



The Race for AI Hegemony

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How to cite this paper: de Carvalho, V. D. H. (2025). The Race for AI Hegemony. *Socioeconomic Analytics*, 3(1), 01-07.
<https://doi.org/10.51359/2965-4661.2025.265536>

EDITORIAL

Socioeconomic Analytics

<https://periodicos.ufpe.br/revistas/SECAN/>
ISSN Online: 2965-4661

Submitted on: 23.01.2025.

Accepted on: 23.01.2025.

Published on: 02.02.2025.

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Abstract

The growing use of Artificial Intelligence (AI) raises technical, economic, social, legal, and ethical questions. AI can transform industries, automate tasks, and create jobs, but it also brings concerns about infrastructure, resource redistribution, inequality, regulation, and ethics. The race for AI Hegemony between the US and China intensifies economic and political polarization. Investments in research and development will be massive, with competition for talent and resources. Without international coordination, the uncontrolled advance of AI could threaten security and social justice. An inclusive debate is essential to ensure the responsible use of this technology. This text was motivated by recent geopolitical events (already in the first month of 2025), which directly affect people's daily lives worldwide, leaving possible reflections on the power of AI as an active agent in shaping the future of humanity.

Keywords

Artificial Intelligence, Race, Hegemony, Geopolitics, Responsibility, Ethics.

1. Introduction

The beginning of 2025 was marked by a change in the presidency of the most influential nation in the world. This change came with a package of measures affecting various sectors, including the economy, world peace, health, environment, science, and technology. Specifically, this text was created to reflect on the last sector. On Tuesday – January 21, 2025 – of his inauguration, the current President of the United States announced an investment of \$500 billion dedicated to Artificial Intelligence (AI) in partnership with major technology companies, namely OpenAI and Oracle, also involving SoftBank. The entity born from this partnership will be called Stargate, declared by the announcer as "the largest AI infrastructure project in history" (Duffy, 2024).

The project's announcement gave the impression that there is an actual race for AI dominance, so the nation that first establishes itself in this regard will become an "AI Hegemony." This becomes even more evident when we observe attempts at embargoes/blocks on the United

States' competitors in the "global AI market" – mainly directed at China. Notably, China had already launched a plan to ensure it becomes an AI superpower, starting in 2017, to guarantee that by 2030, the country would be at the forefront of AI-related developments (Booth, 2025). This Chinese perspective incorporates not only the development of definitive AI with the national brand incorporated but also technologies closely linked to the context of the innovative industry to compete with the United States in the industrial domain in general (Ul Mansoor, 2024).

With nuances of a new technological Cold War, this race for AI hegemony raises concerns about the intensification of geopolitical rivalries and the possibility of unbalanced technological development, with uncertain consequences for people's well-being (Gerlich, 2024). The unbridled pursuit of dominance over this strategic technology could lead to AI deepening disparities between countries with access to this technology and those left behind. The interesting article "*The Geopolitics of AI*" by Bernard Marr, published in Forbes in November 2024, brings the perception that nations leading AI development will have the power to shape the rules of the game in crucial areas such as the economy, defense, and international relations, while those on the fringes risk becoming increasingly dependent and vulnerable (Marr, 2024).

Moreover, the concentration of power in the hands of a few actors, whether states or large corporations, raises serious ethical questions. Nathalie A. Smuha's article, titled "*From a 'race to AI' to a 'race to AI regulation': regulatory competition for artificial intelligence*" (Smuha, 2021), leads us to ask questions such as: Who will control the development and application of AI? How can we ensure that this technology is used for the benefit of humanity and not for nefarious purposes, such as creating autonomous weapons or mass surveillance? Who will oversee what governments are doing regarding AI development and use policies for their benefit at the expense of other nations? The essence of these questions is that the lack of effective global governance mechanisms for AI increases the risk that this unbridled race will lead to a dystopian future where technology serves to deepen inequalities and threaten democracy and human rights.

Promoting international cooperation and dialogue among nations becomes crucial to ensuring that AI is developed and used responsibly and ethically. Creating global governance mechanisms, with the participation of governments, companies, and civil society, is essential to prevent the race for AI hegemony from becoming a zero-sum game with disastrous consequences for humanity. It is necessary to ensure that AI is a force for global progress and welfare, not a tool for domination and control.

2. What can we expect from this race in the next few years?

The intensification of this race will be boosted by the need for ever-faster technological advances and the growing perception of AI as a crucial strategy (de Carvalho & Costa, 2022; Shao et al., 2022). We can expect massive investments in research and development by governments and companies and fierce competition for talent and resources (Ali et al., 2024). This race, however, will not only take place in the technological sphere but also the economic, political, and diplomatic fields, with the formation of alliances and blocs around AI and the pursuit of influence in defining global norms and standards for the development and use of this technology and in digital transformation (Yang et al., 2024).

We will likely see an increase in polarization between the main actors in this scenario, with the US and China emerging as leaders and seeking to consolidate their spheres of influence. This

polarization may manifest in competition for technological advances and the dispute for markets, talent, and resources, intensifying geopolitical tensions and rivalry between these countries. At the same time, the race for AI could drive the formation of new centers of power beyond the United States and China, involving countries like India, members of the European Union, South Korea, Brazil, and others seeking to position themselves as relevant actors in this new global scenario (Mochizuki & Vickers, 2024; Saló & Galceran-Vercher, 2024).

The intensification of the race for AI also highlights the need for effective global governance for this technology (Sharma, 2023). The absence of international coordination and cooperation mechanisms could lead to unsustainable AI development, with unpredictable consequences for security, stability, and social justice (Gerlich, 2024). The international community must come together to ensure that AI is used for humanity's benefit, not for nefarious purposes or to exacerbate existing inequalities.

In this context, the ethical issue becomes central. The race for AI hegemony cannot come at the expense of fundamental values such as privacy, freedom, and human dignity. It is necessary to ensure that the development and application of AI are guided by solid ethical principles that promote inclusion, transparency, and accountability. AI can potentially transform the world in a profound and lasting way. However, it is necessary to ensure this transformation is positive and benefits everyone, not just a privileged few.

The moral behind all of this is that the future of AI will depend on the choices we make today. The race for AI hegemony could lead us to a future of shared prosperity and progress or to a world of growing inequalities and conflicts amplified by technology. As a global society, it is up to us to define which path we want to take. AI is a powerful tool, but its ultimate impact will depend on how wisely and responsibly we use it.

3. What impact does all this have on our daily lives?

The impacts of the race for AI hegemony on our daily lives are multiple and far-reaching, permeating various spheres of social life. Firstly, AI is already transforming how we work and interact with the job market. The automation of tasks and the growing presence of algorithms in decision-making processes require workers to adapt to new demands and skills while creating new opportunities in areas related to the development and management of AI systems (Ozturk, 2024). New professions related to AI, such as those involved in data science, project management, and software engineering dedicated to AI products, AI customer service, AI research (Brauner et al., 2023), and AI ethics (Cocchiaro et al., 2024), are likely to emerge and stand out in the job market. The educational context will also have to adjust to the use of intelligent tools, always seeking to maintain the central role of humans in any work process (Rakowski & Kowaliková, 2024; Stepanović, 2024).

Additionally, AI is shaping the way we consume information and interact with the world around us. Recommendation and personalization algorithms influence our choices, from the products we buy to the news we read, raising questions about the formation of informational bubbles filled with misinformation and behavior manipulation (Zhang et al., 2024) as occurred, for instance, during the COVID-19 pandemics (de Carvalho, Nepomuceno, Poletto, & Costa, 2022; de Carvalho, Nepomuceno, Poletto, Turet, et al., 2022).

The increasing presence of virtual assistants and intelligent chatbots in our daily lives changes the way we communicate and access services, bringing challenges related to privacy and data

security (Shankar, 2024). AI also impacts how we move around, with the development of autonomous cars and intelligent traffic management systems, and how we take care of our health with the use of AI in diagnosing and treating diseases. In short, it serves as a foundation for what we can call smart things, becoming increasingly present in our daily lives (Chan-Olmsted et al., 2024).

The influence of AI in our daily lives is also manifested in the public sphere, with the growing use of algorithms in areas such as security, justice, and public administration (de Carvalho et al., 2024; de Carvalho & Costa, 2023). Facial recognition systems, predictive policing, and data analysis for governmental decision-making raise complex ethical and social questions that require public attention and debate (Ning, 2024; Xu et al., 2023). It is necessary to ensure that AI is used transparently and responsibly to avoid the perpetuation of biases and algorithmic discrimination and that its benefits are distributed fairly and equitably.

In summary, the race for AI hegemony drives a series of transformations that directly impact our daily lives, from how we work and consume to how we interact with public power and exercise our citizenship. It is crucial that society is informed and actively participates in the debate on the development and application of AI to ensure that this technology is used to promote social well-being and construct a fairer and more sustainable future.

4. Conclusion

The race for AI dominance is one of the most complex and multifaceted topics today. The implications of the technological competition inherent in this race transcend the technical sphere, impacting global geopolitics, the economy, social relations, and our daily lives in profound and unpredictable ways. AI has the potential to revolutionize human life, driving advances in various areas. However, it also presents risks and challenges that require attention and responsibility from governments, companies, and society as a whole.

To ensure AI becomes a driving force for progress and social welfare, the race for its dominance must be guided by international cooperation, ethics, and the pursuit of solutions that benefit humanity. Global AI governance, the promotion of inclusion, and the development of control and transparency mechanisms are essential elements to ensure that this powerful technology is used fairly, safely, and responsibly, contributing to the construction of a more prosperous and equitable future for everyone (Sharma, 2023).

Conflict of Interest Declaration

The author has no conflicts of interest to declare or financial interest to report.

Artificial Intelligence Use Statement

While preparing this work, the author used Google's Gemini Advanced 1.5 Pro, Microsoft Copilot for Word in Microsoft 365, and Grammarly to translate and edit the text. After using these tools, he reviewed and edited the content as needed and take full responsibility for the content of the published text.

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