

Impact of Artificial Intelligence on International Security: Opportunities and Challenges

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Abstract—*The application and deployment of Artificial Intelligence (AI) have influenced virtually all facets of human endeavour. This influence is not limited only to application to how we conduct business or socialize; the military application has further proved that as effective of a tool AI can be, it equally exposes how devastating it can be to humanity's unity and overall survival.*

This paper explores the impact of AI on global security and further examines the opportunities and challenges abound. Global peace largely relies on the cautious use of this potential weapon of devastating destruction. Furthermore, contemporary governance is battling with an advanced technology that has no physical mass or measurable destruction potentials.

To address the risks associated with the use of AI, actors in the international society should make efforts to build stronger international laws and regulations that can guide the use of AI especially military application, ensure human oversight in the use of AI military systems applications and encourage actors in the international society in promoting responsible AI deployment and accountability.

Key Words—*Global Security, Artificial Intelligence, Cyber Security, International Policy and Peace and Emerging technologies*

I. INTRODUCTION

One of the most influential technologies that shapes contemporary development and security studies is Artificial Intelligence, commonly known as AI. The growing use of technology in military operations, intelligence, cybersecurity, decision-making, and surveillance has reshaped how countries in the international system view and address security threats. Scholars like (Salam, Sinurat, Izzatussolekha, Yasin, & Sacıpto, 2023) opine that Artificial Intelligence is making waves in global security issues, offering a wide range of possibilities and challenges.

Traditional security issues were centred on conventional warfare tactics like open fighting

between formal armies; however, in recent times, because of the evolution of Artificial Intelligence (AI), security issues have expanded to other areas like cyberwarfare, autonomous systems, defence strategies and intelligence gathering. As noted by (Osimen, Fulani, Chidozie, & Dada, 2024), because AI systems can process vast amounts of data with precision and accuracy, it has revolutionised not only defence strategies but has also increased competition among global powers in the international system. The rapid evolution of AI technologies has moved the world beyond predictive analytical security models to a more sophisticated security framework centred around the production of technologically advanced weaponry and surveillance systems. As such, AI technologies are playing a crucial role in how nations are responding to modern security challenges (Rickli & Mantellassi, 2023). Scholars like (Okpo, Imam, & Odam, 2026) reinforce this school of thought by stating that AI has the potential to play a vital role in addressing security challenges, including societal, environmental, and economic challenges. However, he warned that since AI technologies can be hacked, it is important to properly secure AI models to promote sustainable peace and security.

Similarly, in 2023, a report by the United Nations Institute for Disarmament Research noted that the rapid progress in artificial intelligence (AI) over the past few years, along with its ability to scale and integrate with other technologies, has sparked global concerns about the dangers of AI to global security (Johnson, 2019'). Concerns about misuse and the potential for escalation are at the forefront of these discussions rising tensions among actors in the international system. It is against this background that this paper aims to discuss the impact of AI on international or global security, focusing specifically on how states can use AI to promote their security framework, as well as the challenges AI poses to global peace and security.

II. LITERATURE REVIEW

Artificial Intelligence

Authors like (Sheikh, Prins, & Schrijvers, 2023) and (Russell & Norvig, 2020) note that there is no universally acceptable definition of Artificial Intelligence, and as such there are a lot of misconceptions and confusion when it comes to explaining and defining Artificial Intelligence. Notwithstanding, (Sheikh, Prins, & Schrijvers, 2023) argued that when talking about AI, from a broader perspective, the concept is often linked to algorithms, but that understanding is somewhat shallow and not the most insightful way to understand the concept. The word algorithms have been in scholarly works, long before AI became popular. The term 'algorithm' actually traces back to a ninth-century Persian mathematician named Mohammed ibn Musa al-Kharizmi, and it refers to a specific method for solving problems or doing calculations.

From this understanding of the word algorithms, (Sheikh, Prins, & Schrijvers, 2023) further argued that if the definition of AI is simply narrowed down to the use of algorithms, then it would include a bunch of other activities, like how pocket calculator function or even directions in simple cookbooks.

From a more streamlined point of view, at its core, AI simply refers to computers trying to imitate the kind of intelligence that humans naturally possess. However, some purists have argued that many applications and technologies are quite basic and do not truly qualify as AI. Nonetheless, it is important to note that this viewpoint does not really fit with the discussion of this paper, because using it would imply that AI is not actually here yet.

Other definitions, like that of Nils John Nilsson, who is a computer scientist, describe AI as a technology that not only operates effectively but also has the foresight to adapt to its environment. DenkWerk, in 2018, on the other hand, argue that AI is centred on the ability of technologies to perceive, set goals, initiate actions, and learn from feedback loops (Sheikh, Prins, & Schrijvers, 2023). The High-Level Expert Group on Artificial Intelligence (AI HLEG) from the European Commission (EC) (EUROPEAN COMMISSION, 2024) offers a similar definition, stating that intelligent systems analyse their environment and take actions often autonomously to achieve particular goals.

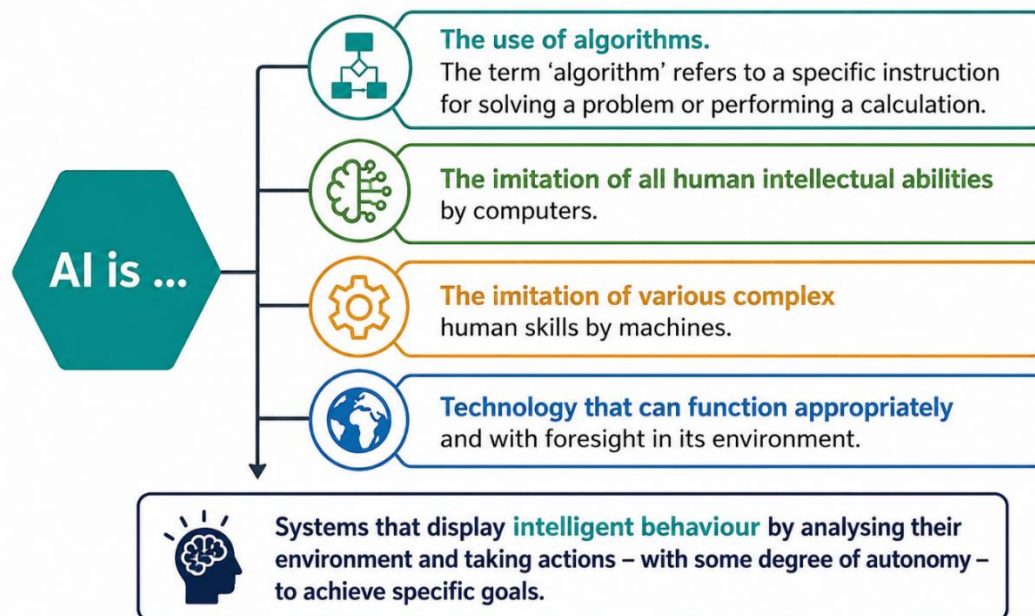


Figure 1. AI in the contemporary age

Despite the numerous definitions of AI, in the contemporary international system, this concept has gained prominence, playing a key role in shaping state relations and global security frameworks. However, this paper notes that although AI presents multiple opportunities, the concept poses significant threats and challenges.

International Security in the Age of Emerging Technologies

The rapid rise and spread of technologies have significantly changed security landscapes in the 21st century. Historically, the focus of international security was mainly military strength, safeguarding territorial boundaries, and defending states against

external threats. However, presently, the advancements in technology have broadened the landscape of security threats and how nations seek to ensure their safety. New and groundbreaking technologies like artificial intelligence (AI), biotechnology, biowarfare, cybersecurity, and cyberspace all play a bigger role in shaping military capabilities, fuelling strategic rivalries, transforming how wars are fought, and influencing international security frameworks. In line with this school of thought, (Adisa, Akanbi, & Ogundoyin, 2025) argues that countries are increasingly weaving in technological tools such as satellite monitoring, drones, biometric systems, cybersecurity technologies, and artificial intelligence into their national and regional security strategies. States nowadays use surveillance drones and satellite imagery to enhance their ability to monitor threats and vulnerabilities, making border control and anti-insurgency operations much more effective. At the same time, the use of biometric identification systems has strengthened national ID initiatives, which are essential for safeguarding elections and boosting the efficiency of law enforcement agencies. (Adisa, Akanbi, & Ogundoyin, 2025) further notes that the rapid use of cyberwarfare by states in the international system highlights a pressing need to tackle digital threats like hacking, disinformation, and cyber espionage, which are becoming more prevalent, especially in continents like Africa.

Furthermore, digital technologies have played a crucial role in updating early warning and crisis response systems. In Africa, for instance, platforms such as the Continental Early Warning System (CEWS) and several regional security hubs now leverage real-time data analysis and digital communication networks to identify and address potential conflicts with greater speed and precision. However, with these advancements come new challenges. The rapid adoption of digital tools has sparked virtual concerns about data security, unequal access to technology, and the potential misuse of surveillance systems by authoritarian governments (Adisa, Akanbi, & Ogundoyin, 2025). It is important to note that, while the promise of technological innovation can help promote peace and security drastically, it's still crucial to keep in mind that without strong commitments to transparency, data privacy, inclusiveness, and respect for human rights, these technological advances can easily increase

tension and hinder sustainable peace and security in the international system.

AI and Contemporary Governance

Within the landscape of the contemporary security system, AI has become a vital aspect of global governance. However, because it operates without borders, it is seen as a global challenge that affects all countries in the world (Momha, 2024). Oftentimes, the advancement of AI is intricately linked to the internet, and it is accepted universally as a vital public service that eases the lives of the people. The interconnectedness of the world and advancements in AI technologies are driving its rapid expansion globally, influencing all actors in the world (Batool, Zowghi, & Bano, 2025).

However, this connection also deepens the digital divide, with a staggering 3.7 billion people still lacking internet access. As highlighted by UN Deputy Secretary-General Amina Mohammed, this digital divide is becoming the “new face of inequality” (United Nations, 2026); the rise of AI is likely to worsen this divide. To tackle issues like broadband access, infrastructure development, data privacy, cybersecurity, and cross-border data flows (United Nations, 2026), the international community must work together to promote responsible and secure internet use in the age of AI. (Momha, 2024) opines that the rapid growth of AI around the world brings both exciting opportunities and significant risks, but these are not shared equally. There are noticeable gaps between developed and developing countries. According to (PricewaterhouseCoopers S.A, 2021), China is expected to see the biggest economic boost from AI, with a staggering 26 per cent increase, while North America is projected to gain 14.5 per cent by 2030. This translates to a whopping \$10.7 trillion, making up nearly 70 per cent of the global economic impact. This stark imbalance highlights the critical need for collaborative governance frameworks that prioritise the needs of underserved and underrepresented communities.

Opportunities of AI on international security

A major opportunity for AI to positively impact international security is enhancing intelligence gathering, counterterrorism, and threat detection. AI has the ability to sift through vast and intricate datasets, whether it's satellite images, social media posts, communication networks, or other intelligence

sources, at a speed that traditional methods do not. This technology can be a game changer for states in the international system, so that they can identify unusual activities, monitor conflict zones and even detect potential security threats early.

In line with this point of view, (Achinike, Onuigbo, Iwuno, & Nwosu, 2026) argues that, in the realm of counterterrorism, AI plays a crucial role by providing sophisticated tools for analysing data. It helps identify potential threats by sifting through social media interactions, financial transactions, and travel patterns (Bécue, Praça, & Gama, 2021). With the help of AI-driven facial recognition and autonomous drones, authorities can effectively identify and target individuals engaged in criminal or terrorist activities. In 2017, for example, the United States launched Project Maven to deploy computer algorithms to War Zones, winning wars with artificial intelligence and computer algorithms (Calderaro & Blumfelde, 2022) (Rickli & Mantellassi, 2023). However, (Dhirani, Mukhtiar, Chowdhry, & Newe, 2023) argue that these technologies come with significant ethical dilemmas, particularly concerning privacy, personal freedom, and the potential for misuse. Striking a balance between the advantages and the risks involved calls for strong regulatory frameworks to oversee the use of AI, especially in sensitive security contexts (Nissar, Pathak, & Gupta, 2026); (Kolade, 2024).

Furthermore, AI is creating new opportunities to enhance cybersecurity. With governments, military entities, and essential infrastructure relying more on digital networks, cyberattacks have emerged as a significant factor in today's international security landscape. During the Russian-Ukraine war, for example, cyber actors linked to Russia have been launching destructive cyberattacks against the Ukrainian government, targeting government institutions and vital infrastructure. These attacks prove that the role of AI in cybersecurity is becoming increasingly vital as the frequency and intensity of cyberattacks rise around the world (Kolade, 2024). According to (Chehri, Zimmermann, Schmidt, & Masuada, 2021), AI's ability to spot unusual patterns in network traffic and react instantly has significantly bolstered the security of essential services like energy grids, banks, and healthcare systems. Yet, it's important to recognise that the very technologies meant to enhance cybersecurity can also be misused, resulting in more advanced cyberattacks and fresh

risks to national security (Bécue, Praça, & Gama, 2021).

Lastly, in the contemporary international society, it is important to note that AI is also creating new opportunities in humanitarian security and disaster response, which helps expand our understanding of international security to encompass more than just military threats. (Kolade, 2024) notes that AI has revealed a lot of potential in dealing with human security challenges associated with climate change. According to (Nishant, Kennedy, & Corbett, 2020), AI-powered predictive models allow governments and international organisations to more accurately anticipate the impacts of climate change, such as extreme weather events, rising sea levels, and shortages of resources. This ability to predict enhances resource management and disaster response, helping countries tackle climate-related threats more effectively (Olaniyi, Ugonna, Olaniyi, Arigbabu, & Adigwe, 2024); (Ayman, Gamal, Atwa, Khaled, & Saad, 2024); (Kolade, 2024). (El Afandi, Moustafa, Ibrahim, & Irfan, 2026), also argues that in the 21st century AI-driven models are now predicting natural disasters such as floods and hurricanes, which enhances disaster response efforts and helps governments handle crises more efficiently, illustrating the multiple benefits of AI, and how it has impacted positively on dimensions of security.

III. RISK OF AI ON INTERNATIONAL SECURITY

Despite, its numerous benefits and opportunities, there are still concerns on the challenges and risks AI has on international security dimensions. According to (Kolade, 2024), one major worry about AI in the realm of security is how it affects privacy globally. AI-powered surveillance systems, such as facial recognition technologies, collect enormous amounts of personal information, which raises serious ethical questions about privacy violations (Dhirani, Mukhtiar, Chowdhry, & Newe, 2023). As cited by (Kolade, 2024), the lack of transparency in AI surveillance, particularly in authoritarian countries, makes these concerns even more pressing. It's crucial to have strong privacy protections and ethical guidelines in place to prevent the misuse of AI in surveillance (Almeida, 2026); (Kolade, 2024).

Additionally, although AI has the potential to enhance cyber security capabilities, it also presents a

significant risk associated with cyberattacks and autonomous warfare (Hashmi, Yamin, & Yayilgan, 2025). Because of AI, there has been a rise of autonomous weapons that can make decisions on their own without human oversight, and these actions have led to a lot of concerns about who to hold accountable not only in conflict zones. Similarly, (Sarker, 2021), also note that AI's involvement in cyberattacks is expanding, with systems being utilized to craft sophisticated malware. Aside from the rise of autonomous weapons, and cyberattacks there have also been reports on how open AI have negatively impacted the personal security of citizens globally like in the case of Adam Raine where chaptgpt discouraged him from seeking help even after he shared suicidal thoughts with the open AI (Bécue, Praça, & Gama, 2021).

Lastly, another major risk AI has on international security is the concerns about realist deep fake videos, altered images and misleading information that can fuel socio-political unrest, and exacerbate tension among both state and non-state actors in the international system. A prominent example arose during the Russia-Ukraine war, where a deepfake video depicted President Volodymyr Zelenskyy asking Ukrainian soldiers to surrender (Erskine & Miller, 2024). Although the video was quickly debunked, it showcased the alarming potential of AI-generated misinformation in global conflicts. The video further fuelled tension and mistrust among leaders and citizens affected by the conflict. In sum, it is important to keep in mind that AI can strength both national and international security, however, there are also numerous risks and concerns associated with using it.

IV. CONCLUSION

With the rapid dynamic nature of the international security dimension, nation states need to adjust and come to terms with the rise of AI, and while acknowledging its benefits, such as enhanced intelligence gathering, counterterrorism, cybersecurity, and even addressing climate-induced human security risks, the misuse of AI may contribute to autonomous warfare, cyberattacks, and coordinated misinformation to disrupt and discredit governments and enemy states. To address these risks, the international society needs more effective international regulations, real human control over high-risk AI systems, and stronger cooperation on a

global scale. These actions can ensure that AI's growing impact fosters international peace and security, rather than fuelling tension and conflict.

V. RECOMMENDATION

To address the risks associated with the use of AI, actors in the international society should make efforts to:

1. Build stronger international laws and regulations that can guide the use of AI especially military application. It is crucial that the international community established regulations and sanctions that would ban unpredictable autonomous weapons and guarantee that they adhere to international humanitarian law.
2. Ensure human oversight in the use of AI military systems applications. Ultimately, humans should be the ones responsible for making decisions that involve lethal force. AI can be used in gathering intelligence, conducting surveillance, and supporting military decisions, but it should not replace human judgment.
3. Encourage actors in the international society in promoting responsible AI deployment and accountability. Governments and technology companies need to set up stronger frameworks for testing, auditing and monitoring AI system, prior and throughout their deployments lifecycle.

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