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Artificial Intelligence for Inclusive and Sustainable Growth: Aligning AI Technologies with the SDGs

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Abstract - Artificial intelligence is increasingly shaping economic, social, and environmental development, offering both opportunities and risks for global sustainability. This paper examines how AI capabilities such as predictive analytics, automation and data integration can be aligned with the targets of the United Nations Sustainable Development Goals to promote inclusive and sustainable growth. Using a systems perspective, the study treats AI as an enabling infrastructure influencing service delivery, governance, and knowledge production. It evaluates AI's contributions in sectors such as finance, education, healthcare and climate management while also addressing challenges including digital inequality, algorithmic bias and governance gaps. The paper argues that AI can support equitable and sustainable development only when guided by ethical frameworks, inclusive policies and coordinated institutional strategies that prioritise long-term social and environmental outcomes.

Key Words: Artificial intelligence, Sustainable Development Goals, inclusive growth, digital inequality, AI governance, sustainable innovation.

1.INTRODUCTION

Contemporary debates on development increasingly recognise that technological change is reshaping the pathways through which societies pursue prosperity, equity, and environmental stability. Among emerging technologies, artificial intelligence occupies a particularly influential position because it not only enhances efficiency but also transforms how knowledge is generated, decisions are made, and institutions operate. Understanding how AI can be aligned with global development priorities is therefore essential for ensuring that innovation contributes to broad-based and sustainable progress rather than deepening existing disparities.

Despite decades of economic expansion and technological progress, profound structural challenges continue to shape global development trajectories. Persistent poverty, widening income inequality, ecological degradation and uneven access to education and healthcare reveal that growth alone does not guarantee social inclusion or environmental sustainability [1], [2]. Climate change intensifies these pressures by disrupting livelihoods, increasing resource scarcity and exposing institutional weaknesses, particularly in low- and middle-income countries. These interconnected crises underscore the need for development strategies that simultaneously address economic opportunity, social justice and environmental resilience rather than treating them as separate policy domains.

In response to these multidimensional challenges, the United Nations established the Sustainable Development Goals as a comprehensive agenda for achieving inclusive and sustainable development by integrating economic, social and environmental priorities [3], [4]. The SDGs provide a shared normative framework that guides governments, institutions, and civil society toward measurable targets in areas such as poverty reduction, quality education, gender equality, sustainable cities, and climate action. Their significance lies not only in the breadth of their objectives but also in their recognition that development outcomes depend on coordinated institutional capacity, reliable data and adaptive policy mechanisms.

Artificial intelligence has emerged as a general-purpose technology capable of reshaping production systems, governance processes, and knowledge infrastructures. Through capabilities such as pattern recognition, predictive modelling, and automated decision support, AI enables organisations to analyse complex datasets, optimise resource allocation and deliver services at unprecedented scale and speed. These features position AI as more than a productivity tool. It functions as a socio-technical infrastructure that influences how societies organise labour, distribute opportunities and respond to emerging risks. Consequently, its developmental implications extend beyond efficiency gains to include institutional transformation and shifts in power over data and knowledge.

2. CONCEPTUAL FOUNDATIONS

Understanding the developmental significance of artificial intelligence requires a conceptual framework that situates technology within broader social, economic, and institutional processes. Rather than treating AI as a purely technical innovation, it is more analytically productive to view it as part of a transformation in how knowledge is produced, resources are allocated, and governance systems operate. This section therefore clarifies the theoretical relationships among artificial intelligence, inclusive growth and sustainable development in order to establish the analytical foundation for examining AI's alignment with global development goals.

A. Artificial Intelligence as a Development Enabler

Artificial intelligence can be understood as a general-purpose technological capability that enhances decision-making, prediction, and operational efficiency across diverse sectors. Its developmental significance lies in its capacity to process vast and heterogeneous datasets, identify patterns that are not easily visible to human analysts and support adaptive responses in complex policy environments. These functions allow institutions to improve targeting of social programmes, optimise infrastructure systems and anticipate economic or environmental risks with greater precision. As a result, AI contributes not only to productivity gains but also to institutional learning and administrative effectiveness. In this sense, AI operates as an enabling infrastructure that strengthens the informational foundations upon which inclusive and sustainable growth strategies depend [5].

B. Inclusive Growth and Sustainable Development

Inclusive growth refers to economic expansion that generates opportunities across social groups while ensuring that its benefits are equitably distributed. Sustainable development extends this principle by incorporating environmental stewardship and intergenerational equity into the concept of progress [6]. Together, these ideas challenge traditional growth paradigms that prioritised aggregate output without addressing structural inequality or ecological limits. Within the framework articulated by the United Nations Sustainable Development Goals, inclusive and sustainable growth is conceived as a multidimensional process that integrates poverty reduction, access to services, institutional accountability and environmental protection [7]. The conceptual linkage between inclusion and sustainability lies in their shared emphasis on resilience and fairness, recognising that development outcomes must support both present well-being and future stability.

C. Linking Artificial Intelligence with the Sustainable Development Goals

The relationship between artificial intelligence and the Sustainable Development Goals is best understood through a systems perspective that views AI as an amplifier of existing institutional capacities rather than a standalone solution. When embedded within effective governance structures, AI can enhance monitoring of development indicators, improve policy design through evidence-based modelling, and extend the reach of public services into underserved communities. Conversely, where institutional capacity is weak or regulatory oversight is limited, AI may intensify inequalities by privileging actors with access to data, infrastructure and technical expertise. Conceptually, this dual potential highlights that AI's developmental value emerges from its interaction with social institutions, policy priorities and normative commitments to equity and sustainability [8], [9]. Aligning AI with the SDGs therefore requires not only technological deployment but also the deliberate integration of ethical standards, participatory governance, and inclusive data practices into the broader development architecture [10], [11].

3. DOMAINS WHERE AI SUPPORTS INCLUSIVE AND SUSTAINABLE GROWTH

The developmental implications of artificial intelligence become most visible when examined across the concrete domains in which technological capabilities intersect with social needs and policy priorities. Rather than contributing to growth in an abstract sense, AI reshapes specific sectors that influence how opportunities are distributed, how services are delivered, and how environmental systems are managed. Analysing these domains helps clarify the mechanisms through which AI can support inclusive and sustainable growth while also revealing the institutional conditions required for its effective deployment.

A. Economic Inclusion and Poverty Reduction

Artificial intelligence has the potential to expand economic participation by improving access to financial

services, enhancing productivity in small enterprises, and supporting more efficient labour markets [12], [13]. In the financial sector, machine learning systems can analyse alternative data sources to assess creditworthiness for individuals and small businesses that lack formal banking histories, thereby broadening access to credit opportunities [14]. In agriculture and informal sectors, AI-driven advisory tools can optimise planting schedules, supply chains and pricing decisions, enabling producers to reduce uncertainty and improve income stability. These applications contribute to more inclusive growth by lowering informational barriers and transaction costs that historically excluded marginalised populations from formal economic systems. However, the inclusiveness of these outcomes depends on equitable access to digital infrastructure and safeguards against data-driven discrimination, highlighting the importance of policy frameworks that ensure AI-driven economic transformation benefits a broad social base.

B. Social Inclusion in Education, Health, and Public Services

Artificial intelligence also plays a significant role in enhancing the reach and quality of essential social services, particularly in education, healthcare, and public administration [15], [16]. In education, adaptive learning systems can personalise instructional content to students' needs, enabling more effective learning pathways for individuals who might otherwise struggle in standardised systems [17], [18]. In healthcare, AI-supported diagnostic tools and predictive models can assist clinicians in identifying diseases earlier and allocating resources more efficiently, particularly in underserved regions where medical expertise is scarce [19], [20]. Within public administration, AI-based analytics can improve targeting of welfare programmes, detect inefficiencies and enhance transparency in service delivery [21], [22]. These applications contribute to social inclusion by strengthening institutional capacity to provide equitable access to knowledge, health, and public resources. Their effectiveness, however, depends on trust, data protection and the integration of technological systems with human-centred governance practices. Figure 1 demonstrates the role of AI for inclusive and sustainable growth.

Figure 1: AI for Inclusive and Sustainable Growth

C. Environmental Sustainability and Climate Action

Beyond economic and social domains, artificial intelligence offers significant potential for advancing environmental sustainability and supporting climate resilience. AI-driven models can analyse environmental data to forecast extreme weather events, monitor biodiversity, and optimise the management of energy and water systems. Smart grid technologies, for example, use predictive algorithms to balance energy supply and demand, improving efficiency while facilitating the integration of renewable sources. In urban planning, AI-supported simulations can help design transportation networks and resource flows that minimise emissions and environmental stress. Such applications align closely with the environmental priorities embedded in the agenda of the United Nations Sustainable Development Goals by linking technological innovation with long-term ecological stewardship. At the same time, the environmental footprint of AI infrastructure itself, particularly its energy consumption and material requirements, underscores the need for sustainable design principles that ensure technological solutions do not generate new environmental burdens.

4. RISKS AND BARRIERS TO INCLUSIVE AI-DRIVEN GROWTH

While artificial intelligence offers significant opportunities to advance development objectives, its transformative capacity also introduces structural risks that may undermine inclusion and sustainability if left unaddressed. These risks do not arise solely from technological limitations but from the interaction between AI systems and existing social, economic and

institutional inequalities. A critical examination of these barriers is therefore essential for understanding the conditions under which AI can either support or hinder equitable development.

A. Digital Divide and Unequal Access

One of the most persistent barriers to inclusive AI-driven growth lies in the unequal distribution of digital infrastructure, computational resources, and technical expertise across and within countries. Advanced AI systems require high-quality data, reliable connectivity, and substantial investment in hardware and human capital, conditions that are concentrated in wealthier regions and urban centres. As a result, the benefits of AI innovation often accrue to actors already positioned within strong technological ecosystems, while low-income communities and developing economies risk becoming dependent consumers rather than active producers of AI solutions. This asymmetry may deepen global and domestic inequalities by reinforcing existing patterns of economic concentration and limiting opportunities for technological self-determination. Addressing this divide requires long-term investment in digital public infrastructure, inclusive innovation ecosystems, and capacity building that allows diverse regions to shape AI applications according to their own developmental priorities.

B. Algorithmic Bias and Social Inequality

AI systems learn from historical data, and when such data reflect entrenched social inequalities, algorithmic outputs may replicate or even amplify patterns of discrimination. Bias can emerge in areas such as hiring systems, credit scoring, predictive policing or welfare allocation when datasets underrepresent marginalised populations or encode historically unequal treatment. These outcomes challenge the assumption that algorithmic decision-making is inherently objective and instead reveal the socio-political character of data-driven systems. Without transparent auditing processes, inclusive data governance and accountability mechanisms, algorithmic bias can erode public trust and reinforce structural exclusion. Scholars and policy institutions, including the OECD, increasingly emphasise that fairness in AI requires continuous oversight, interdisciplinary evaluation and participatory design processes that incorporate diverse social perspectives into technological development.

C. Environmental Costs of Artificial Intelligence

Although AI is often promoted as a tool for environmental sustainability, the infrastructure supporting large-scale computation carries significant ecological implications. Training complex machine learning models consumes substantial energy, and the expansion of data centres increases demand for electricity, cooling systems and rare-earth materials used in hardware production. If powered by carbon-intensive energy sources, the growth of AI infrastructure may contribute to greenhouse gas emissions and resource depletion, thereby offsetting some of the environmental gains that AI-enabled optimisation seeks to achieve. Sustainable AI development therefore requires attention to energy-efficient algorithms, responsible hardware lifecycles, and integration with renewable energy systems. Recognising these environmental costs is essential for ensuring that technological innovation aligns with long-term ecological resilience rather than producing hidden sustainability trade-offs.

D. Governance and Regulatory Challenges

A final barrier to inclusive AI-driven growth concerns the fragmentation of governance frameworks and the pace at which technological innovation outstrips regulatory adaptation. Figure 2 shows the risks and barriers to inclusive AI driven growth.

Figure 2: Risks & Barriers to Inclusive AI-Driven Growth

Many countries lack comprehensive legal structures addressing data ownership, algorithmic accountability, cross-border data flows and ethical standards for

automated decision-making. This regulatory lag creates uncertainty for institutions while allowing powerful actors to shape AI deployment in ways that may prioritise commercial advantage over public welfare. Moreover, the global nature of digital technologies complicates national oversight, making international coordination essential for addressing issues such as data monopolies, labour displacement and technological dependency. Effective governance therefore depends on collaborative frameworks that combine national policy innovation with multilateral cooperation, ensuring that AI development remains consistent with human rights, social justice and sustainable development objectives

5. GOVERNANCE AND POLICY FRAMEWORKS FOR ALIGNING AI WITH THE SDGs

Realising the developmental potential of artificial intelligence depends not only on technological capability but on the governance arrangements that shape how systems are designed, deployed, and evaluated. Effective policy frameworks are essential for ensuring that AI contributes to inclusive and sustainable growth rather than reinforcing inequality or environmental strain. This requires moving beyond fragmented regulation toward integrated approaches that link ethical principles, institutional accountability and measurable development outcomes.

A. Ethical AI Principles for Sustainable Development

At the foundation of SDG-aligned AI governance lies the articulation of ethical principles that guide technological development toward socially beneficial outcomes. Norms such as transparency, accountability, fairness, and human oversight help ensure that automated systems remain consistent with democratic values and human rights. Ethical AI frameworks encourage designers and policymakers to consider not only efficiency but also distributive justice, environmental impact and long-term societal consequences. Embedding such principles into procurement standards, research funding, and institutional practices promotes responsible innovation while strengthening public trust. International initiatives, including those advanced by the UNESCO, underscore that ethical AI must be grounded in cultural diversity, human dignity, and sustainability if it is to contribute meaningfully to global development objectives.

B. Global and National Policy Approaches

Because artificial intelligence operates across borders through data flows, digital markets, and transnational research networks, effective governance requires coordination between national strategies and global policy frameworks. At the national level, governments play a crucial role in establishing regulatory standards for data protection, algorithmic accountability and public sector adoption of AI systems. These policies help ensure that technological innovation aligns with domestic development priorities and social welfare objectives. At the international level, cooperation is needed to prevent regulatory fragmentation, address data monopolies and facilitate knowledge sharing between countries. Multilateral dialogue, regional partnerships and development-oriented technology transfer mechanisms can support a more equitable global AI ecosystem, enabling countries to harness innovation without becoming structurally dependent on a small number of dominant technology producers.

C. SDG-Aligned Innovation and Evaluation Frameworks

Beyond ethical principles and regulatory coordination, aligning AI with the Sustainable Development Goals requires practical mechanisms for assessing whether technological initiatives genuinely contribute to inclusive and sustainable outcomes. SDG-aligned innovation frameworks encourage policymakers and organisations to evaluate AI projects against indicators such as poverty reduction, service accessibility, gender equality, environmental impact and institutional transparency. Incorporating such metrics into funding decisions, pilot programmes, and public procurement processes ensures that technological investments are judged not solely by economic return but by their broader developmental value. This approach shifts AI governance from reactive regulation toward proactive steering of innovation, fostering a policy environment in which technological progress is systematically linked to measurable improvements in social well-being and ecological resilience.

6. FUTURE DIRECTIONS FOR RESEARCH AND IMPLEMENTATION

As artificial intelligence becomes increasingly embedded in development strategies, the challenge shifts from demonstrating its potential to shaping the

conditions under which it can deliver equitable and sustainable outcomes. Future research and implementation efforts must therefore move beyond isolated technological applications toward systemic approaches that integrate institutional capacity, ethical governance and contextual sensitivity. Advancing this agenda requires interdisciplinary inquiry, inclusive innovation processes, and sustained investment in both human and technical infrastructure. Figure 3 illustrates the future directions for research and implementation.

Figure 3: Future Directions for Research and Implementation

A. Interdisciplinary and Context-Sensitive Research Approaches

Future research on artificial intelligence and development must place greater emphasis on interdisciplinary collaboration that brings together expertise from computer science, economics, public policy, sociology and environmental studies. AI systems do not operate in a vacuum but interact with labour markets, governance structures, cultural norms and ecological constraints. Research that integrates these perspectives can better assess the societal consequences of AI deployment and identify context-specific solutions that reflect local institutional realities. Such approaches are particularly important in developing regions where imported technological models may not align with social needs or infrastructural conditions. By grounding AI research in local knowledge systems and participatory methodologies, scholars can contribute to more inclusive and socially responsive innovation pathways.

B. Inclusive Data Ecosystems and Localised AI Development

A central priority for future implementation lies in the creation of inclusive data ecosystems that reflect diverse populations, languages, and socio-economic contexts. Many existing AI systems are trained on datasets that disproportionately represent high-income regions, which limits their relevance and fairness when applied elsewhere. Investing in locally generated datasets, open data initiatives and community-based data governance models can help ensure that AI systems are responsive to the needs of different populations. At the same time, supporting local research institutions, startups, and public-sector innovation labs can foster technological self-reliance and reduce dependency on external providers. This shift toward localised AI development strengthens both the inclusiveness and the sustainability of technological adoption. Figure 4 shows the inclusive data ecosystems.

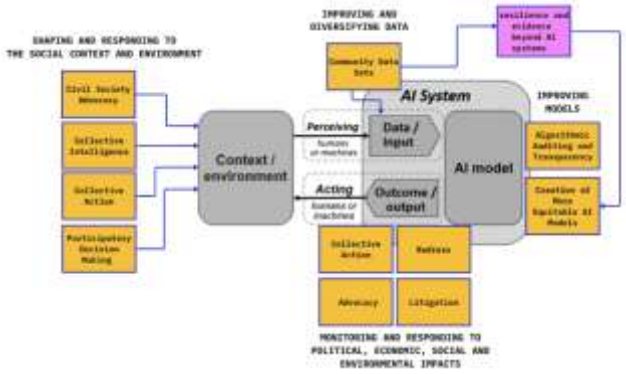

Figure 4: Inclusive Data Ecosystems

C. Capacity Building and AI Literacy for Sustainable Adoption

Technological transformation cannot be sustained without parallel investments in human capabilities. Future implementation strategies must therefore prioritise education, professional training, and public awareness initiatives that build AI literacy across multiple levels of society. Policymakers require technical understanding to regulate emerging systems effectively, while educators and professionals need the skills to integrate AI tools into their work responsibly. Public literacy is equally important for fostering informed debate, democratic oversight and trust in technological systems. Capacity-building initiatives that combine technical training with ethical and social perspectives can help societies harness AI in ways that

support long-term development objectives rather than short-term efficiency gains.

D. Sustainable and Responsible AI Infrastructure

Another key direction for future implementation involves ensuring that the physical and computational infrastructure supporting AI development aligns with environmental sustainability goals. Research into energy-efficient algorithms, low-resource machine learning techniques and sustainable hardware supply chains can reduce the ecological footprint of AI systems. Policymakers and organisations can further support this objective by linking digital infrastructure expansion with renewable energy investments and circular economy principles in hardware production. Embedding sustainability into the design of AI infrastructure ensures that technological progress contributes to environmental resilience rather than intensifying resource pressures.

7. CONCLUSION

Artificial intelligence is rapidly becoming a foundational component of contemporary development pathways, with the capacity to influence economic productivity, social equity, institutional effectiveness and environmental sustainability. This paper has argued that AI's contribution to inclusive and sustainable growth is not predetermined by technological capability alone but shaped by governance choices, data practices, infrastructural access and ethical commitments embedded within development strategies. When aligned with the priorities articulated in the agenda of the United Nations Sustainable Development Goals, AI can strengthen public service delivery, expand economic participation, and support more adaptive responses to environmental challenges. However, without deliberate policy direction and inclusive institutional design, the same technologies risk reinforcing inequality, concentrating power and generating new ecological pressures. The central implication is that AI should be understood not simply as a tool for efficiency but as a socio-technical system whose developmental value depends on how societies govern its integration into economic and social life. Ensuring that artificial intelligence advances inclusive and sustainable growth therefore requires coordinated international cooperation, national policy innovation, and sustained investment in equitable digital infrastructure, human capabilities and responsible technological design.

REFERENCES

[1] A. J. van Niekerk, "Inclusive Economic Sustainability: SDGs and Global Inequality," *Sustainability 2020, Vol. 12,* vol. 12, no. 13, Jul. 2020, doi: 10.3390/su12135427.

[2] N. P. Hariram, K. B. Mekha, V. Suganthan, and K. Sudhakar, "Sustainalism: An Integrated Socio-Economic-Environmental Model to Address Sustainable Development and Sustainability," *Sustainability 2023, Vol. 15,* vol. 15, no. 13, Jul. 2023, doi: 10.3390/su151310682.

[3] Y. Zhang, "Measuring Progress Toward Sustainable Development Goals Through Legal Integration and Policy Guidance," *Journal of Energy and Environmental Policy Options* , vol. 4, no. 1, pp. 1–8, Mar. 2021, Accessed: Feb. 15, 2026. [Online]. Available: https://resdojournals.com/index.php/JEEPO/article/view/174

[4] M. Sousa, M. F. Almeida, and R. Calili, "Multiple Criteria Decision Making for the Achievement of the UN Sustainable Development Goals: A Systematic Literature Review and a Research Agenda," *Sustainability 2021, Vol. 13,* vol. 13, no. 8, Apr. 2021, doi: 10.3390/su13084129.

[5] D. Mhlanga, "Artificial Intelligence in the Industry 4.0, and Its Impact on Poverty, Innovation, Infrastructure Development, and the Sustainable Development Goals: Lessons from Emerging Economies?," *Sustainability 2021, Vol. 13,* vol. 13, no. 11, May 2021, doi: 10.3390/su13115788.

[6] N. Abramovich and A. Vasiliu, "Sustainability as fairness: A Rawlsian framework linking intergenerational equity and the sustainable development goals (SDGs) with business practices," *Sustainable Development*, vol. 31, no. 3, pp. 1328–1342, Jun. 2023, doi: 10.1002/sd.2451.

[7] G. Bándi, "Sustainable Development, the Interests of Future Generations, and Moral

and Legal Implications", doi: 10.54237/profnet.2022.jeszcpefg_2.

[8] A. S. Gill and S. Germann, "Conceptual and normative approaches to AI governance for a global digital ecosystem supportive of the UN Sustainable Development Goals (SDGs)," *AI and Ethics 2021 2:2*, vol. 2, no. 2, pp. 293–301, May 2021, doi: 10.1007/s43681-021-00058-z.

[9] A. Rojas and A. Tuomi, "Reimagining the sustainable social development of AI for the service sector: the role of startups," *Journal of Ethics in Entrepreneurship and Technology*, vol. 2, no. 1, pp. 39–54, Nov. 2022, doi: 10.1108/jeet-03-2022-0005.

[10] M. J. Moon, "Searching for inclusive artificial intelligence for social good: Participatory governance and policy recommendations for making AI more inclusive and benign for society," *Public Adm. Rev.*, vol. 83, no. 6, pp. 1496–1505, Nov. 2023, doi: 10.1111/puar.13648.

[11] N. Rane, "Roles and Challenges of ChatGPT and Similar Generative Artificial Intelligence for Achieving the Sustainable Development Goals (SDGs)," *SSRN Electronic Journal*, Aug. 2023, doi: 10.2139/ssrn.4603244.

[12] N. Kshetri, "The Role of Artificial Intelligence in Promoting Financial Inclusion in Developing Countries," *Journal of Global Information Technology Management*, vol. 24, no. 1, pp. 1–6, Jan. 2021, doi: 10.1080/1097198X.2021.1871273.

[13] D. Mhlanga, "Industry 4.0 in Finance: The Impact of Artificial Intelligence (AI) on Digital Financial Inclusion," *International Journal of Financial Studies 2020, Vol. 8,* vol. 8, no. 3, pp. 1–14, Jul. 2020, doi: 10.3390/ijfs8030045.

[14] S. Bhatore, L. Mohan, and Y. R. Reddy, "Machine learning techniques for credit risk evaluation: a systematic literature review," *Journal of Banking and Financial Technology 2020 4:1*, vol. 4, no. 1, pp. 111–138, Jun. 2020, doi: 10.1007/s42786-020-00020-3.

[15] A. Al-Besher and K. Kumar, "Use of artificial intelligence to enhance e-government services," *Measurement: Sensors*, vol. 24, no. 3, p. 100484, Dec. 2022, doi: 10.1016/j.measen.2022.100484.

[16] D. B. Olawade, O. J. Wada, A. C. David-Olawade, E. Kunonga, O. Abaire, and J. Ling, "Using artificial intelligence to improve public health: a narrative review," *Front. Public Health*, vol. 11, p. 1196397, Oct. 2023, doi: 10.3389/fpubh.2023.1196397.

[17] D. L. Taylor, M. Yeung, A. Z. Bashet, D. L. Taylor, and M. Yeung, "Personalized and Adaptive Learning," pp. 17–34, 2021, doi: 10.1007/978-3-030-58948-6_2.

[18] A. Donevska-Todorova, K. Dziergwa, and K. Simbeck, "Individualizing Learning Pathways with Adaptive Learning Strategies: Design, Implementation and Scale", doi: 10.5220/0010995100003182.

[19] P. Manickam *et al.*, "Artificial Intelligence (AI) and Internet of Medical Things (IoMT) Assisted Biomedical Systems for Intelligent Healthcare," *Biosensors 2022, Vol. 12,* vol. 12, no. 8, Jul. 2022, doi: 10.3390/bios12080562.

[20] M. Bertl *et al.*, "Future Opportunities for Systematic AI Support in Healthcare," *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)* , vol. 14129 LNCS, pp. 203–224, 2025, doi: 10.1007/978-3-031-73741-1_13.

[21] G. Misuraca, D. Broster, and C. Centeno, "Digital Europe 2030: Designing scenarios for ICT in future governance and policy making," *Gov. Inf. Q.*, vol. 29, no. SUPPL. 1, p. 101976, Jan. 2012, doi: 10.1016/j.giq.2011.08.006.

[22] T. Kinder, J. Stenvall, E. Koskimies, H. Webb, and S. Janenova, "Local public services and the ethical deployment of artificial intelligence," *Gov. Inf. Q.*, vol. 40, no. 4, p. 101865, Oct. 2023, doi: 10.1016/j.giq.2023.101865.