said that Gemini is suitable to help writers (Fig. 4). Meanwhile, another user said that Grok is more interactive and fun to discuss (Fig. 5).



Fig. 3 Comparative Topic Analysis Results of ChatGPT, DeepSeek, and Other Chatbots

Dicompere antara deepseek, chatgpt, sama gemini, kalo lo indonesian writer lebih masuk pake gemini tetep

11.59 AM · 30 Jan 2025 · **115** Tayangan

Fig. 4 Representative Tweet Shows User Preference Towards Gemini

Ngobrol sama Grok ternyata lebih menyenangkan dibanding ChatGPT dan Deepseek.

8.51 PM · 23 Feb 2025 · **40** Tayangan

Fig. 5 Representative Tweet Shows User Preference Towards Grok

Grok and Gemini—as with ChatGPT—actually have several similarities. These three AI chatbots are all based in America and have direct or indirect relations with 'Big Tech' or the largest technology companies in the world. Grok is a chatbot developed by the company xAI, a startup owned by Elon Musk who is also the CEO of Tesla and SpaceX. This company exclusively collaborates with X Corp to develop its technology for users of the X application or formerly known as Twitter. Grok's active users reached 1.3 million in 2024.³⁰ Meanwhile, Gemini is an AI chatbot developed directly by Google and released in mid-2023. Furthermore, Google gradually integrated this chatbot into its technology suite such as Google Workspace and Gmail.³¹ ChatGPT itself, although owned by the startup OpenAI, received a large injection of funds from Microsoft as an investor with a value of USD 13 billion.³²

Before DeepSeek arrived, Big Tech such as Microsoft, Amazon, and Google seemed to monopolize the AI market.³³ This situation directly made the US a leader in the industry. The US government has even made various efforts to maintain its position in AI, such as denying other countries access to key technologies, monitoring important investments in the technology sector, securing and controlling important supply chains such as semiconductors, and embargoing sensitive technologies.³⁴ Therefore, the presence of DeepSeek was then considered a threat to 'national security' by the US government.³⁵ Putting aside the state view of this situation, the presence of DeepSeek also can be seen as a form of AI democratization that is reshaping global power shown in Sallam et al. study.³⁶ Monopoly on AI can have implications for the formation of an AI trajectory that may prioritize profit over broader social benefits, potentially deepening the inequality between those who control AI and those affected by it.³⁷ This situation further sparked public discussion about the AI arms race between the US and China, a key topic explored in this study.

C.

On-going Discussions of Socio-Political and Economic Impacts Over AI Technology Competition between the US and China

In the topic of global AI competition, representative words such as 'China,' 'America,' and 'Technology' appear in this finding as can be seen in Fig. 6. The public highlights how the presence of DeepSeek shook the global AI market, affecting the shares of US technology companies (Fig. 7). This refers to the 17% plunge in Nvidia shares after the release of DeepSeek. Through the effectiveness that DeepSeek can do, investors then release their ownership of the US technology company. This condition is in accordance with the results of research conducted by Horowitz et al.,³⁸ which emphasizes the significance of AI in shaping the global economy and politics.



Fig. 6 Comparative Topic Analysis Results of Global AI Competition

Selamat Tinggal ChatGpt 🙋🏻

Selamat Datang DeepSeek 🙋🏻

Saham AMERIKA Runtuh dalam semalam 'kemuculan teknologi DeepSeek' yg Kalahkan Raksasa Amerika

Canggihnya performa aplikasi kecerdasan buatan (AI) yang dirilis Cina, Deepseek, pekan lalu mengejutkan Silicon Valley dan merontokkan nilai saham teknologi AS. Produsen cip Nvidia termasuk yang paling merugi, tercatat kehilangan \$600 miliar nilai saham dalam sehari.

Diklaim berbiaya produksi rendah, DeepSeek mampu menjadi aplikasi yang paling banyak diunduh di App Store, mengalahkan popularitas pesaingnya dari AS, ChatGPT.

Apa yang membuat DeepSeek menggemparkan dunia AI?



1:12 PM · 30 Jan 2025 · 375 Tayangan

Fig. 7 Representative Tweet Shows User Attention of DeepSeek Presence and Its Impact on Global Market

Companies that have developed AI technology directly or through investment in AI startups such as 'Big Tech' have made a profit due to the increasing demand for AI. The cloud business of Microsoft, Amazon, and Google earned a combined revenue of 62.9 billion USD in Q3 2024 or an increase of 22.2% from the previous year.³⁹ According to a report issued by Statista in 2024,⁴⁰ the market size of generative AI itself shows an annual growth of 41.52% so that in 2030 the market volume is estimated to reach USD 356.05 billion.



The intention of big countries such as the US and China in developing AI to gain economic benefits is stated in the national strategies issued. Through the American Artificial Intelligence Initiative issued by Donald Trump in 2019, Trump stated, "continued American leadership in AI is of paramount importance to maintaining the economic and national security of the United States".⁴¹ Meanwhile, China, which issued the Next Generation Artificial Intelligence Development Plan in 2017, stated in its strategic goals for 2030, namely, "By 2030 AI theory, technology and application reach globally advanced level. China becomes global AI innovation center. Intelligence economy and society make marked progress, laying a solid foundation for becoming an innovation-driven and economically powerful country." In their strategies, both countries expressed support for forms of innovation related to AI technology, including those carried out by the private sector such as technology companies. Therefore, the presence of DeepSeek—which is said to have the potential to shift the dominance of OpenAI's ChatGPT—is then considered disruptive and sparks discussions about geopolitics.

Another point that sparked public discussion on platform X in the findings of this study was related to the political aspect, especially regarding media censorship imposed by China. Public attention was focused on DeepSeek R1's reluctance to explain sensitive issues such as The Tiananmen Square incident in 1989—a series of protests and demonstrations carried out by Chinese students taking place in Tiananmen Square—where at that time the Chinese government was involved in the killing of hundreds or even thousands of students who were members of student protesters.⁴² In hands-on tests conducted by NBC News to compare the answers generated by ChatGPT and DeepSeek in answering questions related to politically sensitive topics in China, DeepSeek generally refused to answer or instead gave pro-Chinese government answers compared to ChatGPT which was more neutral or in accordance with non-Chinese sources.⁴³

There are concerns that DeepSeek could become a powerful tool in controlling public speech and opinion so that a number of countries such as the US, Taiwan, and Australia have banned the use of DeepSeek on official devices.⁴⁴

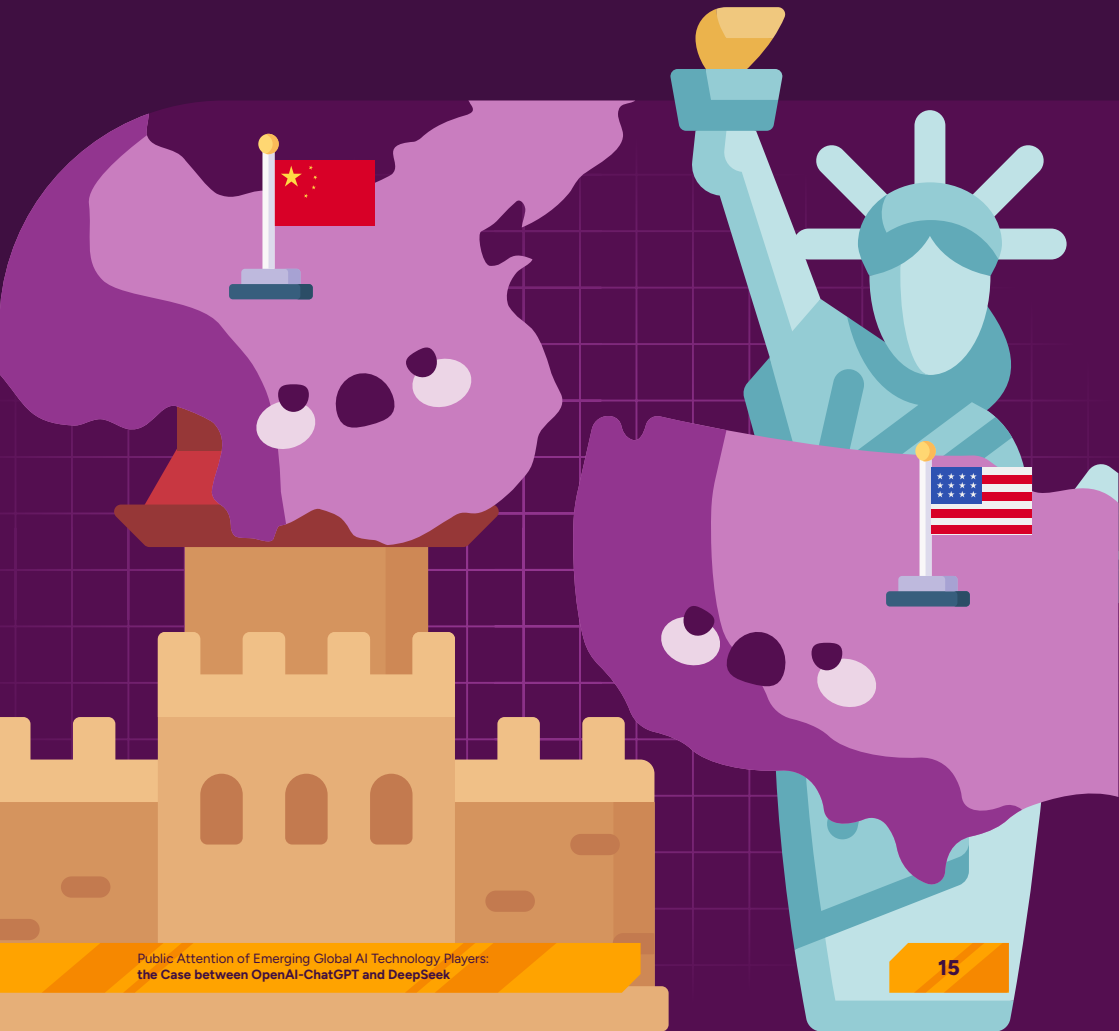
The US government also has concerns about data security. China's policy granting Beijing broad authority to access data from companies based in the country has raised concerns about behavioral change campaigns or disinformation to Western society.⁴⁵ This is not the first time the US government has taken preventive measures against data security threats from Chinese technology companies. Prior to this, the US government has blacklisted several technology products from China, such as those produced by Huawei and ZTE in 2022 on the grounds that they threaten national security.⁴⁶ In addition, the US government has also tried to ban the WeChat, TikTok, and RedNote applications for the same reason.

In terms of user data management, both AI companies located in the US and China have not yet firmly guaranteed the privacy of user data.⁴⁷ Through policies issued by the US and Chinese governments, they are suspected of providing great flexibility for local companies to access their users' data under the pretext of 'research and development'.⁴⁸ Large data collection does play a major role in training AI technology, but the ambitions of these two superpowers actually sacrifice their citizens.

The competition between the US and China in winning the AI arms race is based on their awareness of the power that will be obtained in the future in the global landscape. In terms of economy, both are trying to secure future benefits considering that AI is currently being developed in various lines of human life. Meanwhile, in terms of politics, both are competing to develop AI technology in order to control 'stability' in their sovereign territory.

CONCLUSION

Public sentiment towards the competition between ChatGPT and DeepSeek can be useful as evaluation material for the development of AI technology in the future. This study found 3 topics of public attention, namely the emergence of DeepSeek as a new competitor over the ChatGPT's dominance, public preference for using other chatbots, and socio-political and economic implications for the ongoing AI competition between the US and China.



REFERENCES

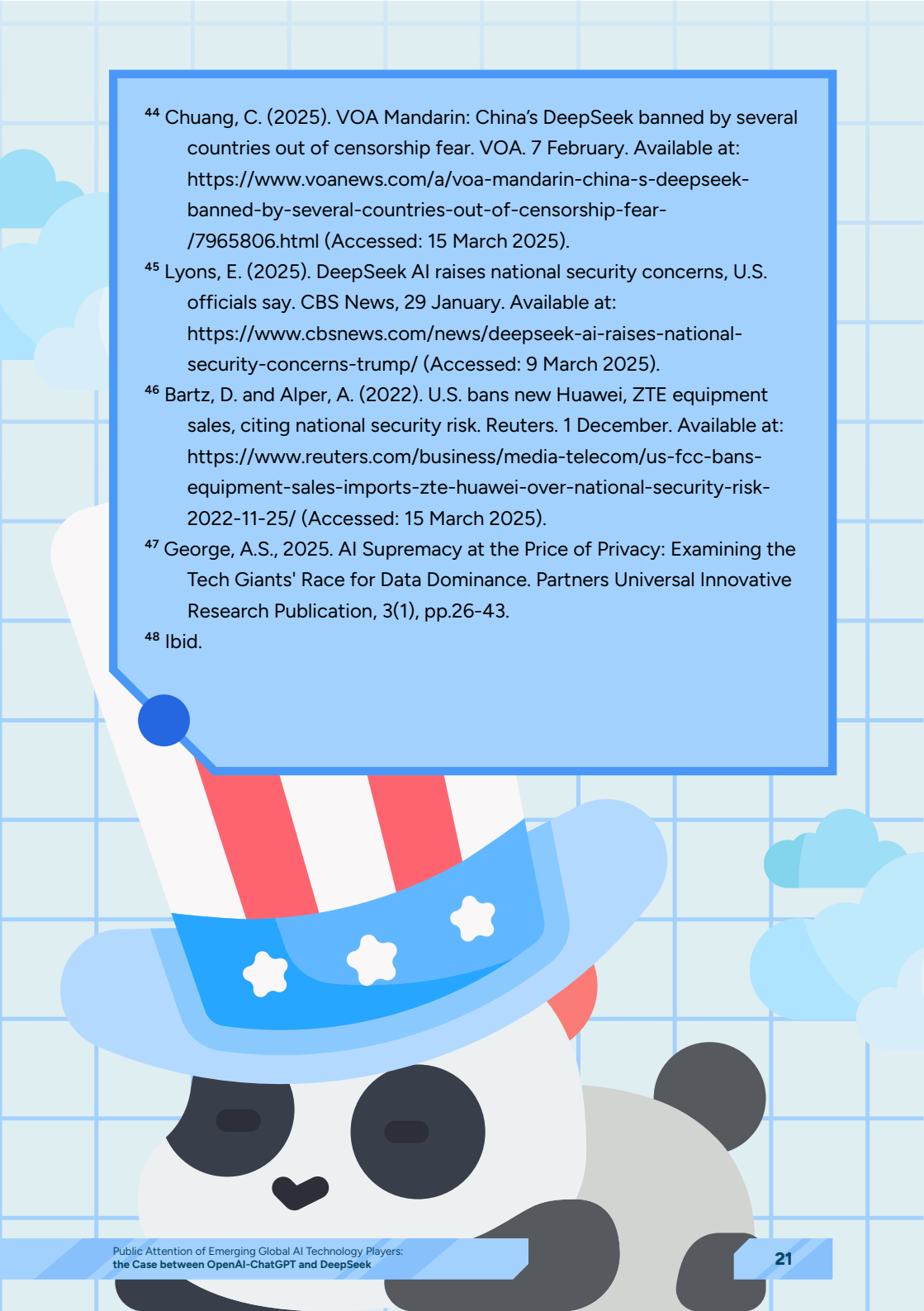
- ¹ Carew, S., Cooper, A., Banerjee, A. (2025). Deepseek Sparks AI stock selloff; Nvidia posts record market-cap loss. Reuters. 28 January. Available at: <https://www.reuters.com/technology/chinas-deepseek-sets-off-ai-market-rout-2025-01-27/> (Accessed: 26 February 2025).
- ² Lazard (2023) Geopolitics of Artificial Intelligence. Available at <https://www.lazard.com/research-insights/the-geopolitics-of-artificial-intelligence/>
- ³ von Ingersleben-Seip, N. (2023). 'Competition and cooperation in Artificial Intelligence Standard Setting: Explaining Emergent Patterns', Review of Policy Research, 40(5), pp. 781–810. doi:10.1111/ropr.12538.
- ⁴ Digital Planet (2023) The emerging geography of AI: Introducing the top-ranked Ai Nations (train) scorecard. Available at: <https://digitalplanet.tufts.edu/the-emerging-geography-of-ai/> (Accessed: 26 February 2025).
- ⁵ Ibid
- ⁶ State Council (2017) Next Generation Artificial Intelligence Development Plan. Available at: <http://fi.china-embassy.gov.cn/eng/kxjs/201710/P020210628714286134479.pdf>.
- ⁷ National Science and Technology Council (2016) The National Artificial Intelligence Research and Development Strategic Plan. Available at: https://www.nitrd.gov/pubs/national_ai_rd_strategic_plan.pdf.
- ⁸ McKinsey (2023) The state of AI in 2023: Generative AI's breakout year. Available at: <https://www.mckinsey.com/capabilities/quantumblack/our-insights/the-state-of-ai-in-2023-generative-ais-breakout-year#/>
- ⁹ Shokrollahi, Y., Yarmohammadtoosky, S., Nikahd, M.M., Dong, P., Li, X. and Gu, L., (2023). A comprehensive review of generative AI in healthcare. arXiv preprint arXiv:2310.00795.

- 
- ¹⁰ Chan, C.K.Y. and Lee, K.K., (2023). The AI generation gap: Are Gen Z students more interested in adopting generative AI such as ChatGPT in teaching and learning than their Gen X and millennial generation teachers?. *Smart learning environments*, 10(1), p.60.
- ¹¹ Haque, M.A., (2023). A Brief analysis of "ChatGPT"—A revolutionary tool designed by OpenAI. *EAI Endorsed Trans. AI Robot*, 1(1), p.12.
- ¹² Goldman, D. (2025) What is DeepSeek, the Chinese AI startup that shook the tech world? *CNN*. 27 January. Available at: <https://edition.cnn.com/2025/01/27/tech/deepseek-ai-explainer/index.html> (Accessed: 26 February 2025).
- ¹³ Fraser, G. (2025). DeepSeek vs ChatGPT - how do they compare? *BBC*. 28 January. Available at: <https://www.bbc.com/news/articles/cqx9zn27700o> (Accessed: 26 February 2025).
- ¹⁴ Ibid.
- ¹⁵ Hartmann, J., Schwenzow, J. and Witte, M., (2023). The political ideology of conversational AI: Converging evidence on ChatGPT's pro-environmental, left-libertarian orientation. *arXiv preprint arXiv:2301.01768*.
- ¹⁶ Grootendorst, M., (2022). BERTopic: Neural topic modeling with a class-based TF-IDF procedure. *arXiv preprint arXiv:2203.05794*.
- ¹⁷ Boston Consulting Group (2024) Consumers Know More About AI Than Business Leaders Think. Available at: <https://www.bcg.com/publications/2024/consumers-know-more-about-ai-than-businesses-think> (Accessed: 26 February 2025).
- ¹⁸ Grootendorst, M., (2022). BERTopic: Neural topic modeling with a class-based TF-IDF procedure. *arXiv preprint arXiv:2203.05794*.

- ¹⁹ Marr, B. (2023). A Short History of ChatGPT: How We Got To Where We Are Today. Forbes. 19 March. Available at: <https://www.forbes.com/sites/bernardmarr/2023/05/19/a-short-history-of-chatgpt-how-we-got-to-where-we-are-today/> (Accessed: 3 March 2025)
- ²⁰ Thorbecke, C. (2023). A year after ChatGPT's release, the AI revolution is just beginning. CNN. 30 November. Available at: <https://edition.cnn.com/2023/11/30/tech/chatgpt-openai-revolution-one-year/index.html> (Accessed: 3 March 2025)
- ²¹ UBS. (2023). Has the AI rally gone too far? Available at: <https://www.ubs.com/global/en/wealthmanagement/insights/chief-investment-office/house-view/daily/2023/latest-25052023.html> (Accessed: 3 March 2025)
- ²² Xing, J. and Jiang, Q., (2024). Factors influencing user experience in AI chat systems—a satisfaction study based on factor analysis and linear regression. Kybernetes.
- ²³ Manik, M.M.H., (2025). ChatGPT vs. DeepSeek: A Comparative Study on AI-Based Code Generation. arXiv preprint arXiv:2502.18467.
- ²⁴ Chowdhury, M.N.U.R., Haque, A. and Ahmed, I. (2025). DeepSeek vs. ChatGPT: A Comparative Analysis of Performance, Efficiency, and Ethical AI Considerations.
- ²⁵ Metz, C. (2025). How Did DeepSeek Build Its A.I. With Less Money? The New York Times. 12 February. Available at: <https://www.nytimes.com/2025/02/12/technology/deepseek-ai-chip-costs.html#:~:text=As%20DeepSeek%20engineers%20detailed%20in,in%20building%20its%20latest%20A.I> (Accessed: 3 March 2025)
- ²⁶ Rahman, A., Mahir, S.H., Tashrif, M.T.A., Aishi, A.A., Karim, M.A., Kundu, D., Debnath, T., Moududi, M.A.A. and Eidmum, M.D., 2025. Comparative Analysis Based on DeepSeek, ChatGPT, and Google Gemini: Features, Techniques, Performance, Future Prospects. arXiv preprint arXiv:2503.04783.
- ²⁷ Zhou, L., 2023. A Historical Overview of Artificial Intelligence in China. Science Insights, 42(6), pp.969-973.

- ²⁸ Lundvall, B.Å. and Rikap, C., (2022). China's catching-up in artificial intelligence seen as a co-evolution of corporate and national innovation systems. *Research Policy*, 51(1), p.104395.
- ²⁹ Wong, M. (2025). The DeepSeek Wake-Up Call. *The Atlantic*. January 30. Available at:
<https://www.theatlantic.com/newsletters/archive/2025/01/the-deepseek-wake-up-call/681512/> (Accessed: 3 March 2025).
- ³⁰ Cardillo, A. (2024). 40+ Chatbot Statistics (2024). Available at:
<https://explodingtopics.com/blog/chatbot-statistics> (Accessed: 7 March 2025)
- ³¹ Caballar, R. D. and Stryker, C. (2024). What is Google Gemini? IBM. 27 September. Available at: <https://www.ibm.com/think/topics/google-gemini> (Accessed: 7 March 2025).
- ³² Day, M. and Bloomberg. (2025). Microsoft creates in-house AI models it believes rival OpenAI's. *Fortune*. 8 March 2025. Available at:
<https://fortune.com/2025/03/07/microsoft-creates-in-house-ai-models-it-believes-rival-openais/> (Accessed: 9 March 2025).
- ³³ Kak, A., West, S. M., Whittaker, M. (2023). Make no mistake— AI is owned by Big Tech. *MIT Technology Review*. 5 December. Available at:
<https://www.technologyreview.com/2023/12/05/1084393/make-no-mistake-ai-is-owned-by-big-tech/> (Accessed: (9 March 2025).
- ³⁴ European Council on Foreign Relations. (2022). The geopolitics of technology: How the EU can become a global player. Available at:
<https://ecfr.eu/publication/the-geopolitics-of-technology-how-the-eu-can-become-a-global-player/>
- ³⁵ Lyons, E. (2025). DeepSeek AI raises national security concerns, U.S. officials say. *CBS News*, 29 January. Available at:
<https://www.cbsnews.com/news/deepseek-ai-raises-national-security-concerns-trump/> (Accessed: 9 March 2025).
- ³⁶ Sallam, M., Al-Mahzoum, K., Sallam, M. and Mijwil, M.M., 2025. DeepSeek: Is it the End of Generative AI Monopoly or the Mark of the Impending Doomsday?. *Mesopotamian Journal of Big Data*, 2025, pp.26-34.

- ³⁷ Randieri, C. (2024). The Democratization Of AI: Bridging The Gap Between Monopolization And Personal Empowerment. Forbes. 25 March. Available at: <https://www.forbes.com/councils/forbestechcouncil/2024/03/25/the-democratization-of-ai-bridging-the-gap-between-monopolization-and-personal-empowerment/> (Accessed: 9 March 2025).
- ³⁸ Horowitz, M.C., Allen, G.C., Kania, E.B. and Scharre, P. (2018). Strategic competition in an era of artificial intelligence. Center for a New American Security.
- ³⁹ Pymnts. (2024). Big Tech Makes Money by Spending on AI Infrastructure. Available at: <https://www.pymnts.com/news/artificial-intelligence/2024/big-tech-makes-money-spending-ai-infrastructure/> (Accessed: 13 March 2025).
- ⁴⁰ Statista. (2024). Generative AI - Worldwide. Available at: <https://www.statista.com/outlook/tmo/artificial-intelligence/generative-ai/worldwide> (Accessed: 13 March 2025).
- ⁴¹ Executive Order on Maintaining American Leadership in Artificial Intelligence. Issued on 11 February 2019. Available at: <https://trumpwhitehouse.archives.gov/presidential-actions/executive-order-maintaining-american-leadership-artificial-intelligence/>.
- ⁴² McCarthy, S. (2025). DeepSeek is giving the world a window into Chinese censorship and information control. CNN. 29 January. Available at: <https://edition.cnn.com/2025/01/29/china/deepseek-ai-china-censorship-moderation-intl-hnk/index.html> (Accessed: 15 March 2025).
- ⁴³ Yang, A. (2025). On DeepSeek, you can watch AI navigate censorship in real time. NBC News. 30 January. Available at: <https://www.nbcnews.com/tech/innovation/deepseek-censorship-china-rcna189594> (Accessed: 15 March 2025).

- 
- ⁴⁴ Chuang, C. (2025). VOA Mandarin: China's DeepSeek banned by several countries out of censorship fear. VOA. 7 February. Available at: <https://www.voanews.com/a/voa-mandarin-china-s-deepseek-banned-by-several-countries-out-of-censorship-fear-/7965806.html> (Accessed: 15 March 2025).
- ⁴⁵ Lyons, E. (2025). DeepSeek AI raises national security concerns, U.S. officials say. CBS News, 29 January. Available at: <https://www.cbsnews.com/news/deepseek-ai-raises-national-security-concerns-trump/> (Accessed: 9 March 2025).
- ⁴⁶ Bartz, D. and Alper, A. (2022). U.S. bans new Huawei, ZTE equipment sales, citing national security risk. Reuters. 1 December. Available at: <https://www.reuters.com/business/media-telecom/us-fcc-bans-equipment-sales-imports-zte-huawei-over-national-security-risk-2022-11-25/> (Accessed: 15 March 2025).
- ⁴⁷ George, A.S., 2025. AI Supremacy at the Price of Privacy: Examining the Tech Giants' Race for Data Dominance. Partners Universal Innovative Research Publication, 3(1), pp.26-43.
- ⁴⁸ Ibid.



Center for Digital Society

Faculty of Social and Political Sciences
Universitas Gadjah Mada
BC Building 2nd Floor, Room BC 201-203
Jalan Socio Yustisia 1
Bulaksumur, Yogyakarta, 55281, Indonesia

Phone: (0274) 563362, Ext. 116
Email: cfds.fisipol@ugm.ac.id
Website: cfds.fisipol.ugm.ac.id

 facebook.com/cfdsugm

 [Center for Digital Society \(CfDS\)](https://www.linkedin.com/company/Center-for-Digital-Society-(CfDS))

 [cfds_ugm](https://www.instagram.com/cfds_ugm)

 [@cfds_ugm](https://twitter.com/cfds_ugm)

 [@cfds_ugm](https://twitter.com/cfds_ugm)

 [CFDS UGM](https://www.youtube.com/channel/UCfDSUGM)