

<https://doi.org/10.70265/ETNV6785>

PERSPECTIVES FOR THE DEVELOPMENT OF ARTIFICIAL INTELLIGENCE: SECURITY DIMENSION OF ARTIFICIAL INTELLIGENCE IN THE MILITARY SECTOR

Stefaniya Mircheska

***Summary:** Artificial intelligence (AI) is a technology of significant military-political and strategic value. The use of artificial intelligence has become one of the main topics of public debate in recent years. This technological solution has positive results, but it turns out that it also has many hidden consequences for various fields, ranging from increasing the efficiency of industrial production to developing various applications that have the potential to be used for military purposes. Beyond its potential to increase production and efficiency, AI also brings a range of military applications and new threats. In this way, AI represents the coming revolution in military affairs that could reorient the relative distribution of power. In parallel, the new threats become even more serious when considering the high complexity of control in the spread of artificial intelligence – potential for use and increasing the risk of abuse.*

***Key words:** strategic value of artificial intelligence in defense, prospects of AI in defense, future development trends and applications of AI*

INTRODUCTION

In recent years, one of the most hotly debated issues in the public sphere has been artificial intelligence (AI). From improving industrial production efficiency to drug research and language translation, among other technological, scientific, or social uses, artificial intelligence has ramifications for various fields. AI is also becoming a national concern due to its high strategic worth and wide variety of potential applications. With the prospect of new tools for enhancing and simplifying already-existing technologies, nations and private businesses throughout the world are actively devoting substantial resources to creating their own AI software. For instance, it is anticipated that the application of AI would account for up to 45% of worldwide sales by 2030. As AI applications grow in importance, misuse could lead to the loss of strategic advantages. One such actor is the European Union (EU), which is investing in AI research through common planning, a variety of EU-scale investments, and the unification of European AI policy. The EU actively promotes the strategic importance of AI and is

heavily involved in its development, yet it appears to be lagging behind other major powers in the world. This lag stems from several factors, including fragmented funding structures, slower regulatory approval processes, and a focus on ethical standards that sometimes delay technological advancements. Unlike the centralized investments of the US and China, European efforts are distributed across multiple member states, leading to potential duplication and inefficiencies. Furthermore, the EU's prioritization of safe and ethical AI, while commendable, can hinder rapid deployment compared to countries with fewer restrictions.

The United States, China, and Europe currently have the top AI research and development environments. The amount of money invested on AI in various fields is likewise comparable to this state. About 75-80 % of worldwide AI investment in recent years has come from the US and China (76.6 % in 2022, 76 % in 2021, and 80 % in 2020). This development, at the very least, shows how interested international players are becoming in AI. Focusing on the initial goals and results of these investments is crucial in this setting, though. A pertinent understanding of Europe's position can also be obtained by knowing where the investments are going and what their intended use is.

AI development has long been seen as a national priority in China. It has built a framework of legislation that influence the operations of federal and municipal governments, the commercial sector, and academia in AI. Thus, this framework enables the Chinese government to direct AI development and, more significantly, to exert more control over the direction and results of research. To put it another way, money intended for AI research can be readily transferred in China to support the policy, which is often decided by the Politburo, China's State Council, or official publications. Despite its longstanding and expanding significance in the Chinese context, the private sector is still viewed more as an adjunct to the US strategy. The Chinese People's Liberation Army only uses the private sector for military procurements, which is the exception in this instance. The goal of achieving a controlled "civil-military fusion" of AI development in China, however, continues to motivate the strategy.

Specifically, the defense industry in US is one that receives substantial funding from the federal government. Despite the diverse variety of fields covered by North American Industry Classification System – Professional, Scientific, and Technical Services (NAICS), contracts associated with the Department of Defense (DoD) account for 84% of the overall funding amount under NAICS. In 2022, the federal government spent over \$3.3 billion (almost €3.12 billion) on AI. In the US, two primary development streams are discernible. The first stream is scientific progress in AI, which is fueled by consumer demand and guided by expenditures made by private corporations in an effort to increase profits. In order to supplement market-

driven investments, the second stream involves the direct funding of strategic initiatives based on governmental decisions.

The EU is the third most powerful competitor in AI research and application, after the US and China. The main area where the EU varies from the other two competitors is in how it handles AI. The structure of Europe's investment system is the primary area of difference. Currently, the European Commission intends to invest about €1 billion annually through the "Horizon Europe" and "Digital Europe" projects. We must keep in mind that, in addition to the €1 billion specified, the government contributions of each individual member state are equally crucial in the European scenario (Maslej, Fattorini, Brynjolfsson, Etchemendy, Ligett, 2023). Germany, for instance, has declared that it will double its investment in AI in 2023, with the goal of reaching up to €1 billion year following the increase.

Consequently, up to a sum comparable to the European Union's investment. It is quite probable that the nominal amount might be equivalent to the total amount of government investment, such as that made by the United States, if all European national and multinational investments are added together. Therefore, the coordination and management of funds, rather than the numerical amount spent on AI research and development, is the crux of the issue. Both China and the United States have a clear picture of the monies' intended use and a framing strategy. In the meanwhile, issues like research duplication or member state strategies that are incompatible may cause direct finance in Europe to lose its potential. Furthermore, in terms of legal regulation and the ethics of AI development, the European AI ecosystem is particularly intriguing. Similar to China and the US, Europe has its own legal system that establishes the goals and, most importantly, the guiding principles of application and research (Myers, 2023). In terms of AI-related legal principles and research ethics, we might even say that Europe leads the globe. By attempting to incorporate the concept of safe artificial intelligence, it establishes a standard akin to those established in fields like data protection or cybernetics. But this field of competence does not provide Europe with a means of bridging the technological divide between China and the United States.

It goes without saying that national contexts for AI differ from one nation to the next. These discrepancies, however, aren't always caused by different funding rates or a disdain for AI in general. Furthermore, we must admit that the current state of affairs is the result of multiple major factors. There are a number, and in the parts that follow, we will look at the most significant ones.

1. MILITARY ARTIFICIAL INTELLIGENCE REGULATORY FRAMEWORK: RULES OF ENGAGEMENT (ROE)

The creation, application, and deployment of artificial intelligence (AI) for military objectives necessitate appropriate regulatory frameworks. International law must be followed by any such structures. Furthermore, regulatory frameworks should facilitate the application and implementation of international law since it does not yet offer particular guidance on military applications of AI (OECD, 2024).

The unique characteristics of AI, distinguishing it from conventional military hardware, necessitate new regulatory measures as its military applications expand. This is particularly true when AI allows weapons or decision support systems to make decisions on their own. AI systems that are at least partially autonomous are either in the development stage or have previously been used in military operations. According to reports, the U.S. AI-guided Long Range Anti-Ship Missile (LRASM) can choose and engage targets on its own. A Turkish Kargu-2 drone is accused of following and attacking human targets in Libya in March 2020 without direct human operator control. AI is also used by the Israeli Lavender and Gospel systems, which assist in targeting choices.

Therefore, a number of global projects and procedures are aiming to create global regulatory frameworks for the creation, application, and deployment of military artificial intelligence. The United States-led Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy, the summits on Responsible AI in the Military Domain, the Group of Governmental Experts on Lethal Autonomous Weapon Systems, and associated procedures at the UN General Assembly are some examples of these initiatives and procedures.

Domestic rules are also necessary for AI applications in the military. The U.S. Department of Defense Ethical Principles for Artificial Intelligence and the NATO Principles of Responsible Use of Artificial Intelligence in Defense are two examples of the policies that many states and NATO have adopted on the use of AI for military and defense objectives. However, in order to address the unique characteristics of AI, both national and international regulations and policies require appropriate regulatory frameworks that define and operationalize their goals and content.

Regulations are an effective way to control the use of AI in the military. Rules are frequently used by contemporary militaries to specify the conditions under which and restrictions on the employment of military forces can be implemented. Therefore, ROE enables armed forces to convert international legal requirements, military strategic aims, and political goals into operational settings. Based on an examination of key tools for planning and carrying out military operations using AI, this post suggests that rules of

engagement (ROE) can be used as a framework for controlling the use of AI in military applications (Berchev & Petkov, 2024).

More precisely, ROE authorizes and/or restricts “the use of force, the positioning and posturing of forces, and the employment of certain specific capabilities,” among other things. They often include fundamental components, such as broad directives for the commander and broad political and legal concerns pertinent to the operation. Warnings before using force, the use of particular weapons, and the limitations and authorizations for using force to protect civilians and civilian property or to attack specified military targets can all be covered in the instructions. Additionally, ROE can specify which commanders in the chain of command have the authority to approve particular operations.

ROE are a component of a broader regulatory framework that governs the use of force and the deployment of military troops. They so interact with other kinds of military orders, particularly tactical and targeting orders. Targeting directives give precise guidelines for targeting, such as limitations on what can be targeted and how to minimize collateral harm. Tactical directives are defined as “orders directed either at the force as a whole or at specific types of units or weapon systems, restricting the use of specific weapon systems during the conduct of the operation or regulating the conduct of specific types of missions within the operation as a whole.” ROE can also take many different shapes. They could be issued as standing instructions, operational plans, or orders for execution and deployment. Typically, military legal advisers write and oversee them. Drafting ROE can be based on generic ROE and template documents, such as NATO's MC362/1 Document and the San Remo Handbook on Rules of Engagement.

Applying ROE to Military AI – Because ROE addresses the key needs that policymakers have determined AI must have, it can be an appropriate regulatory framework for the use of AI in military applications. In fact, national and international debates on military AI regulation have brought to light the necessity of comprehensive, detailed, and tangible regulations that are also adaptable.

First, laws controlling the application of military AI must be comprehensive, taking into account factors more than only military or legal ones. Notably, ethical issues still need to be addressed at the core of such regulations. This includes, among other things, the acceptable levels of predictability and mistake of AI systems, but it also focuses on the degree of autonomy of these systems and the manner in which humans may effectively control them. Specifically, ROEs are a good regulatory framework because they include legal, military, and political factors and can incorporate other considerations like technology-specific ethical limits.

Second, since there is no "one size fits all" approach to the employment of AI, rules must be specific. For example, AI applications for health care

management require different parameters than AI for fully autonomous combat weapons. Nevertheless, depending on its intended application or method of operation, a particular technology type may also require distinct operational constraints. For various use scenarios, different ROEs (or similar rules of behavior) may be implemented. ROE can define the rules for particular uses, while international law, policies, military doctrines, and military directives can establish the basic normative baselines and standards for applying AI in the military context generally.

Thirdly, rules must be both specific and adaptable in order to effectively direct behavior in various contexts. ROE can include parameters for specific scenarios that may occur during a certain mission and can be written and adopted for each mission. The specs might need to be modified because things can change while activities are underway. A cascade letter of authority, which is typically included with ROEs, outlines who at a given level of command has the power to alter specified parameters for action. As a result, the parameters can be changed to suit the circumstances, which is particularly helpful when directing the use of AI systems that can learn from fresh information.

ROE can be a useful tool to guide the use of military AI, notably because they represent a holistic, specific, and concrete but flexible regulatory framework. ROE can complement and implement policies, regulations, and guidelines at the higher echelon, thereby enabling the transposition of military, political, legal, and ethical principles and objectives into concrete action. ROE can be particularly useful for human-machine teaming and the concretization of meaningful human control over AI systems, notably in the context of targeting. ROE can thereby function as a core instrument for preparing and conducting military operations using AI. Furthermore, they can support the concretization, application, and implementation of existing and potential future international law.

2. USEFUL MILITARY APPLICATIONS OF AI

In the realm of artificial intelligence, military applications of AI have gained significant attention. The use of AI has advanced significantly in the last year alone, both in terms of availability and capabilities, particularly in the area of generative AI. In order to preserve security and technological superiority, the military must stay up to date with these advancements. It might be difficult to stay on top of the ways AI can support military operations since new applications are always emerging. As AI becomes crucial, military superiority will hinge on algorithmic efficiency rather than force size thus it is worthwhile to look at how the military is using AI now and how it might use it in the future. The creation of computer systems that can carry out activities that typically require human intelligence, like speech

recognition, visual perception, decision-making, and language translation, is known as artificial intelligence.

AI can help with every facet of military activity, from organizing operations to moving troops, from educating staff to giving them medical attention. However, for the systems to be effective, they must be put into place in a way that is appropriate for the work at hand and in accordance with best practices. Military application AI include:

- Warfare systems – AI may be used to improve operations and reduce the need for human input in areas including weaponry, sensors, navigation, aviation support, and surveillance. Because of their increased efficiency, these systems might need less upkeep. Eliminating the requirement for complete human control over combat systems lessens the effect of human error and frees up human resources for other crucial duties. In particular, the Pentagon has revised its autonomous weapons policy to incorporate new developments in artificial intelligence. Numerous technical advancements since the policy's inception in 2012 have made this update necessary. The update offers guidelines for the development and employment of autonomous weapons, one of the most practical military uses of artificial intelligence, in a safe and moral manner. The policy establishes a working group tasked with advising the DoD on autonomous weapons systems, in addition to reviewing and testing requirements.

- Drone swarms – Using swarm intelligence for drone operations is one of the most innovative and interesting new military uses of AI. For a number of reasons, these drone swarms are fundamentally far more efficient than a single drone. Important information can be communicated to other drones in the swarm or used by the drone itself. These swarms are capable of making judgments in a range of scenarios and can be employed in both simulations and real-world training activities. While the swarm has a general goal, each drone can operate independently and creatively to achieve it. In reality, AI-controlled drone swarms are designed to behave similarly to natural insect swarms. When a bee discovers anything that could help the other bees in the hive, for instance, it will tell other bees about it in detail. Drones are capable of doing the same. Like a bee, they can provide information about a target's height, direction, and distance as well as any possible threats. One of the most important areas of military AI applications is the employment of AI-powered drone swarms to apply this potent collective intelligence to military goals.

- Strategic decision making – One of the most advantageous applications of AI in the military is in a field where military leaders may be reluctant to allow AI to play a role. Making strategic decisions is aided by

that. Artificial intelligence (AI) systems can gather and analyze data from a wide range of sources to help in decision-making, particularly under pressure. AI systems are frequently able to examine situations fast and effectively and decide on the best course of action in dire situations. With the disclaimer that AI may not yet fully comprehend human ethical concerns and that there is a risk of AI learning from the biases that may exist in the materials in its database, it can also eliminate preconceptions that may result from human input. Nonetheless, making decisions under duress is an essential aspect of serving in the military, and AI and people can collaborate to facilitate this process. AI's rapid analytical skills combined with humans' ethical awareness can expedite the decision-making process. In military contexts, generative artificial intelligence can aid in decision-making. Generative models may quickly sift through vast volumes of data to reveal relationships, trends, and possible consequences that would take longer for humans to discover on their own. Collaboration between humans and AI can be facilitated by presenting this data to human decision makers in a conversational manner as well as reports. Additionally, AI can build simulations to test out potential outcomes, enabling better decision-making. After AI provides this data, humans must fill in the blanks by applying their knowledge of morality, national security concerns, and situational specifics to get the best results.

- Combat simulation and training – From simulating techniques employed in non-combatative contexts to mathematical models, this software can be utilized for almost anything. As a result, soldiers will be more equipped to handle real-life scenarios. To make sure soldiers have as much experience as possible before using their skills in real-life scenarios, these simulations can give them realistic missions and tasks. Programs for education and military training can be enhanced using generative AI. AI-powered language models are able to generate new training materials, such as study guides, tests, and notes, by reading training manuals and other sources. AI can also be used to assess students' present skills and customize instruction to meet their individual requirements. Generative AI to respond to inquiries from students and clarify ideas in a manner akin to that of a human teacher. AI can create more thorough training, including intricate military simulations, by evaluating vast volumes of intelligence data, records of prior combat encounters, and more. Additionally, conversational AI can offer tailored feedback to assist students improve their abilities and let commanding authorities know where a certain student might be having trouble. AI has great potential for use in military training, but it should never completely take the role of human teachers. Leadership should be in control

of the final analysis of students' skills and constantly examine AI-generated materials to prevent problems like prejudice or false information. While AI can create customized courses that human teachers can subsequently check for correctness and other problems, human instructors should decide on the overall curriculum. However, because AI can absorb information more quickly than humans, teachers may utilize technology to help them build and deliver training programs that are more effective because they can give each student the tailored attention they need.

- Target recognition – In military situations, artificial intelligence can help improve target recognition accuracy. Systems like these can become more adept at determining the location of their targets with the help of AI. By reviewing reports, records, news, and other types of information, it can also help defense personnel gain a thorough picture of an operation area. It does this by combining and evaluating different sources far more quickly than humans could. Military decision makers can ask questions to ensure that the most pertinent information is brought to the surface during a two-way debate regarding this data thanks to generative AI's conversational capabilities. AI systems can forecast weather and environmental variables, predict enemy conduct, evaluate mission methods, and recommend mitigation strategies.

- Treat monitoring – Information gathering and analysis operations are used in threat monitoring and situation awareness to support a wide range of military missions. Some unmanned systems can be deployed on a predetermined path or controlled remotely. By using artificial intelligence (AI), these technologies let defense personnel monitor threats and use their situational awareness. AI-enabled drones can also be employed in similar circumstances. They are able to keep an eye on border regions, identify dangers, and notify response teams. They can also improve the safety of soldiers in battle and fortify the defense of military installations.

- Cybersecurity – AI can be very helpful in preventing cyberattacks on even the most protected military systems. Attacks have the potential to undermine the operation and put military personnel in danger by compromising confidential information or causing complete system damage. AI has the power to shield computers, networks, data, and applications from unauthorized users. Additionally, AI is capable of analyzing cyberattack trends and developing defenses against them. Long before malware attacks even reach a network, these technologies are able to identify their simplest characteristics.

3. FUTURE TRENDS IN MILITARY AI

AI is a valuable military, political, and strategic tool. AI has the ability to boost output and efficiency, but it also presents new risks and a variety of military uses. In this sense, artificial intelligence "is the next big thing in military affairs that could change the balance of power." Furthermore, the complexity of regulating the spread of AI assets and their potential for dual use, which raises the possibility of abuse, make the new risks much more grave. Every aspect of security will be impacted to some extent by the use of AI, and in some, it may have a particularly big effect. The combination of AI and cybernetics is where this phenomenon is most evident. AI is currently utilized to detect malware, phishing attempts, and active cyberattacks. The biggest problem facing AI today in cybernetics is to make it more resilient "against the adaptive behaviors of the adversaries." The most widely used artificial intelligence (AI) technique in cybernetics today, machine learning, is useless at preventing ongoing cyberattacks because it is unable to accurately foresee changes on the part of attackers. However, with the use of increasingly sophisticated AI systems with superior "improvisation capabilities," this could alter. The fact that those AI capabilities would "equally empower offensive and defensive measures" must be taken into account. Nevertheless, AI will enable us to more successfully combat any threats in cyberspace since it eliminates human error. Naturally, we can't count on cyberattacks to go away. Analyzes show that artificial intelligence also points to major shortcomings and challenges, and some of them are mainly aimed at:

- Ethical concerns: Significant ethical concerns regarding the role of human judgment in combat are brought up by the deployment of autonomous weaponry;
- Reliability and unpredictability: In intricate, real-world situations, AI systems may act erratically, which could have unexpected repercussions;
- Vulnerability to hacking and spoofing: Adversaries may corrupt AI-powered systems, which might turn weapons against their operators;
- Data dependence: For AI systems to work well, enormous volumes of high-quality data are needed, which isn't always possible in combat scenarios;
- Lack of human judgment: AI might have trouble making difficult decisions that call for empathy, cultural awareness, or careful consideration of ethical issues;
- Escalation risks: AI-powered warfare's efficiency and speed have the ability to cause disputes to escalate quickly, raising the possibility of a major conflict;
- Proliferation concerns: AI technology could end up in the hands of rogue states or non-state actors as it becomes more widely available;

- Legal ambiguity: Complex legal issues pertaining to responsibility and adherence to international law are brought up by the deployment of autonomous armed systems.

The main future trends in military AI, are focused on:

- Enhanced autonomy: AI systems of the future are probably going to be able to make more decisions and maybe function with less human supervision;

- Human-machine collaboration: Human troops will collaborate with advanced AI to improve their skills and decision-making;

- Swarm intelligence: To accomplish complicated tasks, sizable clusters of self-governing robots or drones will coordinate their movements;

- Quantum AI: The combination of AI and quantum computing may result in previously unheard-of levels of processing power and problem-solving ability;

- AI-powered hypersonic weapons: AI could help create hypersonic missiles that are more precise and agile;

- AI will improve the capabilities of electronic warfare by allowing devices to instantly adjust to and defeat hostile tactics;

- Geopolitical event prediction: AI may be utilized to foresee future hostilities and assist in strategic decision-making.

CONCLUSION

AI's incorporation into military systems offers both enormous potential and formidable obstacles. While AI enhances military capabilities and decision-making, it also raises significant ethical, legal, and security concerns. Given the speed at which AI is developing in the military, worldwide standards, laws, and safety precautions must be established immediately. Finding a balance between utilizing military AI's advantages and reducing its risks is essential as we proceed. Strong governance frameworks, consistent international cooperation, and a dedication to preserving human control over important decisions are all necessary for this. We may strive toward a future where technological breakthroughs enhance rather than compromise global security by proactively tackling the threats posed by military AI.

The prospects for the development of artificial intelligence in defense currently have a wide horizon in the form of using the applications of artificial intelligence for various purposes. Analyzes that have been made so far by countries that actively use artificial intelligence in defense and security indicate a positive attitude, but also consider the potential for hidden consequences that have different effects. As the applications of artificial intelligence are many and used differently, they have inherent threats.

The development trends of artificial intelligence are a harbinger of a new revolutionary era of technological development especially in military

affairs. The global trend in national security and defense is a new distribution of military forces, given that every country has the mindset of rapid technological solutions in defense and the increasing use of artificial intelligence and its applications. The future of defense appears bright with developments in artificial intelligence, defense hardware, and applications. A move toward increasingly autonomous, networked, and data-driven operations to better address new threats and intricate problems is reflected in these current military technology trends. The ongoing integration of these technologies will be essential to preserving international defense security as approaches.

BIBLIOGRAPHY:

- Berchev, D., & Petkov, S. (2024). Mastering the Rules of Engagement: Some Training Guidelines. *Proceedings of the Annual University Scientific Conference, 03-04 October 2024, Veliko Tarnovo, Vol. 2* (pp. 47-60). Vasil Levski National Military University Press. Retrieved October 22, 2024, from https://www.researchgate.net/publication/384607279_Mastering_the_Rules_Of_Engagement_Some_Training_Guidelines
- Center for a New American Security (CNAS). (n.d.). *Artificial Intelligence and Global Security*. CNAS. <https://www.cnas.org/artificial-intelligence-and-global-security>
- European Parliament. (2023, August 6). *EU AI Act: First Regulation on Artificial Intelligence*. European Parliament. Retrieved July 22, 2024, from https://www.europarl.europa.eu/news/en/headlines/society/20230601_STO93804/eu-ai-act-first-regulation-on-artificial-intelligence
- European Union. (2024). *Aims and values*. European Union. Retrieved July 23, 2024, from https://european-union.europa.eu/principles-countries-history/principles-and-values/aims-and-values_en
- Maslej, N., Fattorini, L., Brynjolfsson, E., Etchemendy, J., Ligett, K., et al. (2023). *The AI Index 2023 Annual Report*. AI Index Steering Committee, Institute for Human-Centered AI, Stanford University. Retrieved January 26, 2024, from https://aiindex.stanford.edu/wp-content/uploads/2023/04/HAI_AI-Index-Report_2023.pdf
- Meltzer, J. P., Kerrz, C., and Engler, A. (2020, June 17). *The importance and opportunities of transatlantic cooperation on AI*. Brookings. Retrieved July 23, 2024, from <https://www.brookings.edu/articles/the-importance-and-opportunities-of-transatlantic-cooperation-on-ai/>
- Myers, A. (2023, February 27,). *AI's Powers of Political Persuasion*. Stanford University HAI. Retrieved July 23, 2024, from <https://hai.stanford.edu/news/ais-powers-political-persuasion>

-
- Morgan, F. E., Boudreaux, B., Lohn, A. J., Ashby, M., Curriden, et al. (2020). *Military Applications of Artificial Intelligence: Ethical Concerns in an Uncertain World*. RAND Corporation. https://www.rand.org/pubs/research_reports/RR3139-1.html
- NATO Allied Command Transformation. (2020). *Military Uses of Artificial Intelligence, Automation, and Robotics (MUAAR)*. Retrieved March 19, 2021, from https://www.act.nato.int/wp-content/uploads/2023/05/2020_mcdc-muaar.pdf
- NATO Science & Technology Organization. (2020). *Science & Technology Trends 2020-2040*. Retrieved March 19, 2021, from <https://www.sto.nato.int/pages/tech-trends.aspx>
- OECD. (2024). *Recommendation of the Council on Artificial Intelligence*. OECD Legal Instruments. <https://legalinstruments.oecd.org/en/instruments/oecd-legal-0449>