

Prospect of Cooperation between China and the United States in Artificial Intelligence (AI) Technology

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Introduction

In the dawn of the Fourth Industrial Revolution (4IR), Artificial Intelligence (AI) stands at the forefront, driving unprecedented technological advancements that are reshaping industries, economies, and global power dynamics. The 4IR, characterised by the fusion of digital, physical, and biological worlds, has positioned AI as a pivotal force, not just in transforming business models, but also in determining the strategic dominance of nations.¹ Nowhere is this more evident than in the intensifying technological rivalry between China and the US. Both superpowers are involved in an intensified race to lead in AI innovation, with far-reaching implications for global economic leadership, security, and governance.² However, amid this rivalry lies a paradox: while competition fuels rapid advancements, it also presents unique ground for opportunities for cooperation between China and the US in this critical domain as without a doubt AI is at the core of high-tech development and is also shaping the future of technology and geopolitics. This study delves into the prospects of Sino-American collaboration in AI, focusing on whether shared challenges, such as ethical AI development and global standardisation, could pave the way for a more cooperative future between these two technological giants.³

AI Driven Advancements

AI technology provides dramatic benefits across all sectors of society, improving efficiency, creativity, and problem-solving in previously imagined ways. AI-powered diagnostics and personalised treatments improve patient outcomes while also making healthcare more accessible.⁴ In education, adaptive learning platforms are tailored

to individual needs, allowing students to learn at their own speed.⁵ AI also enables smart cities, which optimise traffic flow, reduce energy usage, and enhance public safety. In business, it promotes innovation, streamlines operations, and allows for better informed decision-making, whereas in entertainment, AI is developing new sorts of immersive experiences.⁶ Even in environmental protection, AI plays an important role, from anticipating climate patterns to monitoring wildlife populations.⁷ These developments not only raise living standards but also provide us the ability to address some of the world's daunting challenges faced by humanity in the modern era.

Daunting Effects of AI

While AI technology is extremely powerful, it also presents serious threats in a variety of industries that must not be neglected. In cybersecurity, AI can be used to launch complex cyberattacks, breach systems, and steal critical data with terrifying precision.⁸ The emergence of autonomous weaponry known as Automated Weapon System (AWSs), fueled by AI poses new hazards in conflict, since machines may make life-or-death decisions without human control. Arming AI with such capabilities is not only limited to the spectrum of Sino-US rivalry, but it poses serious existential threat to the very survival of the entire human race.⁹ In the workplace, AI-powered technology threatens to displace millions of labours, worsening inequality and social discontent.¹⁰ Furthermore, AI-powered surveillance technologies may enable hitherto unheard-of levels of privacy intrusion, undermining human liberties and facilitating widespread monitoring. The ability of AI to propagate misinformation via deep fakes and algorithmic manipulation is also an increasing issue,

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as it has the potential to weaken media confidence and destabilise democracies.¹¹ The ethical dilemmas posed by artificial intelligence, such as bias in algorithms used to make decisions, have the potential to reinforce and magnify pre-existing societal disparities, thereby making it more challenging to get equitable and fair results. These hazards underline the importance of strong governance, ethical standards, and international cooperation in mitigating the risks of AI.

Approaches of China and the US towards AI

Being the fastest growing industry and having impact on almost each sector of the society, from economic to the military and security spectrum, both China and the US are investing heavily in AI technologies development and deployments in different sectors to attain global leadership and dominance. "AI is expected to become a crucial component of economic and military power in the near future," Stanford University's Artificial Intelligence Index Report 2023 stated.¹² A PwC report estimates that by 2030, 70 per cent of the profits generated by AI technologies will be shared between the US and China.¹³ Although the two countries strive to create the most cutting-edge AI applications, there are several chances for collaboration to reduce the possible risks associated with the technology.

China hopes to become a global leader in AI in the next decade, and has committed to investing \$150 billion to achieve this goal.¹⁴ China's approach is to promote its large technology firms, which create tight integration of AI into everyday applications. One example is Tencent's WeChat application, which is used across the country for everything from instant messaging to cashless payments.¹⁵ The US, on the other hand, does have some comparative advantages, such as the ability to attract top people from throughout the world, distribute capital efficiently through startups, and maintain a robust AI research ecosystem. Moreover, the US is also more concerned with the societal ramifications of artificial intelligence than with its widespread use.

The US leads the silicon microchips industry, that is the backbone of the AI industry, coming up with the policies of banning the export of these microchips to the Chinese firms, limiting China's access to these essential chips. In response, China being the largest producer of rare-Earth metals globally, which is core ingredient for the silicon chips, is trying to impose ban on the exports of these rare-earths.¹⁶ Both countries are striving to establish their own influence in the sphere of technological advancement in AI technology, presenting themselves as the flagbearer and global leaders in the newly emerging technologies.¹⁷

Challenges and Need for Cooperation

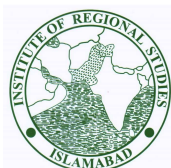
While the relations between China and the US are mostly defined through their rivalry in various technological fronts, due to shared challenges the two countries can opt to cooperate with each other, not only for their own respective national interests, but for the greater benefit of the world at large.

Cooperation in AI-led Technologies

The scope of AI is ever-wider as it has become integrated in every facet of our lives in the 21st century. There are certain areas where the two economic giants and superpowers must cooperate to prevent hazardous aftermaths of the uncontrolled lifting, development, and at the same time deployment of AI technologies. Cooperation in these sectors is not only crucial to avoid escalation of tensions between China and the US but also for the safety of the whole international system, more generally, the safety of entire human race.

Automated Weapon Systems (AWS)

The advent of AI-powered autonomous weaponry, Automated Weapon Systems (AWS), poses significant risks to global warfare, particularly as robots begin to make life-or-death decisions without human intervention. In the context of the growing China-US competition, the race to create such technologies risks raising tensions and jeopardising global security. The lack of human control in these systems could result in catastrophic mistakes, unintentional wars, and a new type of arms race with potentially disastrous effects.¹⁸ China and



the US must move from rivalry to cooperation in the development and management of AI in warfare in order to avert such a dangerous future. Collaboration is required not only to prevent the exploitation of this great technology, but also to ensure humanity's overall survival and well-being.

Avoiding Tech-led Economic War

The US started using economic sanctions and policies like de-coupling and de-risking of China to contain China's rise as an economic power, altering its dominance over the global supply chain and access to the blueprints for the independent development of AI technology. This tug of war between China and the US is not only intensifying their growing rivalry but also impact the whole global supply chains with far-reaching implications on the developing countries of the global South. Ergo, it is the need of the time for the US and China to cooperate with each other on sensitive issues especially the AI technologies, maintain a win-win situation for all. Despite their deviating approaches, China and the US can still collaborate in advancement of technology to better capture the benefits of AI while simultaneously reducing its risks. Cooperation between the two countries can lead to sharing best practices for deploying new technologies and monitoring their use.¹⁹

Jobs Displacement due to AI

As China and the US are sheering their ways to become global leader in AI technology, both countries must consider the potential risk posed by AI development to jobs security globally. With the development of AI, there is a huge jobs crisis spike felt throughout the world, even effecting China and the US domestically. ²⁰ According to a BBC survey in March 2023, "AI could replace equivalent of 300 million jobs".²¹ Therefore, while both countries are engaged in quest for glory of world leadership through AI technology, there must be collaborative

efforts by both countries to address the threats imposed to jobs security by AI and find meaningful alternatives collectively.

Mini-steps towards AI Cooperation

Although China and the US are tangled in rivalry on various issues, but in the spectrum of AI, there are some bacons of hope where China and the US have shown green signals for cooperation. The first ever AI safety Summit, held in Bletchley Park, London, UK on November 1-2, 2023,²² was attended by the leaders of both countries amidst their ongoing intensified rivalry in many areas, i.e., trade and global supply chain, South China Sea, Taiwan strait, etc. both China and the US presented positive remarks towards collaborative efforts to regulate the development of AI technology, making "the security of Humans the first priority" in the advancements of AI technology.²³ Noteworthy, both China and the US indicated signs for cooperation on the controlled use of AI technology in the military fields in order to avoid the escalation of tensions and prevent any growing environment arms race like the one witnessed during the cold-war era between the US and USSR.²⁴

Conclusion

AI technology has revolutionised the 21st century world, fast molding into our lives even without being noticed. China and the US, whose relations are mostly characterised by their long-standing rivalry in different sectors, may have some chances of cooperation on AI technologies. AI Safety Summit and signs of agreement on avoiding arms race involving AI technology are positive reproachments between China and the US for cooperation on the development of AI. There are many compelling reasons for cooperation as this study finds, but keeping in view the realpolitik, geopolitical interests and the contest for global power will determine the future course of actions.

Notes and References

- ¹ "Fourth Industrial Revolution," *World Economic Forum*, <https://www.weforum.org/focus/fourth-industrial-revolution/>.
- ² Jon Bateman, "U.S.-China Technological "Decoupling": A Strategy and Policy Framework," *Carnegie Endowment for International Peace*, 25 April 2022, <https://carnegieendowment.org/research/2022/04/us-china-technological-decoupling-a-strategy-and-policy-framework?lang=en>.
- ³ Ryan Hass, "US-China relations in the age of artificial intelligence," *Brookings Institution*, 10 January 2019, <https://www.brookings.edu/articles/us-china-relations-in-the-age-of-artificial-intelligence/>.
- ⁴ Angela Spatharou, Solveigh Hieronimus, and Jonathan Jenkins, "Transforming healthcare with AI: The impact on the workforce and organizations," *Mckinsey & Company*, 10 March 2020, <https://www.mckinsey.com/industries/healthcare/our-insights/transforming-healthcare-with-ai>.
- ⁵ "How can artificial intelligence enhance education?," *UNESCO*, 18 February 2019, <https://www.unesco.org/en/articles/how-can-artificial-intelligence-enhance-education>.
- ⁶ "AI in Media and Entertainment Industry: Market Trends, Forecast & Future, 31 March 2023 12 min read," *castr*, 31 March 2023, <https://castr.com/blog/ai-in-media-and-entertainment-industry/>.
- ⁷ Atif Khurshid Wani, "Environmental resilience through artificial intelligence: innovations in monitoring and management," *Springer*, 15 February 2024, <https://link.springer.com/article/10.1007/s11356-024-32404-z>.
- ⁸ Kayode Ayinoluwa, "The Impact and Limitations of Artificial Intelligence in Cybersecurity," *Research Gate*, June 2024, https://www.researchgate.net/publication/381253587_The_Impact_and_Limitations_of_Artificial_Intelligence_in_Cybersecurity.
- ⁹ "Weapons powered by artificial intelligence pose a frontier risk and need to be regulated," *World Economic Forum*, 23 June 2021, <https://www.weforum.org/agenda/2021/06/the-accelerating-development-of-weapons-powered-by-artificial-risk-is-a-risk-to-humanity/>.
- ¹⁰ "AI in the workplace: Transformations, challenges, and the road ahead," *Walkme blog*, 27 September 2023, <https://walkme.com/blog/ai-in-the-workplace/>.
- ¹¹ Ángel Fernández Gambín, Anis Yazidi, Athanasios Vasilakos, Hårek Haugerud & Youcef Djenour, "Deepfakes: current and future trends," *Springer*, 19 February 2024, <https://link.springer.com/article/10.1007/s10462-023-10679-x>.
- ¹² "Artificial Intelligence Index Report 2023," <https://aiindex.stanford.edu/ai-index-report-2023/>
- ¹³ "PwC's Global Artificial Intelligence Study: Exploiting the AI Revolution," <https://www.pwc.com/gx/en/issues/data-and-analytics/publications/artificial-intelligence-study.html>.
- ¹⁴ Jack Karsten, "How the U.S. and China can compete and cooperate on artificial intelligence," *Brookings Institution*, 14 March 2019, <https://www.brookings.edu/articles/how-the-u-s-and-china-can-compete-and-cooperate-on-artificial-intelligence/>.
- ¹⁵ Jack Karsten, "How the U.S. and China can compete and cooperate on artificial intelligence," *Brookings Institution*, 14 March 2019, <https://www.brookings.edu/articles/how-the-u-s-and-china-can-compete-and-cooperate-on-artificial-intelligence/>.
- ¹⁶ Gracelin Baskaran, "What China's Ban on Rare Earths Processing Technology Exports Means," *Centre for Strategic and International Studies*, 8 January 2024, <https://www.csis.org/analysis/what-chinas-ban-rare-earths-processing-technology-exports-means>.
- ¹⁷ "The United States and China's complex cooperation and rivalry continue," *East Asia Forum*, 1 February 2024, <https://eastasiaforum.org/2024/02/01/the-united-states-and-chinas-complex-cooperation-and-rivalry-continue/>.
- ¹⁸ "Weapons powered by artificial intelligence pose a frontier risk and need to be regulated," *World Economic Forum*, 23 June 2021, <https://www.weforum.org/agenda/2021/06/the-accelerating-development-of-weapons-powered-by-artificial-risk-is-a-risk-to-humanity/>.
- ¹⁹ Jack Karsten, "How the U.S. and China can compete and cooperate on artificial intelligence," *Brookings Institution*, 14 March 2019, <https://www.brookings.edu/articles/how-the-u-s-and-china-can-compete-and-cooperate-on-artificial-intelligence/>.
- ²⁰ "These are the jobs most likely to be lost – and created – because of AI," *World Economic Forum*, 4 May 2023, <https://www.weforum.org/agenda/2023/05/jobs-lost-created-ai-gpt/>.
- ²¹ Chris Vallance, "AI could replace equivalent of 300 million jobs – report," *BBC*, 28 March 2023, <https://www.bbc.com/news/technology-65102150>.
- ²² "AI Safety Summit Hosted by the UK, 1st and 2nd November 2023 at Bletchley Park," <https://www.aisafetysummit.gov.uk/>.
- ²³ "First AI summit on human security," *Jahangir's World Times*, December 2023.
- ²⁴ "The Cold War arms race: a dangerous game of brinkmanship," *History Skills*, <https://www.historyskills.com/classroom/year-10/arms-race/>.