IAEA

“Artificial intelligence in nuclear weapons”

CMUNP

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Welcome Letter

Dear distinguished participants, welcome to the esteemed International Atomic Energy Agency (IAEA) committee of CMUNP. With great pleasure, we extend our warmest greetings to every one of you.

It is with enthusiasm that we embrace your presence here, as we embark on a journey aimed at fostering understanding and cooperation on issues of nuclear energy and global security. As we delve into the proceedings of this committee, it is crucial to bear in mind the overarching mission of the IAEA, which is to promote peace and security through the realms of education, culture, and science.

Through the course of your time here, you will have the opportunity to delve into diverse realms of knowledge, which will equip you for the forthcoming debates. Moreover, you will have the chance to gain insights into the multifaceted realities of different nations, ideologies, agreements, and conflict resolution strategies. Your commitment to learning, openness to new perspectives, and willingness to engage in constructive debate and negotiation are paramount.

Understanding the complexities of global affairs and appreciating perspectives divergent from our own can be challenging. Yet, the pursuit of world peace remains a collective aspiration that unites us all.

We extend our heartfelt gratitude to each of you for choosing to be a part of this committee. Wishing you all the best in your endeavors, and remember, the only limits to knowledge are those which you impose upon yourselves.

Committee
Introduction

Committee background

In a world increasingly driven by technological advances, the intersection between artificial intelligence and nuclear weapons poses unprecedented ethical, strategic and security challenges.

The application of artificial intelligence in the context of nuclear weapons not only introduces new possibilities in terms of precision and efficiency, but also raises crucial questions about strategic stability, weapons proliferation, and moral and legal responsibility in their use. of lethal force on a catastrophic scale.

This provides a comprehensive analysis of the different aspects related to the integration of artificial intelligence in nuclear weapons, highlighting both the potential benefits and the associated risks and challenges. Through a balanced and evidence-based evaluation, we seek to facilitate a constructive debate that leads to concrete proposals and solutions to address this complex problem.

On October 23, 1956, 81 member countries of the United Nations or its specialized agencies approved in New York the Statute of an International Atomic Energy Agency, which was to begin its functions in Vienna before the end of 1957. With this, a step of capital importance had just been taken towards global control of nuclear energy, more than ten years after having launched the idea of said control, whose first attempt at organization, from 1946 to 1948, had ended in failure. . .
The lines that follow are intended to evoke this "prehistory" of the IAEA.

Committee Faculties

Led by esteemed Chairs and supported by experienced moderators, the Artificial Intelligence in Nuclear Weapons committee boasts a diverse array of expertise. Our Chairs bring forth a wealth of knowledge in international relations, strategic studies, and technological governance, fostering an environment conducive to robust debate and innovative solutions. Complemented by diligent rapporteurs, our facilitators ensure that every voice is heard and every perspective considered, guiding our collective journey towards informed consensus and actionable resolutions.

1. Establishment of norms and standards
2. Review and evaluation
3. Technical assistance
4. Verification and safeguards
5. International cooperation
6. Research and development
7. Dispute resolution

Member States
In the committee there are considered 24 delegations:

1. United States Of America
2. Russian Federation
3. China
4. France
5. United Kingdom of Great Britain and Northern Ireland
6. Germany
7. Japan
8. Canada
9. South Korea
10. India
11. Brazil
12. Australia
13. South Africa
14. Mexico
15. Argentina
16. Spain
17. Italy
18. Netherlands
19. Switzerland
20. Sweden
21. Belgium
22. Norway
23. Indonesia
24. Egypt

TOPIC

"The Role of Artificial Intelligence in Nuclear Proliferation Detection and Prevention"

Introduction

Automated decision-making, artificial intelligence has the potential to improve decision-making in nuclear weapons systems, providing faster analysis of large volumes of data to commanders, enabling them to make critical decisions about the use of nuclear weapons with precise and timely information.

Furthermore, improved targeting, artificial intelligence algorithms can enhance the targeting capabilities of nuclear weapons, identifying and engaging targets with greater precision and efficiency, potentially reducing collateral damage and civilian casualties.

On the other hand, strategic planning and simulation, artificial intelligence can also be useful for simulating various scenarios and developing strategic plans for the use of nuclear weapons, helping military planners better understand the potential outcomes of different actions and optimize their strategies accordingly.

However, security risks must be considered, the integration of artificial intelligence into nuclear weapons systems poses significant security risks. There is concern that AI algorithms may be hacked or manipulated, leading to unauthorized use of nuclear weapons. Additionally, the complexity and opacity of AI systems can make it difficult to verify their reliability and security.

Finally, ethical concerns are raised, the use of artificial intelligence in nuclear weapons systems also raises ethical dilemmas. There is concern that AI could lower the threshold for the use of nuclear weapons by enabling faster decision-making and reducing human oversight.

The International Atomic Energy Agency (IAEA or IAEA) is a United Nations agency charged with promoting the peaceful use of nuclear energy and preventing its use for military purposes. United Nations actions with and at the IAEA include:

1. **Financial Support:** The United Nations provides funds and resources to support IAEA activities, including nuclear inspections, training, and the development of safe and peaceful nuclear technologies.

2. **Resolutions and Guidelines:**The United Nations Security Council may issue resolutions related to nuclear issues and may request the cooperation of the IAEA in the implementation of these resolutions. In addition, the UN General Assembly can issue guidelines and recommendations to the IAEA.

3. **Technical Cooperation**:The United Nations works closely with the IAEA to provide technical assistance to member countries in areas such as nuclear safety, nuclear waste management, nuclear medicine and nuclear agriculture.

4. **Monitoring and Verification**:The IAEA carries out inspections and verifications in Member States to ensure compliance with international nuclear non-proliferation treaties, such as the Nuclear Non-Proliferation Treaty (NPT).

5. **Dialogue Facilitation**:The United Nations can facilitate dialogue between Member States and the IAEA on issues related to nuclear energy, security and non-proliferation.

Historical Background

The IAEA was created in 1957 in response to the deep fears and expectations inspired by the discoveries and varied uses of nuclear technology. The genesis of the Agency dates back to the “Atoms for Peace” speech delivered by Eisenhower, President of the United States, before the United Nations General Assembly on December 8, 1953.
The American ratification of the Charter by President Eisenhower on July 29, 1957, marks the official birth of the International Atomic Energy Agency. At the press conference following the signing ceremony in the Rose Garden of the White House in Washington, D.C., President Eisenhower recalled his speech to the United Nations General Assembly in December 1953, in which he had proposed creating the IAEA.

“In reality, we only crystallized a hope that was growing in many minds in many places [...] the splitting of the atom could lead to the unification of the entire divided world.”

The IAEA is closely linked to nuclear technology and its controversial applications, whether as a weapon or as a practical and useful instrument. The ideas expressed by President Eisenhower in his 1953 speech helped shape the IAEA Statute, which was approved unanimously by 81 nations in October 1956.

“The Agency will seek to accelerate and increase the contribution of atomic energy to peace, health and prosperity throughout the world. To the extent possible, he will ensure that the assistance he provides, or that is provided at his request, or under his direction or control, is not used in a way that contributes to military purposes.

In October 1957, delegates present at the first General Conference decided to establish the headquarters of the IAEA in Vienna, Austria. Until the inauguration of the Vienna International Center in August 1979, the former Grand Hotel, next to the Vienna Opera, was the Agency's temporary headquarters.

The IAEA also has two regional offices, located in Toronto (Canada) - since 1979 - and Tokyo (Japan) - since 1984 - as well as two liaison offices, in New York City (United States of America) - since 1957 —and in Geneva (Switzerland)—since 1965—. The Agency has laboratories specialized in nuclear technology in Vienna and Seibersdorf (Austria), inaugurated in 1961, and, since 1961, in Monaco.

United Nations Actions

The IAEA as an autonomous organization is not under the direct control of the UN, but the IAEA does report to both the UN General Assembly and Security Council. Unlike most other specialized international agencies, the IAEA does much of its work with the Security Council, and not with the United Nations Economic and Social Council The structure and functions of the IAEA are defined by its founding document, the IAEA Statute. The IAEA has three main bodies: the Board of Governors, the General Conference and the Secretariat.

Although it is not under direct control of the UN, the UN helps them to see measures to prevent the proliferation of nuclear weapons, resolve nuclear disputes, provide technical assistance, and strengthen the nuclear capabilities of member states. In addition, they work together to prepare for and respond to nuclear emergencies, promote sustainable development through the peaceful use of nuclear energy, advocate for nuclear security and non-proliferation, and conduct joint research on nuclear issues.

Because its a new topic in the issue of atomic weapons, the IAEA doesn't have enough information to start an investigation and determine how dangerous it is.

Discussion Points

Throughout our deliberations, we will explore key aspects of the role of artificial intelligence (AI) in nuclear proliferation detection and prevention, including but not limited to:

1. The potential of AI in enhancing nuclear safeguards and verification measures, including the development of advanced monitoring and detection systems.
2. Ethical and legal considerations surrounding the use of AI in nuclear security, including issues related to data privacy, transparency, and accountability.
3. The role of international cooperation in leveraging AI for nuclear proliferation detection, including the exchange of best practices, capacity-building initiatives, and collaborative research efforts.
4. Challenges and limitations associated with the integration of AI in nuclear security frameworks, including technical constraints, regulatory barriers, and the potential for unintended consequences.
5. Strategies for balancing innovation and risk mitigation in AI-driven nuclear security initiatives, including the adoption of risk-based approaches and the establishment of robust governance mechanisms.

Guiding Questions

To facilitate our discussions and guide our deliberations, consider the following questions:

1. How can AI be effectively utilized to enhance the detection of illicit nuclear activities, such as clandestine uranium enrichment or nuclear smuggling?
2. What ethical and legal frameworks should govern the use of AI in nuclear proliferation detection and prevention, and how can these frameworks be effectively implemented?
3. What mechanisms are needed to promote international collaboration in AI-driven nuclear security initiatives, and how can existing platforms such as the IAEA facilitate such cooperation?
4. What are the primary challenges hindering the widespread adoption of AI in nuclear security efforts, and how can these challenges be addressed?
5. How can stakeholders strike a balance between innovation and risk mitigation in AI-driven nuclear security strategies, ensuring both effectiveness and ethical integrity?
6. How can the Ai in nuclear weapons affect the countries with lowest economical resources?
7. What will be the long term effects on the world after the implementation and uses of the AI on nuclear weapons?

Glossary

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