RESILIENCE – A STEP FORWARD IN AN ERA OF ARTIFICIAL INTELLIGENCE

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Abstract: Artificial intelligence's significant contribution to global resilience highlights the importance of adopting strategic and collaborative methods to leverage its benefits and tackle associated challenges. The UN's resolution underscores AI's potential to contribute significantly to the Sustainable Development Goals (SDGs), calling for safe, secure, and equitable AI practices. The comprehensive SWOT analysis further underscores AI's capacity to process data rapidly, enhance decision-making, and innovate, while also noting areas for improvement such as addressing ethical concerns and bridging the skills gap.

Keywords: resilience, artificial intelligence, NATO, Sustainable Development Goals, UN, Agenda 2030.

I. Methodology

The methodology delineated in this paper is designed to offer a rigorous and structured framework for the scrutiny of institutional resilience in the context of an increasingly pervasive integration of artificial intelligence (AI) within the fabric of human existence. This integration extends beyond the purview of research utilities to encompass tools that augment the quotidian aspects of life. The primary aim of this study is to dissect the progression and fundamental constituents of AI as a catalyst for the augmentation of scientific inquiry and its implications across a spectrum of societal domains. Acknowledging the intersectionality of resilience with diverse academic fields, inclusive of artificial intelligence, the research espouses an interdisciplinary methodology. Employing the SWOT (*Strengths, Weaknesses, Opportunities, Threats*) analytical framework, this inquiry endeavors to encapsulate not merely the robustness and susceptibilities inherent within the domain of AI resilience, but also to prognosticate impending challenges. These challenges are envisaged within the purview of emergent security threats, technological progressions, and resilience paradigms. Such a prognosticative discourse aims to elucidate potential adaptive strategies for humanity and delineate the role of AI in the prospective enhancement of societal structures.

II. Is AI a step forward to enhancing resilience?

The United Nations (UN) General Assembly resolution on artificial intelligence, adopted on March 11, 2024, focuses on leveraging safe, secure, and trustworthy AI systems for sustainable development. It is the first-ever

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standalone resolution negotiated at the UN General Assembly to establish a world-wide agreement referring to AI governance. The resolution reaffirms the commitment to international law and human rights, stressing that the development and use of AI should respect and promote human rights and freedoms[1]. Therefore, "adopting a landmark resolution on steering the use of artificial intelligence towards global good, the General Assembly [...] also stressed the importance of addressing racial discrimination around the world, including through reparations."[2]. In this context, the UN resolution acknowledges the risks associated with improperly designed or maliciously deployed AI, such as widening digital divides, reinforcing biases, and undermining human rights. Furthermore, it highlights the urgency of reaching a global consensus on governing AI systems, promoting inclusive international cooperation to prevent fragmentation in AI governance, and addressing AI and digital divides, especially in developing countries. The resolution encourages the development of regulatory and governance frameworks that foster an enabling ecosystem for AI, emphasizing innovation, entrepreneurship, and knowledge dissemination. There is a strong focus on assisting developing countries to access AI benefits, including through capacity building, enhancing digital infrastructure, and supporting participation in AI development and use. The resolution calls for AI systems to be safe, secure, trustworthy, and human-centric, prioritizing human rights, privacy, and sustainable development. Thus, it recognizes the importance of data in AI development and operation, urging fair, inclusive, and effective data governance to harness AI's potential for sustainable development. The resolution encourages the creation of an environment defined by safety, and trustworthy AI systems through:

• Cooperating with and providing capacity building and technical and financial assistance to developing countries;

• Closing the AI divides and other digital divides that exist between and within countries;

• Promoting equitable access to the benefits of AI systems;

• Respecting, protecting, and promoting human rights and fundamental freedoms throughout the life cycle of AI systems;

• Protecting individuals from all forms of discrimination, bias, misuse, or other harm from AI systems;

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[1] UN. 2024a, *Seizing the opportunities of safe, secure and trustworthy artificial intelligence systems for sustainable development*, available at https:// documents.un.org/doc/undoc/-ltd/n24/065/92/pdf/n2406592. pdf?token=Boe3CdCUmN9Xf29ua9&fe=true, accessed on 12.12.2024.
[2] UN. 2024b, *General Assembly Adopts Landmark Resolution on Steering Artificial Intelligence towards Global Good, Faster Realization of Sustainable Development*, available at https://press.un.org/en/2024/ ga12588.doc.htm, accessed on 10.12.2024.

• Developing regulatory and governance approaches and frameworks related to AI systems;
• Testing AI systems prior to deployment and use;
• Raising public awareness of the appropriate civil use of AI systems;
• Encouraging the development of tools that identify AI generated digital content and their origin;
• Safeguarding privacy and the protection of personal data;
• Respecting intellectual property rights;
• Mitigating the potential negative consequences for workforces;
• Encouraging the private sector to adhere to applicable international and domestic laws.

The resolution acknowledges the evolving nature of AI and the need for ongoing discussions on governance approaches that are adaptable and inclusive. It encourages collaboration among governments, the private sector, civil society, academia, and other stakeholders to promote an equitable and non-discriminatory environment for AI development and use. The resolution reiterates the UN's unique position in achieving global consensus on AI governance aligned with international law, human rights, and the SDGs, and stresses the importance of including developing countries in these discussions ("By the terms of the resolution titled "Seizing the opportunities of safe, secure, and trustworthy artificial intelligence systems for sustainable development"[…], which it adopted without a vote, the Assembly resolved to bridge the artificial intelligence (AI) and other digital divides between and within countries and promote safe, secure and trustworthy AI systems to accelerate progress towards the full realization of the 2030 Agenda for Sustainable Development."[3]). Hence, it underlines the potential of AI to accelerate progress towards achieving all 17 SDGs, by recognizing the importance of AI in promoting economic, social and environmental sustainability.

2.1. Legal Framework for Resilience Objectives and SDGs

In 2015, on 25th of October, the UN General Assembly has adopted the 2030 Agenda, named – "Transforming our world: the 2030 Agenda for Sustainable Development", which includes 17 SDGs as a means for a common ground for peace, prosperity for humans and the planet, now and for the future. The SDGs are a collection of 17 interconnected objectives meant to recognize that threats, disasters, shocks and stresses produced by natural and man-made hazards present immense challenges and can reverse years of development gains. The subject matter of 2023's UN General Assembly was "Rebuilding Trust and Reigniting Global Solidarity" based

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[3] *Idem.*

on the 2030 Agenda and the UN SDGs[4]. The SDGs, with their emphasis on interconnected objectives and the pledge that "no one will be left behind", recognize the critical impact of various threats and challenges on development gains. The aforementioned theme, discussed at the UN General Assembly, resonates deeply with the concept of resilience, advocating for a collective, inclusive approach to overcoming adversities and fostering a more resilient global community. However, the extensive devastation of the natural environment is obstructing efforts to achieve the SDGs and jeopardizing the future of humanity[5]. In 2018, the UN Environment Programme (UNEP) along with other collaborators established the Good Life Goals, which represent a series of individual actions that individuals globally can undertake to aid in the advancement of the SDGs[6]. There are four core principles that support UNEP's environmental approach to the 2030 Agenda, such as[7]: universality (*The 2030 Agenda is global, applying to all peoples in all countries. It is a shared agenda that requires a collective response from the international community, governments, businesses, and citizens group*), integration (*The 2030 Agenda sustainable development as a harmonious whole. Past approaches treated the social, environmental and economic dimensions of sustainable development as disconnected pillars, but the new Agenda integrates and balances the three*), human rights and equity (*The 2030 Agenda provides a pathway to a more just and sustainable world for all. It encourages a more even distribution of wealth and resources; equitable access to opportunities, information and rule of law, and the development new approaches that build capacities at all level of society are needed*) and innovation (*The acceleration and transfer of technological innovations is key to delivering the 2030 Agenda. The world will need new innovation pathways that draw on formal science, traditional knowledge and citizen common sense*).

Resilience, fundamentally understood as the capacity to recover from shocks and adversities, emerges as an essential theme when juxtaposed with the myriad crises that the societies have encountered. These crises, encompassing conflicts, terrorist activities, cyber threats, economic turmoil, migration, climate change and pandemics, underscore the imperative of

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[4] UN. 2023, *78th session of the UN General Assembly*, availabale at https://www.unep.org/unga/2023, accessed on 10.12.2024.

[5] UNEP. 2024a, *UNEP and the Sustainable Development Goals*, available at https://www.unep.org/explore-topics/sustainable-development-goals, accessed on 12.12.2024.

[6] UNEP. 2024b, *Why do the Sustainable Development Goals matter?*, available at https://www.unep.org/explore-topics/sustainable-developmentgoals/why-do-sustainable-development-goals-matter, accessed on 24.11.2024.

[7] UNEP. 2018, *Delivering on the Environmental Dimension of the 2030 Agenda for Sustainable Development − a concept note*, available at https:// sdgtoolkit.org/wp-content/uploads/2017/02/Delivering-on-theEnvironmental-Dimension-of-the-2030-Agenda-for-SustainableDevelopment-%E2%80%93-a-concept-note.pdf, accessed on 30.11.2024.

resilience in sustaining human existence and well-being. The RAND Corporation highlights the importance of societal resilience by emphasizing the need for a comprehensive approach across government and society to effectively respond to crises. This includes preparedness, response and recovery phases to build awareness, mobilize necessary resources, and restore functionality post-crisis[8].

Moreover, the UN's Common Guidance on Building Resilient Societies highlights the necessity of integrating resilience into socio-economic, health and humanitarian responses. This approach ensures that societies are better prepared to handle and recover from various crises, thus maintaining social stability and well-being[9]. The array of responses to these crises, spanning technological advancements, particularly in artificial intelligence (AI), improvements in public policy, democratization, citizen mobilization and, notably, international cooperation, reflects a multi-level approach to building and enhancing resilience at various levels. Hence, the concept of resilience is integral to societal survival amidst diverse crises. By focusing on comprehensive preparedness, agile response and efficient recovery strategies, societies can better withstand and recover from adversities, ensuring sustained human existence and well-being. By focusing on the development and deployment of safe, secure and trustworthy AI systems, the UN resolution - "Seizing the opportunities of safe, secure, and trustworthy artificial intelligence systems for sustainable development" - inherently supports the resilience objectives outlined in the 2030 Agenda for Sustainable Development and the SDGs.

The connection between AI and resilience is rooted in AI's potential to address and mitigate the impacts of crises that threaten human existence and well-being. The recognition of AI's potential to accelerate progress towards achieving all 17 SDGs underscores its role in building resilience. AI has the capacity to promote economic, social, and environmental sustainability, which are core components of a resilient global community. By harnessing AI for sustainable development, societies can better prepare for, respond to, and recover from the diverse challenges they face, ultimately advancing towards a more resilient future. AI's role in enhancing resilience is twofold: it serves not only as a tool for responding to immediate crises, but also as a means for building long-term systemic resilience.

By ensuring that AI systems respect and promote human rights, the UN resolution advocates for a resilient global framework in which

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technological advancements do not exacerbate vulnerabilities, but rather strengthen societal capacities to withstand and recover from crises.

By promoting equitable access to AI technologies and their benefits, the resolution seeks to ensure that all nations have the capacity to utilize AI as a tool for addressing the multi-layered challenges they face. This approach is considered resilient, as it recognizes and addresses the disparities that can hinder collective recovery and progress. Such frameworks are vital for preventing the misuse of AI, mitigating biases, and protecting against other harms that could undermine societal resilience. Moreover, these frameworks facilitate innovation and entrepreneurship, which are key drivers of resilience in the face of changing global challenges. In summary, the UN General Assembly resolution on AI articulates a vision in which AI serves as a significant tool for enhancing global resilience, which makes AI to be seen as a step forward in this matter.

Through its focus on safe, secure, and trustworthy AI systems, the resolution outlines a path for leveraging technology to build a resilient, inclusive, and sustainable world, aligned with the overarching objectives of the 2030 Agenda for Sustainable Development and the SDGs. The continuous fight to respond and deter these aggressive factors towards human existence and well-being has brought several types of reactions into the light: technological development (increasing AI capabilities), the need for enhancing the quality of public policies, the urge for democratization and citizens' mobilization and international cooperation. The advancements in artificial intelligence (AI) are essential in enhancing societal resilience. AI's potential to improve decision-making, optimize resource allocation, predict and mitigate crises is increasingly recognized.

For instance, AI-driven technologies can enhance disaster response, improve cybersecurity defenses, and support public health initiatives[10]. Regarding effective public policy, governments worldwide are implementing frameworks to ensure responsible AI development and use. Examples include Canada's directive on AI in government, Singapore's Model AI Governance Framework and the EU's comprehensive legislative scheme for AI regulation. These policies aim to balance innovation with ethical considerations, ensuring that technological advancements benefit society without compromising safety or equity[11].

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[10] Cameron Kerry F., Ann R., Andrew H. Tisch, Joshua P. Meltzer, Andrea Renda, Alex Engler, Rosanna Fanni, 2021, *Strengthening international cooperation on AI*, available at https:// www.brookings.edu/articles/strengthening-internationalcooperation-on-ai/, accessed on 10.12.2024.

[11] Daniel Zhang, Christie Lawrence, Michael Sellitto, Russell Wald, Marietje Schaake, Daniel E. Ho, Russ Altman, Andrew Grotto, 2022, *Enhancing International Cooperation in AI Research: The Case for a Multilateral AI Research Institute,* available at https://hai.stanford.edu/sites/default/files/202205/HAI%20Policy%20White%20Paper%20-%20Enhancing%20International%20Cooperation%20in%20AI%20

Democratization and the active involvement of citizens are vital for building resilient societies. Open-source AI initiatives and public participation in policy-making processes enhance transparency and trust. Democratizing AI involves making AI tools and knowledge accessible to a broader audience, thus empowering communities to leverage these technologies for local problem-solving and innovation[12]. Global cooperation is essential for addressing complex, transnational challenges. Collaborative efforts in AI research and development, such as those facilitated by international forums and agreements, can lead to shared standards and best practices, reducing duplication of efforts and fostering innovation. Enhanced international cooperation helps create a cohesive approach to managing AI's risks and benefits, promoting stability and progress across nations[13].

The interplay of technological development, efficient public policies, democratization, citizen engagement and international cooperation forms a comprehensive response strategy to mitigate and deter threats to human existence and well-being. These elements collectively enhance society's capacity to withstand and recover from various crises, ensuring sustainable development and security. NATO is also taking an inclusive approach with regards to the Alliance resilience in order to meet the never-ending global strategic challenges.

That said, the principle of resilience, enshrined in Article 3 of the North Atlantic Treaty, is sustaining the Alliance security principle (*In order to more effectively achieve the objectives of this Treaty, the Parties, separately and jointly, by means of continuous and effective self-help and mutual aid, will maintain and develop their individual and collective capacity to resist armed attack*[14]). This principle underscores the importance of resilience not merely as a reactive capacity but as a proactive, foundational pillar for collective security and defense. Moreover, NATO's 2030 Agenda embraces six specialized Planning Groups covering seven resilience baseline areas, such as: the civil protection group, the joint health group, the energy planning group, the civil communication group, the food and water planning group and the transport group.

Both NATO's strategic approach to Alliance resilience and the UN's 2030 Agenda for Sustainable Development encapsulate a broader understanding of resilience as an essential quality for navigating the

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Research.pdf#:~:text=URL%3A%20https%3A%2F%2Fhai.stanford.edu%2Fsites%2Fdefault%2Ffiles%2F2022, accessed on 05.12.2024.

[12] *Idem.*

[13] Cameron Kerry F. et al., 2021, *op.cit, loc.cit.*

[14] NATO. 2023, *Resilience, civil preparedness and Article 3* available at https://www.nato.int/cps/en/natohq/topics_132722.htm, accessed on 10.12.2024.

complexities of the contemporary world. These efforts highlight the recognition that resilience extends beyond mere recovery; it encompasses preparedness, adaptability, and the capacity for transformative growth in the face of adversities. Thus, resilience emerges not only as a mechanism for coping with crises, but as a foundational principle for advancing human security, development and wellbeing in an increasingly interconnected and challenging global landscape. Both the Health 2020 framework and the 2030 Agenda highlight the necessity of bolstering resilience, including at the systemic level. It is contended that any initiative designed to foster resilience ought to scrutinize the root causes of individuals' vulnerability, as well as confront the power structures and origins of the health disparities and other inequalities targeted by the SDGs.

These factors must be integral to the discussions on, and the pursuit of, legitimate policy measures aimed at enhancing resilience. The expanding knowledge surrounding resilience could account for the heightened attention from policymakers and civil society in figuring out methods to develop and amplify resilience. Continued scientific endeavors to elucidate the impact of resilience on health and well-being across individual, community, and systemic levels, and to identify strategies to fortify it, are crucial for solidifying empirical evidence in this area. Insights gained from executing Health 2020 and advancing towards the SDGs are likely to enhance policy expertise in this challenging domain[15].
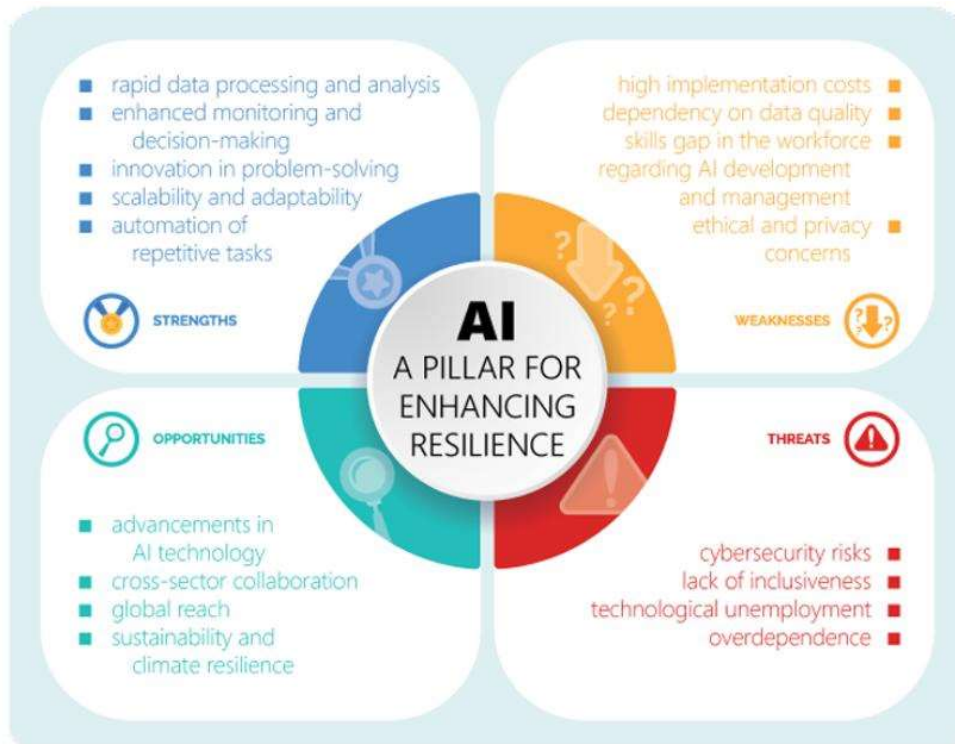
III. AI – a pillar for enhancing resilience

In this section, I will highlight how AI is a pillar for strengthening resilience through a SWOT analysis. Doing so, I will point out where AI stands in terms of resilience at the organizational level and where it can improve or face challenges.

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[15] WHO, 2017, *Building resilience: a key pillar of Health 2020 and the Sustainable Development Goals*, available at file:///C:/Users/E-ARC_Guest/ Desktop/resilience%-20pt%20lucrarea%20mare%20-%20UKR..pdf, accessed on 12.12.2024.

AI presents a powerful tool for enhancing resilience across various domains by offering advanced analytical capabilities, supporting decision-making, and fostering innovation. However, realizing its full potential requires addressing inherent weaknesses and external threats, including ethical considerations, data quality, cybersecurity, and the global digital divide. With strategic planning and collaborative efforts, AI can indeed serve as a pillar for enhancing global resilience. The SWOT analysis reveals the **strengths**, such as:

♦ rapid data processing and analysis – AI's ability to process and analyse vast amounts of data quickly is invaluable in identifying patterns, predicting outcomes, and making informed decisions, especially during crises.

♦ enhanced monitoring and decision-making – AI systems can monitor various parameters continuously and in real-time, from infrastructure integrity to environmental conditions. This capability enables quicker response times to potential threats or failures, thus enhancing the system's overall resilience. Moreover, AI supports better decision-making by providing insights derived from data analysis, leading to more effective and timely responses to emergencies and changing situations. AI's ability to forecast outcomes based on data patterns is invaluable for resilience. Predictive analytics can help organizations anticipate disruptions, optimize

resource allocation, and implement proactive measures to mitigate risks before they escalate.

♦ automation of repetitive tasks - By automating routine and repetitive tasks, AI allows human resources to focus on more complex and strategic activities, thus improving efficiency and reducing human error.

♦ innovation in problem-solving – AI's advanced algorithms can propose innovative solutions to complex problems, enhancing the capacity to respond to unforeseen challenges and crises.

♦ scalability and adaptability - AI systems can be scaled up or down based on need and can adapt to changing circumstances through learning algorithms. This flexibility allows organizations to respond dynamically to changes in the environment or in operational demands. These strengths are foundational elements that can be leveraged to pursue strategic goals, overcome weaknesses, exploit opportunities, and defend against threats in the market. They are often used to identify what an organization does best and how it can use those capabilities to achieve a competitive edge. On the other hand, the weaknesses reflect the vulnerabilities that AI poses for the society and institutions. The identification of weaknesses in a SWOT analysis is not about highlighting failures or shortcomings for their own sake, but instead it's about providing a realistic assessment that forms the foundation for effective strategic planning, allowing organizations to turn potential vulnerabilities into opportunities for growth and improvement. Weaknesses help organizations or individuals to gain a clear understanding of their internal limitations or areas that need improvement. This awareness is crucial for developing realistic strategies and goals. By acknowledging weaknesses, organizations can develop strategies to mitigate these risks before they become significant issues. It allows for proactive rather than reactive management. Also, understanding them helps in the efficient allocation of resources. Organizations can prioritize areas that need more attention or investment to overcome or mitigate these weaknesses. When weaknesses are openly recognized, it fosters a culture of transparency and continuous improvement within an organization. This openness can lead to more engagement and innovation from team members as they contribute to solving identified problems.

In this SWOT analysis, the **weaknesses** that are being identified regarding AI's role in enhancing resilience are the following:

♦ high implementation costs: The initial investment for developing and integrating AI systems can be significant, making it a challenge for resource-constrained entities to adopt.

♦ dependency on data quality: AI's effectiveness is heavily dependent on the availability of high-quality, relevant data. Inaccurate or biased data can lead to flawed decision-making.

♦ skills gap in the workforce regarding AI development and management - which can hinder the effective deployment and use of AI technologies.

♦ ethical and privacy concerns: The use of AI raises ethical questions and privacy concerns, especially regarding data handling, surveillance, and decision-making autonomy. Identifying opportunities in a SWOT analysis is intricately linked to the concept of resilience, particularly in how organizations navigate challenges, adapt to change, and sustain growth in uncertain environments. The recognition of opportunities not only fuels strategic development, but also underpins the building of resilience in multiple ways. They often emerge from changes in the external environment, such as technological advancements, shifts in consumer preferences, or new regulatory landscapes. By identifying and leveraging these opportunities, organizations demonstrate adaptability - one of the core components of resilience. This adaptability ensures they remain relevant and competitive despite the dynamic nature of their operating environments. Moreover, resilience involves not just the ability to recover from setbacks, but also the foresight to anticipate and mitigate potential risks. Opportunities identified in this SWOT analysis can highlight alternative paths and diversification strategies that reduce dependency on volatile markets or technologies, enhancing an organization's capacity to withstand shocks. Recognizing these opportunities enables organizations to allocate their resources in technology with the potential for high returns or strategic importance. This targeted resource allocation supports the development of robust systems and capabilities, strengthening the organization's resilience against future adversities. The pursuit of opportunities often drives innovation, encouraging organizations to explore new markets, products, or processes. This ongoing innovation culture is a key aspect of resilience, as it positions organizations to continuously evolve and improve in response to environmental shifts, ensuring long-term sustainability. Many of the opportunities in this SWOT analysis may involve possible expansion of an organization's capabilities. These networks are vital for resilience, providing support, resources, and shared knowledge that can be crucial in navigating crises or exploiting new market trends.

In this SWOT analysis, the **opportunities** were identified as:

♦ advancements in AI technology - the continuous research and development in AI may offer other opportunities for creating more sophisticated and efficient systems that can better support resilience efforts.

♦ cross-sector collaboration - AI facilitates cross-sector collaborations by enabling the sharing and analysis of data across different domains, promoting a more integrated approach to resilience.

♦ global reach - AI technologies can be deployed globally, offering solutions to enhance resilience in diverse geographical and socio-economic contexts.

♦ sustainability and climate resilience - AI can significantly contribute to environmental monitoring, disaster prediction, and the development of strategies for climate resilience. In what concerns SWOT analysis identified threats, their role is to heighten the organization or society preparedness, as it enables organizations to anticipate and prepare for external challenges that could impact their stability and growth. The connection between recognizing threats and building resilience is grounded in a proactive risk management, where by identifying potential threats, organizations can proactively manage risks instead of reacting to them as they occur. This proactive stance is a core aspect of resilience, allowing for the development of contingency plans, the allocation of resources to buffer against potential impacts, and the implementation of strategies to avoid or mitigate those risks.

Recognizing external threats enables organizations to cultivate strategic agility - the capacity to rapidly adapt strategies in response to changing external conditions. This agility enhances resilience by ensuring that the organization remains viable and competitive even when faced with adverse situations. Understanding the landscape of potential threats contributes to enhanced situational awareness, enabling organizations to navigate their environment more effectively. This awareness is crucial for resilience, as it helps organizations to anticipate changes, recognize early signs of potential disruptions, and respond appropriately. Identifying threats often requires considering global trends and community impacts, leading organizations to engage more deeply with external stakeholders and contribute to collective resilience efforts. This engagement can lead to collaborative solutions that enhance both individual organizational resilience and the resilience of the wider community or industry.

In this context, the identified **threats**, in terms of resilience, are the following:

♦ cybersecurity risks - The increasing reliance on AI systems forces organisations to commit to a fully digital ecosystem, which introduces heightened risks of cyberattacks, which can undermine the resilience of critical infrastructure and systems.

♦ lack of inclusiveness - The unequal access to AI technologies can exacerbate existing inequalities, and lead to a lack of inclusiveness in organisations, which has been demonstrated to limit their ability to innovate and identify market opportunities.

♦ technological unemployment – If societies do not invest early in adapting education programmes to the new requirements of the emerging

technologies, the workforce will be insufficiently prepared and organisations will have difficulty finding suitable employees.

♦ overdependence - Overreliance on AI systems without adequate fallback or human oversight mechanisms can lead to vulnerabilities in critical decision-making processes during crises. AI can be very well seen as a pillar for enhancing global resilience, provided its application is guided by strategic planning and collaborative efforts that address inherent weaknesses and external threats. By leveraging AI's strengths and opportunities, while diligently managing its weaknesses and threats, organizations and societies can build a more resilient future. This approach not only prepares them to withstand and recover from adverse events, but also equips them to thrive in an increasingly complex and uncertain world. AI's capacity for swift data analysis is a cornerstone for resilience, enabling entities to quickly identify risks, forecast potential disruptions, and devise informed strategies. This ability is particularly crucial in times of crisis, where timely decisions can mitigate impacts and steer recovery efforts effectively. By streamlining decision-making processes and automating mundane tasks, AI frees up human resources to tackle strategic challenges and innovative problem-solving, thereby enhancing an organization's adaptability and resilience against unforeseen adversities. AI's innovative solutions to complex problems can significantly boost an organization's resilience, providing novel ways to navigate challenges that traditional methods may not address effectively. Moreover, developing secure, reliable AI systems and ensuring diverse contingency plans, including human oversight can prevent vulnerabilities in critical decision-making processes and infrastructure. Continuous innovation in AI offers opportunities to develop more sophisticated systems that better support resilience efforts. AI's global applicability means that resilience strategies can be implemented and scaled across different geographical and socio-economic contexts, thereby contributing significantly to global resilience efforts. Additionally, AI's role in environmental monitoring and climate resilience underscores its potential to address some of the most pressing global challenges of our time.

IV. Final Conclusions

♦ The UN General Assembly resolution on AI and the SDGs provide a global framework and foundation for leveraging AI in resilience building efforts. These initiatives advocate for the responsible development and use of AI, emphasizing international cooperation, equitable access to AI benefits, and the importance of including developing countries in AI governance discussions.

♦ AI's advanced analytical capabilities and decision-support mechanisms significantly contribute to institutional and societal resilience. Therefore, by quickly processing vast amounts of data, AI aids in

identifying patterns and predicting outcomes, thereby enabling informed decision-making in crisis situations and routine operations alike.

♦ Seizing AI's opportunities, such as technological advancements, cross-sector collaboration, global reach, and contributions to sustainability and climate resilience are of most importance. In this context, these opportunities underscore AI's role in building adaptive, robust systems capable of withstanding and recovering from adversities.

♦ The realization of AI's full potential in enhancing resilience is contingent upon addressing its inherent weaknesses and external threats, including high implementation costs, data quality dependency, workforce skills gaps, and ethical concerns. Strategic planning and collaborative efforts are essential to cross these challenges, ensuring AI systems are safe, secure, trustworthy, and aligned with human rights and SDGs.

♦ Through addressing threats like cybersecurity risks, technological unemployment, global inequalities and overdependence on AI the means for building resilience are supported by a proactive risk management, emphasizing the development of contingency plans and strategies to mitigate potential negative impacts.

♦ AI emerges as a fundamental pillar for enhancing global resilience, offering both significant opportunities and challenges. Strategic, collaborative efforts to leverage AI's strengths, address its weaknesses, and capitalize on opportunities, while mitigating threats, are essential for harnessing AI's full potential in building a resilient, inclusive, and sustainable world.

♦ AI's potential to accelerate progress towards the SDGs highlights its indispensable role in promoting economic, social, and environmental sustainability. Hence, by aligning AI development with these goals, societies can better prepare themselves and recover from challenges, advancing towards a more resilient and sustainable future.

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