世界互联网大会
World Internet Conference

Governing AI for Good and for All
—Empowering Global Sustainable Development

AI Safety and Governance Program of
World Internet Conference Specialized Committee on Artificial Intelligence

April 2025

AI SAFETY AND GOVERNANCE PROGRAM OF WORLD INTERNET CONFERENCE SPECIALIZED COMMITTEE ON AI

CO-LEADS

Zeng Yi Institute of Automation, Chinese Academy of Sciences

Seán Ó hÉigeartaigh University of Cambridge

EXPERTS AND CONTRIBUTORS

Including WIC members and invited experts of the Program,
as well as contributors who provided contents or comments to the report,
listed in alphabetical order by the first letter of the organization name.

Advisory Council on AI of the Ministry of Higher Education, Science and Innovation, Uzbekistan
Ammar Younas

Alibaba Group
Zhang Rong, Wang Xingguang

Arab ICT Organization (AICTO)
Nada Laabidi

Beijing University of Posts and Telecommunications
Yang Zhongliang

Beijing Yinxiang Biji Technology Co., Ltd.
Qiao Qian

CCTV International Network Co., Ltd
Cheng Ming

China Academy of Information and Communications Technology (CAICT)
Hu Naying, Guo Sumin

China Branch of BRICS Institute of Future Networks
Zhou Yuan

China Electronics Standardization Institute (CESI)
Zhang Yanting

China Internet Network Information Center (CNNIC)
Chen Jingjing

China Mobile Communications Group Co., Ltd.
Lin Lin, Wu Shuyan, Liu Yue, Zhao Ying, Deng Jie

China Telecommunications Corporation
Chen Fengxian, Liu Weichen, Wang Feng

China United Network Communications Group Co., Ltd.
Zhou Kai

China University of Political Science and Law
Zhang Linghan

Cloud Security Alliance (CSA)
John Yeoh

Cyber Security Association of China (CSAC)
Wang Jianbing, Xia Wenhui

DBAPPSecurity Co., Ltd.
Wang Xin, Li Huawei

Federal University of Rio Grande do Sul
Edson Prestes

Fuxi Institution
Li Na

Hong Kong University of Science and Technology
Pascale Fung

Institute of Philosophy of Chinese Academy of Social Sciences
Duan Weiwen

IQuilibriumAI
Jimena Sofia Viveros Alvarez

Kingsoft Cloud
Xi Jingjing

Lingnan University of Hong Kong
Yao Xin

Nankai University
Tao Feng

Peking University
Yang Yaodong

Renmin University of China
Gong Xinqi

Sri Lanka CERT
Nirosha Ananda, Charuka Senal Damunupola

Tencent
Deng Wenjie, Zhai Jiahuan, Li Daren,
Wang Mengyin, Cao Jianfeng

Tsinghua University
Tang Xinhua

United Nations University Institute in Macau
Serge Stinckwich

University of Southampton
Dame Wendy Hall

Zhongguancun Laboratory
Tan Zhixing

360 Security Technology Inc.
Xiao Jianwu

Lenovo Group
Hu Yongqi

MiniMax
Peng Tao

Nokia Shanghai Bell Co., Ltd.
Wang Tong, Ye Chenhui

People.cn Co., Ltd.
Gu Wenjie

Shanghai AI Lab
Qiao Yu

Technische Universität München
Christoph Lüitge

The Chinese University of Hong Kong
Helen Meng, Zhang Jiji

UNESCO Regional Office for East Asia
Liu Chang, Xia Hehua

University of Münster
Bernd Holznagel

World Internet Conference
Liang Hao, Zhang Xueli

ZTE Corporation
Meng Wei

Writing Group:

Institute of Automation, Chinese Academy of Sciences
Beijing Key Laboratory of Artificial Intelligence Safety and Superalignment
Beijing Institute of AI Safety and Governance (Beijing-AISI)
Zeng Yi, Lu Enmeng, Fan Jinyu, Huangfu Cunqing

University of Chinese Academy of Sciences
Wang Jin, Wang Zhengqi, Guo Xiaoyang

World Internet Conference
Kang Yanrong, Han Kaiyu

Contact us via:
research@wicinternet.org

Preface

At present, Artificial Intelligence (AI) technology is developing rapidly and profoundly impacting the global economy, society, and environment, emerging as a key driver of sustainable development. In this context, AI governance not only provides clear direction for effectively harnessing AI to achieve the Sustainable Development Goals (SDGs) but also offers robust safeguards against the potential negative impacts and risks that AI may pose. In 2024, the United Nations General Assembly adopted two resolutions to enhance global AI governance and accelerate the implementation of the sustainable development agenda. The "Global Digital Compact" aims to bridge the digital divide, accelerate sustainable development, and strengthen international AI governance for the benefit of humanity.

World Internet Conference (WIC), through the AI Safety and Governance Program of WIC Specialized Committee on AI, has brought together experts from international organizations, universities, think tanks, industry associations, and leading enterprises in the field. This collaborative initiative is focused on conducting joint research on AI governance and sustainable development, with the goal of forging international consensus, expediting problem resolution, and promoting AI as a force for the well-being of human society.

This report presents the global progress, current developments, and existing issues in AI for sustainable development. It provides an analytical discussion on bridging the digital divide and enhancing AI capacity-building through inclusive and shared-benefit approaches to AI development and governance. Furthermore, it proposes action recommendations to accelerate AI-driven global sustainable development, grounded in deepening international cooperation on AI governance for sustainability, and compiles practical case studies. The report aims to serve as a reference for governments, enterprises, and academia, contributing insights and solutions to accelerate AI's role in achieving global Sustainable Development Goals.

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Sustainable Development and AI Governance: Global Progress

In 2015, the United Nations General Assembly adopted the "Transforming Our World: The 2030 Agenda for Sustainable Development" (hereafter also referred to as the 2030 Agenda or the 2030 Agenda for Sustainable Development)[1]. Currently, two-thirds of the 2030 Agenda's implementation period has elapsed, yet achieving its goal faces severe challenges. AI, as the most disruptive technological breakthrough of the past decade, presents both significant opportunities and multiple challenges for achieving the SDGs. Effectively guiding and safeguarding SDGs implementation through AI governance has become an urgent task crucial to humanity' s shared future.

(a) Sustainable Development Is a Comprehensive Process Balancing Multi-Stakeholders' Interest

Sustainable development is a development model that meets the needs of the present without compromising the ability of future generations to meet their own needs[2]. In 2015, the United Nations held the Sustainable Development Summit, where 193 UN Member States unanimously adopted[3] the "Transforming Our World: The 2030 Agenda for Sustainable Development". This agenda established 17 SDGs, covering a wide range of global priorities—from eradicating hunger, ensuring quality education, achieving gender equality, and promoting health and well-being, to combating climate change and fostering sustainable economic growth. **The 17 SDGs represent a shared vision for humanity and a social contract between world leaders and their people[4].**

Figure 1: Interconnections Among the 17 SDGs[5]

1 UNGA Resolution, "Transforming our world: the 2030 Agenda for Sustainable Development" (September 2015), source: https://sdgs.un.org/2030agenda
2 World Commission on Environment and Development, "Our Common Future" (April 1987), source: http://www.un-documents.net/our-common-future.pdf
3 Source: https://sdgs.un.org/2030agenda
4 UN News, remarks by then UN Secretary-General Ban Ki-moon (December 2015), source: https://news.un.org/zh/story/2015/12/249342.
5 This research stems from the "AI4SDGs Think Tank" established by Center for Long-term Artificial Intelligence (CLAI), which analyzes cases published on the United Nations Sustainable Development website using keyword co-occurrence methods. The figure reveals the interlinkage patterns among various SDGs, with the thickness of the lines indicating the strength of the relationship between any two SDGs.

The 17 SDGs are an indivisible whole, which integrates the three dimensions of sustainable development: economic, social, and environmental. The SDGs include economic objectives such as Industry, Innovation and Infrastructure (SDG 9), social objectives like Quality Education (SDG 4), and environmental targets such as Life Below Water (SDG 14). Meanwhile, as can be seen from Figure 1, each SDG is inherently complex, not only connected within its own domain but also deeply intertwined across different fields, which means that contributing to the achievement of any single SDG may simultaneously drive progress in other related SDGs.

In the pursuit of sustainable development, both developing and developed countries share common responsibilities[1]. However, their respective responsibilities and obligations differ due to historical factors, disparities in development levels, and varying capacities. Amid multiple challenges—including the COVID-19 pandemic, geopolitical conflicts, and climate change—developing countries face constraints such as funding shortages and rising debt risks[2]. The 2030 Agenda emphasizes that the international community must provide greater assistance and support to developing countries to ensure equitable and inclusive sustainable development worldwide.

(b) AI Significantly Impacts the Progress of Sustainable Development

AI is a major opportunity to accelerate the sustainable development process. As the most profoundly enabling technology of the past decade, AI provides new possibilities for sustainable development from different perspectives. **Economically,** as a new factor of production, AI can promote industrial innovation and transformation[3], while creating new employment opportunities. **Socially,** AI promotes equitable access to public services such as education[4] and healthcare[5], delivering quality resources to developing countries, remote areas and vulnerable populations[6]. **Environmentally,** AI contributes to the green revolution[7] by helping achieve energy conservation and emission reduction[8], while optimizing resource allocation. **Scientifically,** AI demonstrates breakthrough potential in fields including biomedicine[9], earth sciences[10], and biodiversity conservation[11], providing innovative technological solutions to global challenges.

However, AI also poses numerous challenges to the achievement of sustainable development goals. For example, AI may create pressure on **climate and environmental** sustainability goals: the computing power requirements of current AI technological pathways may create energy burdens[12], increasing carbon emissions; while the rapid iteration of AI hardware may lead to accumulation of electronic waste. Additionally, AI presents challenges to **equality and inclusion,** manifested in the inherent data biases and algorithmic biases in AI carry risks of introducing or reinforcing discrim-

1 UNGA Resolution, "Transforming our world: the 2030 Agenda for Sustainable Development" (September 2015), source: https://sdgs.un.org/2030agenda
2 UN General Assembly statement, China calls for international support to help developing nations achieve sustainable socio-economic development (April 2024), source: https://www.gov.cn/yaowen/liebiao/202404/content_6945579.htm
3 China Telecom' s self-developed AI energy-saving system: saving 800 million kWh of electricity annually and reducing electricity costs by 520 million yuan, source: https://www.c114.com.cn/news/117/a1275451.html
4 Vicari, R., Brackmann, C., Mizusaki, L., & Galafassi, C. (2024). Políticas e governança para apoiar a inserção da Inteligência Artificial na Educação potencializando seus benefícios e minimizando seus riscos (Nota Técnica). SESI-Departamento Nacional.
5 AI applications in healthcare, Ruijin Hospital' s pathological AI model developed with Huawei, source: https://news.sciencenet.cn/htmlnews/2025/2/538982.shtm
6 China Mobile' s Smart Village Doctor initiative in Jilin, source: https://www.10086.cn/download/csrreport/cmcc_2023_csr_report_full_cn.pdf
7 China Mobile' s AI-empowered efficient energy conservation and low-carbon operations in data centers, source: https://sjzyj.wuhu.gov.cn/sjzy/8664228.html
8 Changzhou Municipal Administration Center reduced air conditioning cooling power consumption by 15% through AI deployment (March 2025), source: https://js.ifeng.com/c/8hMOL3DbIZZ
9 Asimov Press, Evo 2' s capability to design entire genomes, source: https://press.asimov.com/articles/evo-2
10 Open AI Computing Industry Alliance' s PECIP project using AI to drive climate action and empower polar research for global sustainable development, source: https://innoport.cuhk.edu.hk/single-cubiczine-eng/hokinchung_en/ & https://mp.weixin.qq.com/s/XnCU3nEdrnY5xdidBhGcMQ
11 Tencent' s Wild Friends Project, source: https://techforgood.qq.com/projects/detail/313
12 Saklani, S., & Singh, D. (2024). Minimizing Carbon Emissions by Improving Water and Energy Use Efficiencies in AI Servers: A Green Cloud Computing Strategy for Sustainable Artificial Intelligence Systems. International Journal of Innovative Science and Research Technology (IJISRT).

ination, leading to misunderstandings and distrust[1]; the widespread application of AI imposes new requirements on workers, potentially causing structural unemployment[2]; with technology and data concentrated in the hands of a few countries, further widening the North-South divide. In terms of **safety**, AI's content generation and output capabilities may manipulate public opinion, create falsehoods and deception, causing harm to individuals or groups[3]; powerful AI may be abused, misused or misapplied, for example it may increase the risks of cyberattacks and bioterrorism[4], pose humanitarian challenges in military operations, and exacerbate privacy violations and copyright infringements, etc. Furthermore, malfunctions or loss of control of AI systems themselves may also create risks. These challenges and risks present new difficulties for achieving sustainable development goals.

In summary, the rapidly developing AI is reshaping human society with unprecedented depth and breadth, making the urgency of its governance increasingly prominent. Only by properly managing AI risks can humanity safely and fully benefit from it[5]. The core of AI governance lies in achieving a dynamic balance between maximizing technological dividends and minimizing social risks through institutional frameworks, ensuring that AI is used for good while preventing misuse, abuse and malicious use. This is not only the safety bottom line to prevent technological alienation, but also the value cornerstone to ensure that AI always serves the progress of human civilization and the well-being of society and its ecological systems[6].

(c) Promoting Empowerment for Sustainable Development is the Consensus of Global AI Governance

The application of AI in empowering sustainable development is a positive practice that presents both opportunities and challenges, with effective governance providing guidance and safeguards. Legal frameworks such as the EU "Artificial Intelligence Act"[7], along with governance frameworks including China's "AI Safety Governance Framework"[8] and the U.S. "AI Risk Management Framework"[9], adopt a risk-based classification and regulatory approach. China's "Interim Measures for the Management of Generative AI Services"[10] "Methods for the Identification of AI-Generated and Synthesized Content"[11], and Singapore's "Model AI Governance Framework for Generative AI" have implemented specialized regulation and governance in response to the widespread application of generative AI[12] technologies. These efforts serve as valuable references for fostering the orderly development and responsible deployment of technology, preventing misuse and malicious exploitation, and guiding nations in addressing the multifaceted impacts of AI in a responsible manner.

The United Nations has identified AI-empowered sustainable development as a key agenda item in recent years. In 2024, **the UN General Assembly** successively adopted two resolutions: "Seizing the opportunities of safe, secure and trustworthy artificial intelligence systems for sustainable development" and "Enhancing international cooperation on artificial intelligence capacity-building", which

1 Bias found in AI system used to detect UK benefits fraud, source: https://www.jaag.org.uk/blog/bias-found-in-ai-system-used-to-detect-uk-benefits-fraud
2 International Monetary Fund, AI will transform the global economy, let's ensure it benefits all humanity (January 2024), source: https://www.imf.org/zh/Blogs/Articles/2024/01/14/ai-will-transform-the-global-economy-lets-make-sure-it-benefits-humanity
3 First AI Safety Summit, The Bletchley Declaration (November 2023), source: https://www.gov.uk/government/publications/ai-safety-summit-2023-the-bletchley-declaration/the-bletchley-declaration-by-countries-attending-the-ai-safety-summit-1-2-november-2023
4 Center for a New American Security, AI and the Evolution of Biological National Security Risks: Capabilities, Thresholds, and Interventions (August 2024), source: https://www.cnas.org/press/press-release/new-cnas-report-on-ai-and-biological-national-security-risks; https://s3.us-east-1.amazonaws.com/files.cnas.org/documents/AIBiologicalRisk_2024_Final.pdf
5 Y. Bengio et al., "International AI Safety Report" (DSIT 2025/001, 2025), source: https://www.gov.uk/government/publications/international-ai-safety-report-2025
6 Beijing Academy of Artificial Intelligence et al., Beijing AI Principles, source: https://www.baai.ac.cn/english.html
7 Source: https://artificialintelligenceact.eu/the-act/
8 Source: https://www.cac.gov.cn/2024-09/09/c_1727567886199789.htm
9 Source: https://www.nist.gov/itl/ai-risk-management-framework
10 Source: https://www.gov.cn/zhengce/zhengceku/202307/content_6891752.htm
11 Source: https://www.cac.gov.cn/2025-03/14/c_1743654684782215.htm
12 Source: https://aiverifyfoundation.sg/wp-content/uploads/2024/05/Model-AI-Governance-Framework-for-Generative-AI-May-2024-1-1.pdf

provide guidance and safeguards for aligning AI technology with the realization of sustainable development goals. **The UN High-level Advisory Body on Artificial Intelligence** released the "Governing AI for Humanity: Final Report"[1], highlighting that governance can be a key enabler for AI innovation for the SDGs globally. The report also put forward several concrete recommendations, including establishing an independent international scientific panel on AI and creating a global dialogue on AI governance to explore areas where AI could contribute to advancing the SDGs. Some of these recommendations were subsequently incorporated into the "Global Digital Compact (GDC)"[2], which was formally adopted during **the UN Summit of the Future** in September 2024. The GDC outlining five objectives including closing all digital divides and accelerating progress across the SDGs, expanding inclusion in and benefits from the digital economy for all, and enhancing international governance of AI for the benefit of humanity. It strengthens international cooperation to advance global digital governance through a series of commitments and actions, providing a framework to support AI in promoting the SDGs.

Besides, **the United Nations Educational, Scientific and Cultural Organization (UNESCO)** issued the "Recommendation on the Ethics of Artificial Intelligence"[3] in 2021, emphasizing AI' s profound impact on society, environment, ecosystem, and human life while actively supporting the equal participation of Global South countries in international AI governance and dialogue. The **World Health Organization (WHO)** released the "Ethics and Governance of Artificial Intelligence for Health: Guidance on Large Multi-modal Models"[4] in 2024, focusing on AI' s role in enhancing human well-being in the healthcare sector. The **International Telecommunication Union (ITU)** has launched the "AI for Good" initiative[5], focusing on the innovative application of AI technologies in real-world scenarios to accelerate the achievement of the SDGs and expand AI-driven solutions globally.

Multilateral mechanisms and dialogue platforms provide governance frameworks to promote the empowerment of AI for sustainable development. The **Organization for Economic Co-operation and Development (OECD)** provides multidisciplinary, evidence -based policy analysis and data to facilitate inclusive and sustainable development and transformation, and to achieve a sustainable and inclusive future[6]. The **Group of Twenty (G20)** approved the "G20 AI Principles"[7] in 2019, emphasizing that AI research and development should adhere to a human-centered development approach. The 2023 G20 New Delhi Summit further called for the establishment of a "human-centered" AI governance framework, with particular attention to fairness issues in technology applications in developing countries[8]. The **European Union (EU)** regards AI technology as a key tool for achieving its "carbon neutrality" goal and, through initiatives such as the "Coordinated Plan on Artificial Intelligence"[9]and the"Packaging and Packaging Waste Regulation"[10], encourages the use of AI technology to develop climate prediction models and smart grids, improve industrial design, and promote the circular economy and green transition. The **Asia-Pacific Economic Cooperation (APEC)** advocates for bridging the digital divide and deepening inclusive cooperation through sound development and governance to achieve sustainability in its "Putrajaya

1 Source: https://www.un.org/sites/un2.un.org/files/governing_ai_for_humanity_final_report_en.pdf
2 Source: https://www.un.org/digital-emerging-technologies/global-digital-compact
3 Source: https://unesdoc.unesco.org/ark:/48223/pf0000380455_chi
4 Source:https://www.who.int/publications/i/item/9789240084759
5 International Telecommunication Union, AI for Good Global Summit, source: https://aiforgood.itu.int/summit24/
6 OECD, "Declaration on Transformative Science, Technology and Innovation Policies for a Sustainable and Inclusive Future" (April 2024), source: https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0501
7 Source:https://wp.oecd.ai/app/uploads/2021/06/G20-AI-Principles.pdf
8 G20 New Delhi Leaders' Declaration-New Delhi, India, 9-10 September 2023,(September 2023), source: https://g20.org/wp-content/uploads/2024/09/G20-2023_India_Declaracao-de-Lideres.pdf
9 Source: https://digital-strategy.ec.europa.eu/en/library/coordinated-plan-artificial-intelligence
10 Source: https://environment.ec.europa.eu/news/new-rules-more-sustainable-and-competitive-packaging-economy-2025-02-11_en

Vision 2040"[1].The **Shanghai Cooperation Organization (SCO),** in its "Astana Declaration of the SCO Council of Heads of State"[2], designated 2025 as the "Year of Sustainable Development", calling for seizing the opportunities of digital transformation to promote universally beneficial and inclusive global cooperation and accelerate the implementation of the 2030 Agenda. In 2023, **WIC** released the "Consensus on Developing Responsible Generative Artificial Intelligence"[3], which extensively pooled collective wisdom to advance the synergistic progress of generative AI development and governance.

The Global South holds high expectations and calls for bridging the digital divide to achieve equitable and inclusive sustainable development. The "Havana Declaration"[4], issued at the G77+China Summit in 2023, called for enhancing developing countries' opportunities to access and develop technology, as well as establishing an open, fair, inclusive, and non-discriminatory environment for technological advancement. The Third South Summit[5], held in early 2024, called for narrowing all digital divides and inequalities—within and between countries and regions, as well as between developed and developing countries—in terms of data generation, infrastructure, and accessibility. China has proposed the "Global AI Governance Initiative"[6] and the "AI Capacity-Building Action Plan for Good and for all"[7], emphasizing that inclusive cooperation rather than exclusive isolation in AI development is crucial to ensuring the progress of global sustainable development. China advocates bridging the AI and digital divides to help the Global South benefit equally in the AI development process.

Deepening AI governance and accelerating the global process of AI for sustainable development require broader and more intensive international cooperation. Northern countries possess technological and resource advantages, enabling them to assume international responsibilities, while countries in the Global South have urgent needs for targeted support. Therefore, only through complementary cooperation can both sides jointly address the common challenges between AI and SDGs, thereby promoting the establishment of an inclusive and shared global governance system that ensures the benefits of technology reach all humanity.

1 Source: https://www.apec.org/meeting-papers/leaders-declarations/2020/2020_aelm/annex-a
2 Source: https://www.mfa.gov.cn/zyxw/202407/t20240704_11448360.shtml
3 Source: https://cn.wicinternet.org/2023-11/09/content_36952741.htm
4 Source: https://www.gov.cn/yaowen/liebiao/202309/content_6904536.htm
5 Outcome Document of the Third South Summit, source: http://www.g77.org/doc/3southsummit_outcome.htm
6 Source: https://www.fmprc.gov.cn/web/ziliao_674904/1179_674909/202310/t20231020_11164831.shtml
7 Source: https://www.mfa.gov.cn/web/wjbz_673089/xghd_673097/202412/t20241218_11496414.shtml

02

Current Progress and Future Directions of AI for Sustainable Development

This chapter primarily introduces the current status and future directions of AI for sustainable development. AI presents unprecedented opportunities for advancing the 2030 Agenda for Sustainable Development, yet current research and practices in AI for sustainable development still show significant room for improvement. Hence, it is imperative to offer directional guidance for AI to ensure sustainable development via effective governance.

(a) Current Status and Progress of AI for Sustainable Development

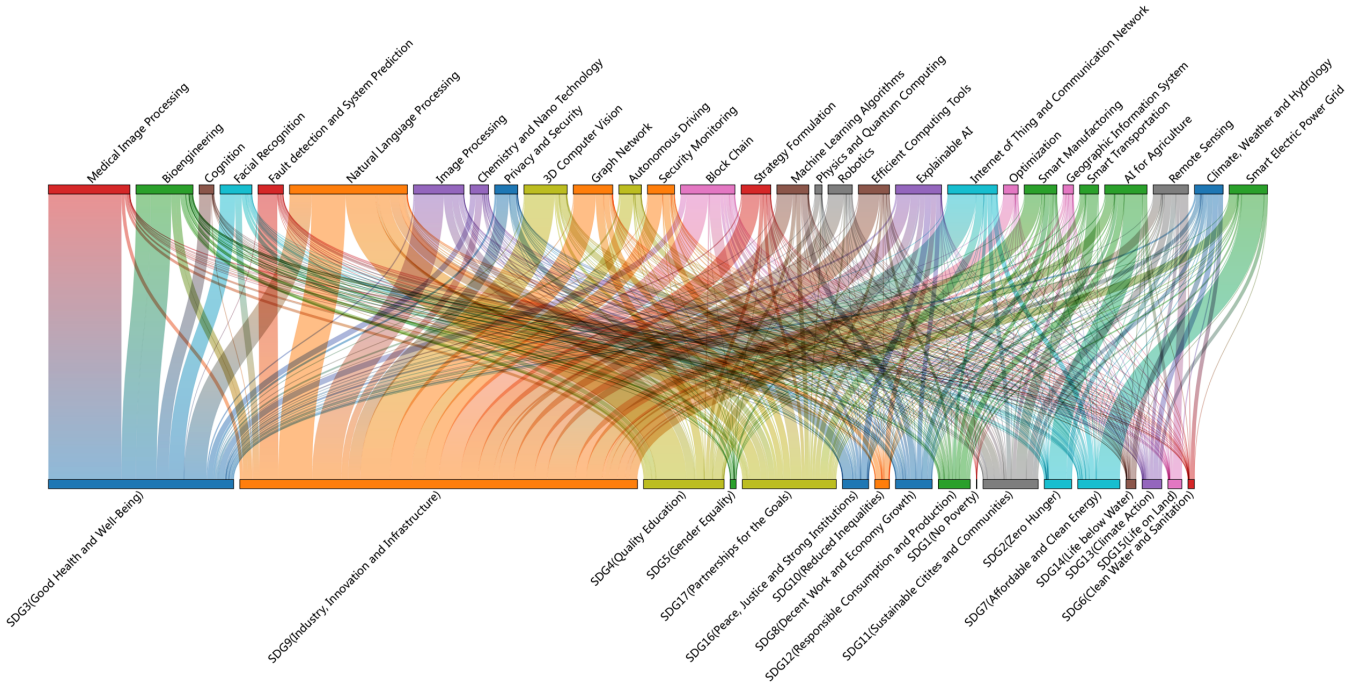

Figure 2: Diagram of the Relationship Between AI Research Fields and SDGs (Based on Literature Analysis)[1]

1 This work originates from the "AI4SDGs Think Tank" established by CLAI. A total of 183,435 highly cited AI papers (with at least 20 citations) from Semantic Scholar were analyzed, among which 96,404 papers contribute to the achievement of at least one Sustainable Development Goal (SDG).

AI possesses immense potential to propel the advancement of the Sustainable Development Goals on a global scale. The 17 SDGs encompass 169 sub-targets[1], while research indicates that AI is expected to facilitate 79% of the SDGs, covering 134 specific targets. Among them, 82% of social objectives, 70% of economic objectives, and 93% of environmental objectives may benefit from AI technologies. Within the 17 SDGs, AI demonstrates particularly prominent potential for SDG 1, SDG 4, SDG 6, SDG 7, SDG 9, SDG 11, SDG 14, and SDG 15[2].

The current research of AI in the SDGs has made widespread progress. Research shows that there is a general correlation between various fields of AI and each SDG. 52.6% of highly cited AI literature makes a positive contribution to at least one SDG. Among all the permutations and combinations of research fields and SDGs, 91% of the combinations have highly cited papers[3]. As shown in Figure 2, AI research across various fields demonstrates significant contributions to Good Health and Well-Being (SDG 3), Quality Education (SDG 4), Industry, Innovation and Infrastructure (SDG 9), and Partnerships for the Goals (SDG 17), with particularly notable impacts from technical domains like image processing and natural language processing. Even in less-studied areas, AI plays distinctive roles. For instance, data analytics and remote sensing technologies can identify impoverished regions for targeted interventions[4], thereby advancing No Poverty (SDG 1). Research on gender bias in word embeddings[5] enhances machine learning transparency, advancing Gender Equality (SDG 5). Machine learning applications in water quality monitoring[6], facilitate the implementation of Clean Water and Sanitation (SDG 6).

In terms of application and practice, in the environmental field, the report "Towards a Coordinated Global Approach to AI Environmental Sustainability Standardization"[7], released during the AI Action Summit, focuses on standardization and best practices for using AI to enhance environmental sustainability. In the medical field, the ITU selected 53 practical cases from 19 countries in its 2024 AI for good case study collection[8], demonstrating the significant role of AI in healthcare services, diagnosis, and treatment innovation. In the agricultural sector, AI has played a key role in crop management, agricultural equipment maintenance[9], and market decision-making, significantly improving agricultural productivity, optimizing resource utilization, and promoting environmental management[10]. Statistics from AI for Sustainable Development Goals (AI4SDGs) Think Tank[11] show that more than 400 cases from 57 countries comprehensively cover all 17 SDGs.

(b) Current Challenges in AI for Sustainable Development

AI still faces multiple challenges in empowering sustainable development, which are mainly manifested in the following four aspects:

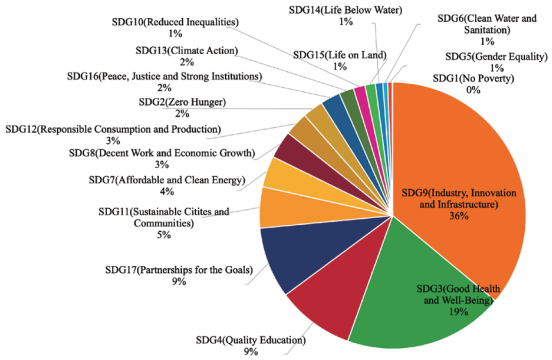

Figure 3: The proportion of literature on AI for the 17 SDGs[12].

1 Source: https://www.un.org/sustainabledevelopment/
2 Vinuesa, R., Azizpour, H., Leite, I. et al. The role of artificial intelligence in achieving the Sustainable Development Goals. Nat Commun 11, 233 (2020). https://doi.org/10.1038/s41467-019-14108-y
3 Source: same as Figure 2
4 Joshua Evan Blumenstock, Fighting poverty with data. Science 353, 753-754 (2016). DOI: 10.1126/science.aah5217
5 N. Garg, L. Schiebinger, D. Jurafsky, & J. Zou, Word embeddings quantify 100 years of gender and ethnic stereotypes, Proc. Natl. Acad. Sci. U.S.A. 115 (16) E3635-E3644, https://doi.org/10.1073/pnas.1720347115 (2018)
6 Sit M, Demiray BZ, Xiang Z, Ewing GJ, Sermet Y, Demir I. A comprehensive review of deep learning applications in hydrology and water resources. Water Sci Technol. 2020 Dec;82(12):2635-2670. doi: 10.2166/wst.2020.369. PMID: 33341760
7 Source: https://www.sustainableaicoalition.org/wp-content/uploads/Standardization_AI_Sustainability.pdf
8 ITU, AI for Good-Innovate for Impact Final Report 2024. source: https://www.itu.int/dms_pub/itu-t/opb/ai4g/T-AI4G-AI4GOOD-2024-3-PDF-E.pdf
9 China Academy of Information and Communications Technology, "China Smart Agriculture Development Report" points out the application of artificial intelligence in weather pattern prediction, irrigation optimization and precision fertilization (December 2021), source: http://www.caict.ac.cn/kxyj/qwfb/ztbg/202201/P020220104495485440718.pdf
10 International Telecommunication Union (ITU), Data Modelling for Digital Agriculture, source: https://www.itu.int/en/ITU-T/focusgroups/ai4a/Documents/Deliverables/FGAI4A-04.pdf.
11 Source: https://ai-for-sdgs.academy/ai4sdgs-research-program-cn
12 Source: same as Figure 2

The potential of AI for sustainable development remains underutilized. Today, more than one-third of the SDGs are stagnating or even regressing, with Zero Hunger (SDG 2), Sustainable Cities and Communities (SDG 11), Life Below Water (SDG 14), Life on Land (SDG 15), and Peace, Justice, and Strong Institutions (SDG 16) facing particularly severe challenges[1]. Among these, AI has the potential to generate significant positive impacts on at least SDG 2, SDG 11, SDG 14, and SDG 15[2]. However, as shown in the figure 3, much of this potential has not been well realized. In addition, research on AI remains limited in other high-potential areas of empowerment, such as No Poverty (SDG 1), Clean Water and Sanitation (SDG 6), Reduced Inequalities (SDG 10), and Climate Action (SDG 13).

AI exhibits imbalanced attention and investment across different sustainable development areas. High-value sectors like industry and medicine attract strong corporate and financial investment due to clear commercialization prospects. Meanwhile, current research resources are predominantly allocated to technological domains such as large language models and image recognition (see Figure 2). However, the technology itself lacks inherent capacity to spontaneously address global societal challenges. The alignment and investment of various resources have empowered certain SDG-related fields to establish a "research-application" virtuous cycle ahead of others. For instance, smart healthcare and smart education directly generate revenue by reducing operational costs, thereby attracting substantial capital. In contrast, areas like water resources and ecological protection suffer from inadequate investment due to the absence of mature business models, making it difficult to form closed-loop systems.

AI for sustainable development suffers from inadequate data resources. On the one hand, there are significant national and regional disparities in relevant data. According to the United Nations "Sustainable Development Goals Report 2023"[3], fewer than half of the 193 countries or regions worldwide have internationally comparable data; data on No Poverty (SDG 1) and Gender Equality (SDG 5) in developing countries generally suffer from urban-rural and regional representativeness biases, with only 20% of sustainable development goal indicators in African countries being supported by complete statistical systems. On the other hand, data distribution across different sustainable development indicators is uneven. The "Sustainable Development Goals Report 2024"[4] further shows that among the 169 targets, 34 lack sufficient trend data or additional analysis, and data timeliness is inadequate, with about one-third of indicators lacking the latest data from the past three years. For example, in the area of Climate Action (SDG 13), only about 10% of countries globally had trend data in 2024. Since AI is highly dependent on data resources, insufficient data quality and representativeness seriously affect AI research and application in these sustainable development goal areas.

There exists an uneven technological compatibility between AI and different SDGs. In related research and practice, there is a high degree of compatibility between Industry, Innovation, and Infrastructure (SDG 9) and almost all AI technology directions; Sustainable Cities and Communities (SDG 11) can integrate technologies from multiple fields such as smart transportation, remote sensing, and 3D vision; Healthcare and education mainly rely on image recognition and natural language processing, but the relevant algorithms and technologies have a relatively high maturity level and are highly matched.

1 United Nations, "The Sustainable Development Report 2024", source: https://dashboards.sdgindex.org/chapters/executive-summary
2 Vinuesa, R., Azizpour, H., Leite, I. et al. The role of artificial intelligence in achieving the Sustainable Development Goals. Nat Commun 11, 233 (2020). https://doi.org/10.1038/s41467-019-14108-y
3 Source: https://unstats.un.org/sdgs/report/2023/The-Sustainable-Development-Goals-Report-2023_Chinese.pdf
4 Source: https://unstats.un.org/sdgs/report/2024/The-Sustainable-Development-Goals-Report-2024.pdf

However, in other SDGs, the potential for AI to play a role has not yet been fully explored, which has led to AI contributing less to No Poverty (SDG 1), Clean Water and Sanitation (SDG 6), and Life Below Water (SDG 14).

Overall, to fully harness the potential of AI in achieving the SDGs by 2030, the following efforts should be intensified in AI development and governance: **First, focusing on bridging the AI and digital divides.** Through governance and cooperation, prevent AI from exacerbating inequalities while leveraging its advantages to ensure equitable benefits for impoverished and vulnerable regions and populations. **Second, accelerating AI' s potential in key SDG areas.** Strengthen scientific innovation and cultivate talent, enhance interdisciplinary collaboration, and foster a robust AI ecosystem. This will maximize AI' s potential in poverty and hunger reduction, biodiversity and environmental protection, and optimal resource allocation. **Third, further capitalizing on mature application domains.** Education, healthcare, and industry represent AI' s comparative advantages for sustainable development, featuring relatively mature technologies, complete industrial chains, and high market readiness. Beyond directly improving educational and healthcare quality, enhancing employment and economic conditions, and promoting inclusive opportunities, these sectors' implementation models offer valuable references for AI' s application to other SDGs.

03

Promoting the Shared Benefits and Inclusiveness of AI Development and Governance to Bridge the AI and Digital Divides

Bridging the digital divide is a core issue and major challenge for sustainable development. Reports from the United Nations indicate that beyond the digital access gap, the digital world also faces data divides and innovation divides, with these digital inequalities reflecting significant governance disparities[1]. The digital divide directly constrains the achievement of multiple goals including No Poverty (SDG 1), Quality Education (SDG 4), and Reduced Inequalities (SDG 10). In response, the United Nations has incorporated bridging the digital divide into the global governance framework through initiatives such as the "SDG Digital Acceleration Agenda"[2].

(a) From Digital Divide to AI Divide

Due to the Matthew effect of technological accumulation, AI may exacerbate the digital divide to some extent. AI technology poses new challenges to the traditional digital divide: First, high-quality data, as the core resource for AI training, is difficult and costly to obtain. Second, computing power is the foundation of AI, and developing countries struggle to afford the high investment required for advanced computing infrastructure. Third, disparities in algorithm development capabilities are creating generational gaps in core AI technologies, while the decision-making mechanisms of algorithms raise the cognitive threshold for the public. According to a report by the United Nations and the International Labour Organization[3], on one hand, AI has intensified **divisions among social groups**: workers with AI skills enjoy higher wage premiums[4], while low-income groups, lacking digital literacy, are excluded from technological dividends, exacerbating income inequality and structural unemployment risks. On the other hand, **regional development gaps** continue to widen due to technological monopolies: some tech companies and early-adopter countries leverage their accumulated computing infrastructure and data resources to gain strong competitiveness in algorithm model development. Meanwhile, many developing countries, constrained by weak technological foundations and limited access to resources, face challenges in their technological upgrading processes.

1 United Nations, Our Common Agenda Policy Brief: A Global Digital Compact (May 2023), source: https://www.un.org/sites/un2.un.org/files/our-common-agenda-policy-brief-gobal-digi-compact-zh.pdf
2 Source: https://www.itu.int/initiatives/sdgdigital/acceleration-agenda/
3 International Labour Organization/United Nations, "Mind the AI Gap: Shaping a Global Perspective on the Future of Work" (2024), source: https://digitallibrary.un.org/record/4061662?ln=zh_CN&v=pdf
4 Chen Fengxian, Diao Naiqi, Wang Na. The Multiple Impacts of Artificial Intelligence on Employment and Policy Recommendations. China Science and Technology, 2024, (12): 84-89.

At the same time, AI also offers the possibility of leapfrog development, providing opportunities to bridge the digital divide. Digital literacy and open cooperation are crucial for narrowing the digital divide[1]. On one hand, AI technology reduces the cost of education and information dissemination, enabling underdeveloped regions and disadvantaged groups to access cutting-edge digital knowledge and skills, thereby improving **digital literacy**. On the other hand, through **open-source communities and ecosystem building**, AI helps break the technological monopolies of developed countries and certain corporations, allowing developing countries to share the benefits of digital technology development and promoting inclusivity and equity.

The emergence of AI has triggered a shift from the digital divide to the AI divide. AI divide represents a new form of the digital divide. At the technical level, barriers arise from the accessibility of algorithmic tools and the ability to acquire data resources. At the cognitive level, there is a significant disparity in public understanding of how intelligent technologies operate and their societal impacts. At the level of intelligent participation, environmental factors such as algorithmic bias and technological monopolies further marginalize disadvantaged groups. In essence, under the influence of AI, the digital divide is no longer just a gap in hardware and skills but also a gap in environment and literacy. Promoting inclusive and equitable AI to enhance public awareness, understanding, and participation in an intelligent society is crucial for bridging this new form of digital divide.

(b) Unlocking AI's Potential to Enhance Digital Literacy

AI provides favorable conditions for enhancing digital literacy. For example, large language models and machine translation reduce language barriers for people when engaging in digital and internet-related work; intelligent voice assistants and smart home devices not only bring convenience to daily life but also shape an intelligent environment, improving public awareness; machine learning-based content recommendation mechanisms deliver personalized information tailored to individual needs, supporting knowledge education and skills training, cultivating digital talent, improving employment quality, and building a lifelong learning ecosystem for all; technologies such as intelligent voice interaction and image recognition help people with disabilities bridge the digital divide; the coordinated development of industrial digitization, along with enterprise-level AI training systems, accelerates the iteration of employees' digital skills, forming a virtuous cycle between talent supply and industrial upgrading.

At the same time, there exists a mutually driving and reinforcing relationship between the application of AI technology and the enhancement of digital literacy. Digital literacy encompasses not only digital skills and knowledge but also attitudes toward, understanding of, and participation in digital and AI domains. The widespread application of AI provides a favorable digital environment that improves public services and civic literacy while simultaneously fostering broader participation in an intelligent society.

In the field of **government governance,** the intelligentization of governance processes and the improvement of government digitalization levels form a virtuous cycle[2]. For example, Shenzhen Futian took the lead in deploying AI civil servants in 2025[3], enhancing government staff's capability and efficiency in using AI to complete tasks such as document revision, legal document generation, public service request allocation, and enterprise screening, while also developing customized intelligent assistants for 240 business scenarios[4], which simultaneously

1 UN Summit of the Future, Global Digital Compact (September 2024), source: https://www.un.org/zh/documents/treaty/A-RES-79-1-Annex-I
2 People's Daily Online, "MinYi Tong" system achieves dynamic perception of public opinion and risk early warning, source: https://baijiahao.baidu.com/s?id=1824767183311673488&wfr=spider&for=pc
3 People's Daily Online, commentary on AI civil servants, source: http://politics.people.com.cn/n1/2025/0224/c458474-40424076.html
4 Guangming Online, Shenzhen Futian's "AI Digital Employees", source: https://m.gmw.cn/2025-02/21/content_1303976783.htm

imposes higher digital literacy requirements on staff.

In the field of **public literacy,** the teaching and application of AI promote the public to improve digital skills to adapt to intelligent scenarios, while the enhancement of public digital literacy in turn feeds back into technological iteration. For example, the Day of AI platform developed by the Massachusetts Institute of Technology[1] provides schools and teachers with free AI teaching and office tools for AI course instruction, improving the digital literacy of students and teachers while also cultivating more professionals with specialized knowledge and practical skills for the AI industry. Singapore has established a lifelong education system covering all age groups, using a series of popular science courses such as AI4E[2] to integrate real-life cases and multilingual resources, lowering the public' s cognitive threshold and promoting the widespread adoption of AI products; Singapore also cultivates professionals through the "AI Apprenticeship Programme"[3], ensuring the human resources needed for technology implementation while feeding back into public education through the practical achievements of engineers, forming a virtuous cycle of technology application and literacy enhancement.

(c) Building an Inclusive and Dynamic AI R&D and Application Ecosystem

Building an inclusive and dynamic AI ecosystem has profound implications for bridging the development gap between different countries and regions worldwide. Currently, there is a significant disparity in AI development between the Global North and South, with technological R&D and applications primarily dominated by northern countries, while countries in the Global South struggle to fully leverage AI for SDGs due to resource and technological constraints. To address this, it is essential to jointly establish inclusive technology communities and ecosystems that lower barriers to R&D and application, enhance open collaboration, and encourage active participation from countries in the Global South in AI development, deployment, and governance. Meanwhile, a broadly participatory AI ecosystem can ensure that countries in the Global South gain greater influence in data collection, technological innovation, and algorithm training, thereby reducing biases and discrimination stemming from underrepresented training data, narrowing the digital divide, and advancing sustainable development on a global scale.

Open Resource serves as the core driving force and practical pathway for the development of AI ecosystem. In the era of generative AI, the definition of open source has gradually evolved into open resource[4] , which may not only manifest as the opening of source code but also include the opening of resources such as data, algorithms, models, standards, knowledge, and content[5]. Open Resource practices represented by DeepSeek effectively promote independent innovation and technical exchange through the open sharing of core technologies, enabling global developers to jointly participate in the evolution of cutting-edge technologies[6]. Open model communities such as ModelScope and Hugging Face significantly lower the threshold for technology application and cultivate transnational developer communities by providing diverse foundational models, toolchains, and collaboration platforms. The ecosystem expansion effect brought about by Open Resource collaboration has penetrated key areas such as government affairs, education, and healthcare, forming diverse solutions with regional adaptability. This inclusive technology model creates a virtuous cycle of economic and social value by

1 Source: https://dayofai.org/?utm_source=aihub.cn
2 Source: https://ai4sme.aisingapore.org/ai-for-everyone/
3 Source: https://aiap.sg/
4 Source: https://cn.wicinternet.org/2025-02/20/content_37862286.htm
5 UNESCO, Recommendation on the Ethics of Artificial Intelligence (November 2021), source: https://unesdoc.unesco.org/ark:/48223/pf0000381137_chi
6 Tencent News, Deep Open Source Boosts the Inclusive "Breakthrough" of AI Large Models, source: https://news.qq.com/rain/a/20250304A01GIL00

optimizing resource allocation, contributing to the continuous advancement of digital transformation in global industrial chains and the realization of SDGs.

While fully unleashing the potential of open resource, corresponding risks must also be noted. The openness of code and data may lead to security vulnerabilities and privacy violations; open resources may introduce intellectual property issues such as open-source license conflicts and unclear copyright ownership; meanwhile, the broad accessibility and openness of open resources may lead to phenomena of abuse, misuse, or even malicious exploitation, as malicious actors could leverage publicly available code for illegal activities or cyberattacks; additionally, operational and management risks include inadequate community governance, insufficient resources, and excessively long dependency chains, all of which collectively form the comprehensive challenges that the open resource ecosystem must confront while promoting technological innovation. The international community should strengthen the construction of the open resource ecosystem through cooperation, promote technology sharing and knowledge dissemination, while establishing corresponding rules and standards to mitigate open resource risks and ensure the healthy development of AI.

An inclusive, equitable and vibrant open resource ecosystem is crucial for bridging the digital divide. Inclusiveness ensures full participation and representation, the principle of equitable access promotes sharing the benefits of AI development, while vibrancy enables long-term and broader impact. To advance sustainable development, **ecosystem building should be coordinated with digital literacy enhancement.** Improving digital literacy creates broader development space for AI R&D and application ecosystems, while robust ecosystems in turn provide abundant resources for digital literacy improvement—only through such virtuous cycles can ecosystem vitality be maintained. Ecosystem communities should form **decentralized interconnected networks** to facilitate exchanges and cooperation between different communities, enabling collaborative innovation and efficient resource integration among all participants[1], thereby creating an ecosystem that is both flexible and secure, open yet self-organizing. Convenience and support should be provided to **help developing countries integrate into the global ecosystem.** Developing countries face multiple challenges in AI including technological, financial and talent constraints. The international community should strengthen cooperation through technology transfer, financial assistance, and talent development to enhance developing countries' AI R&D and application capabilities, enabling their better integration into the global AI ecosystem and shared benefits of development.

1 Arab ICT Organization, Building an Arab AI Project Incubator to Integrate Multi-party Resources for Sustainable Support, source: https://www.aicto.org/ar/

04

Expanding International Cooperation in AI Capability-Building to Accelerate the Process of AI for Sustainable Development

The AI capabilities of various countries serve as the prerequisite and foundation for enabling sustainable development. Developing countries, as the primary focus of the 2030 Agenda for Sustainable Development, face the most formidable sustainable development challenges including poverty eradication, food security, and climate change. With the adoption of the UN General Assembly resolution and the "Global Digital Compact", international cooperation on AI capacity-building presents a valuable historical opportunity for developing countries. Only by deepening international collaboration and strengthening support for AI capacity-building in developing nations can we comprehensively accelerate the realization of the Sustainable Development Agenda.

(a) Difficulties Faced by Developing Countries in Promoting AI for SDGs

Due to weak historical accumulation and fragile development foundations, developing countries generally face gaps in their capacity for developing and applying emerging technologies, including AI. This further exacerbates the difficulties these countries encounter in leveraging AI for SDGs:

The digital infrastructure is underdeveloped. Due to incomplete digital infrastructure, data shows that large populations in certain regions still lack stable electricity supply, with developing countries and regions in Africa and Asia exhibiting significantly lower electricity accessibility than the global average[1]. Simultaneously, global internet penetration rates demonstrate pronounced regional disparities, with low-income countries maintaining particularly low network coverage[2]. Furthermore, while many developing countries have access to electricity and internet, they still face unstable supply conditions. These factors directly hinder the effective deployment of AI technologies.

Data and computing infrastructure are insufficient. The lack of data in developing countries makes it difficult for AI models to accurately capture localized needs, especially in fields such

1 Global Energy Interconnection Development and Cooperation Organization, "Global Electricity Development Index Report" (July 2024), source: https://www.geidco.org.cn/publications/zxbg/2025/7899.shtml]
2 International Telecommunication Union, Measuring Digital Development: Facts and Figures 2024, source: https://www.itu.int/en/ITU-D/Statistics/Pages/facts/default.aspx/

as healthcare, agriculture, and environmental monitoring. The high cost of data collection and the absence of sharing mechanisms have exacerbated the uneven distribution of data resources. At the same time, weak computing power infrastructure limits access to high-performance computing resources. Many developing countries rely on external cloud computing services, which are costly and present data security risks[1].

Technological and application capabilities are lagging. Developing countries lack the ability to develop core algorithms, optimize models, and integrate systems[2], making it difficult to convert technological achievements into tangible applications. As a result, there are challenges in building AI solutions that are adapted to local needs, particularly in addressing complex scenarios such as climate change and disaster early warning, where there is a lack of independent and controllable technological support and implementation solutions.

Risk regulation and response capabilities are lacking. On the one hand, developing countries lack forward-looking legislation in areas such as ethical norms, data security mechanisms, and algorithm transparency. At the same time, due to a lack of technological means, it is difficult to effectively identify and assess the risks that AI technologies may bring. On the other hand, their law enforcement and regulatory agencies are more likely to face issues such as insufficient professional capacity and low cross-departmental collaboration, making it difficult to form effective governance.

Talent reserve and digital literacy remain inadequate. Developing countries often face multiple constraints on talent reserves and national literacy. Due to issues such as funding shortages and education levels, the scale and quality of talent cultivation in developing countries are limited. Low salaries and research conditions exacerbate the loss of local talent and the difficulty of attracting international talent. The public also lacks basic literacy and technical application skills related to AI. These factors hinder the application of AI in key areas of sustainable development.

Participation in international multilateral governance mechanisms are limited. Currently in global AI governance frameworks, developing countries generally lack adequate representation and voice, making it difficult for them to substantively participate in international organizations' rule-making processes. This has resulted in many international AI governance multilateral mechanisms and agenda settings being more inclined to address the concerns of a few nations, while failing to sufficiently incorporate the core demands of developing countries regarding infrastructure, capacity-building, data sovereignty protection, and technology inclusion.

(b) International Cooperation of AI Capacity-Building Offers A Historic Opportunity to Accelerate Sustainable Development

AI capacity-building is a key pathway to accelerating the empowerment of sustainable development. The United Nations resolution on "Enhancing international cooperation on capacity-building of artificial intelligence"[3]. Subsequently, China proposed the "AI Capacity-Building Inclusiveness Initiative"[4] and initiated the establishment of the "Group of Friends on International Cooperation for AI Capacity-Building"[5]. These efforts systematically advance technology sharing, computing power interconnection, talent cultivation, and data security collaboration, reconstructing the technological governance landscape through multilateral coopera-

1 Lehdonvirta, V., Wú, B., & Hawkins, Z. (2024). Compute North vs. Compute South: The Uneven Possibilities of Compute-based AI Governance Around the Globe. Proceedings of the AAAI/ACM Conference on AI, Ethics, and Society, 7(1), 828-838. https://doi.org/10.1609/aies.v7i1.31683
2 UN General Assembly Resolution, "Seizing the opportunities of safe, secure and trustworthy artificial intelligence systems for sustainable development" (March 2024), source: https://docs.un.org/zh/A/78/L.49
3 Source:https://www.gov.cn/yaowen/liebiao/202407/content_6960524.htm
4 Source: https://www.mfa.gov.cn/web/wjbz_673089/xghd_673097/202412/t20241218_11496414.shtml
5 Source: https://un.china-mission.gov.cn/chn/czthd/202412/t20241219_11506138.htm]

tion and transforming the concept of inclusive development into a significant opportunity to accelerate the realization of the 2030 Agenda for Sustainable Development.

Capacity-Building for Digital Infrastructure provides new opportunities for cross-regional collaborative development in achieving SDGs. By constructing sustainable AI infrastructure through regional cooperation, inclusive growth can be promoted, and the digital divide can be narrowed. For example, the deployment of shared computing power centers and smart grids can optimize resource allocation and reduce technological development imbalances between regions[1]. In developing countries, such infrastructure can accelerate the smart transformation of agriculture, directly contributing to the achievement of goals such as Zero Hunger (SDG 2) and Affordable and Clean Energy (SDG 7).

Capacity-Building for Data Resources and Computing Power Optimization provides the possibility for the inclusive implementation of technology in achieving SDGs[2]. Open-source models and algorithm innovation have significantly reduced computing power dependence and inference costs, enabling small and medium-sized enterprises to access high-performance AI services at low cost. This capacity optimization not only facilitates industrial upgrading (SDG9), but also promotes equitable access to education (SDG4), with educational institutions providing personalized learning support for students in remote areas through low-cost API access to large models.

Capacity-Building for Knowledge and Skills Training provides the cornerstone for building a talent reserve for empowering the SDGs. Interdisciplinary talent cultivation has become crucial, such as the model of establishing an AI School at Capital Normal University and university-industry cooperation training bases, which can cultivate interdisciplinary talents with both technical capabilities and ethical awareness. Such capacity-building directly supports Decent Work and Economic Growth (SDG 8) while enhancing the public' s AI literacy and increasing societal awareness of technological risks (SDG 16).

Capacity-Building for Application Empowerment and Solutions provides practical implementation pathways for multi-scenario realization of SDGs. AI has achieved scaled applications across healthcare, transportation, and energy sectors: Africa' s Aerobotics utilizes drones and image recognition for early crop disease detection[3]; the London Stock Exchange has improved customer service efficiency by 50% through AI Q&A systems (SDG 9), large language models offer transparent problem-solving approaches in educational contexts (SDG 4), while smart grid optimization reduces energy waste by 25% (SDG 7). These cases demonstrate AI technology' s synergistic effects in advancing multiple SDGs.

Capacity-Building for R&D Innovation and Ecosystem provides sustainable momentum for technological iteration to empower the SDGs. Establishing open and collaborative innovation ecosystems is crucial, as exemplified by open resource strategy that engages global developers in model optimization, creating a virtuous cycle of "technology sharing-application feedback-iterative upgrading". A report released by the World Economic Forum[4] indicates that enterprises can accelerate the commercialization of Climate Action (SDG 13) related technologies through Digital Cores established in collaboration with cloud service providers and research institutions.

1 The Arab ICT Organization promotes the "Arab AI Charter: AI4All" to facilitate a unified stance and policy framework among regional countries. Source: https://www.aicto.org/ar/
2 The China Telecom Xingchen MaaS platform aims to provide industry clients with end-to-end large model solutions. https://netnic.com.cn/news/info_544.html
3 Source: https://www.aerobotics.com
4 World Economic Forum, AI in Action: Beyond Experimentation to Transform Industry (January 2025), source: https://reports.weforum.org/docs/WEF_AI_in_Action_Beyond_Experimentation_to_Transform_Industry_2025.pdf

Capacity-Building for Safety and Governance provides institutional safeguards for risk prevention and control to empower the SDGs. Addressing risks such as cyberattacks and data biases arising from AI requires establishing governance systems covering ethical norms and security standards. For instance, industry self-regulatory frameworks like the AI Safety Commitments[1] ensure technological applications comply with regional regulations (SDG 16), while enhanced cybersecurity capabilities[2] (e.g., preventing misuse of deepfake technology) directly protect critical social infrastructure security (SDG 9).

(c) Exploring Principles of International Cooperation towards Affordable and Sustainable AI Capacity-Building

International cooperation on AI capacity-building can help developing countries enhance their technological capabilities, narrow the digital divide, and unlock AI's potential to drive economic growth, improve public services, and address global challenges. However, to ensure the long-term benefits and systemic outcomes of capacity-building and guarantee that cooperation truly benefits developing countries, it is essential to prevent cooperation mechanisms from becoming new development burdens. Given the constraints of limited financial, technological, and human resources, there is an urgent need to explore more affordable, sustainable, and innovative cooperation models. By fostering multi-stakeholder collaboration, encouraging participation from both public and private sectors, and combining South-South and North-South cooperation, an open and shared cooperation ecosystem can be established. This will contribute to the inclusive application of AI technologies and support developing countries in achieving equitable and sustainable development goals amid global digital transformation.

To truly benefit developing countries, the following principles should be adhered to in strengthening international cooperation on AI capacity-building: First, upholding **sovereignty**, ensuring that cooperation respects national sovereignty and data sovereignty of all countries. Second, prioritizing **local adaptation**, focusing on localization and demand-driven approaches that fully consider each country's actual conditions and development needs, promoting practical cooperation to ensure technologies and solutions can take root locally. Third, adopting a **step-by-step** approach, prioritizing digital infrastructure development based on the existing conditions in developing countries, laying a solid digital foundation before gradually transitioning to intelligent systems, avoiding undue haste. Fourth, emphasizing **development-governance balance**, by valuing both technological innovation and development capabilities while strengthening safety governance to ensure technologies unleash their potential within secure and controllable parameters. Fifth, fostering **innovation cultivation**, encouraging developing countries to nurture local talent, strengthen domestic technology ecosystems, and build independent innovation capacities. By establishing technology transfer systems tailored to each country's development stage, cooperation outcomes can be effectively translated into endogenous drivers of economic and social progress, helping build long-term, sustainable development capabilities.

1 China Academy of Information and Communications Technology (CAICT), "Release of AI Safety Commitments to Promote Industry Self-Regulation" (December 2024), source: http://finance.people.com.cn/n1/2024/1229/c1004-40391586.html

2 China Internet Network Information Center (CNNIC), Key Technologies and Applications for Deep Adversarial Defense Against AI Phishing Fraud, included in The Charm of Technology – 2024 World Internet Conference Leading Technology Award Achievements

05

International Cooperation on AI Governance for Sustainable Development: Action Recommendations

The AI and digital divides are becoming increasingly pronounced, and the sustainable development process faces urgent and severe challenges. Building AI capacity has become imperative. It is recommended that all global stakeholders deepen international cooperation in the following areas to further accelerate AI' s contribution to global sustainable development.

(a) Comprehensively Advancing AI' s Contribution to the Achievement of the SDGs

Based on the monitoring and analysis of global sustainable development progress, the urgency of the current situation can no longer be ignored, and the achievement of the SDGs is imminent. While AI provides new momentum for sustainable development, its potential remains underutilized and its empowerment across different fields remains uneven. The international community should enhance focus on relevant issues and deepen multilateral cooperation, not only to facilitate the steady realization of AI' s empowering potential and provide guidance and safeguards for AI for sustainable development, but also to address potential negative impacts in the process of AI empowerment.

(b) Promoting Shared Benefits in AI for Sustainable Development

AI for sustainable development should follow the principle of benefit-sharing, ensuring that different nations and groups have as equal opportunities as possible to benefit from it, bridging the AI and digital divides. We should promote joint exploration of cutting-edge AI fundamental research by global research institutions, enterprises, and governments, and strengthen international AI cooperation in fields closely related to sustainable development such as education, healthcare, agriculture, climate, and culture, so that AI development benefits all humanity. International standardization of AI data, algorithms, platforms, applications, and governance should be advanced to reduce technical barriers in cross-border cooperation. In addition, open resources should be encouraged to promote decentralized interoperability among different open-source ecosystem communities, facilitating open sharing of R&D and application outcomes.

(c) Promoting Inclusiveness in AI for Sustainable Development

The international community should encourage the exploration of diverse approaches to AI science and technology and their applications in promoting sustainable development, while addressing both near-term and long-term AI challenges that impact sustainability. Concerted efforts should be made to advance South-South cooperation, North-South cooperation, and organic synergy among different cooperation mechanisms to enhance developing countries' participation in AI governance rule-making, technological R&D, and practical applications. An inclusive multi-stakeholder collaborative governance framework should be advocated to balance perspectives from both North and South on critical issues like data sovereignty, algorithmic transparency, and resource allocation. Attention must be paid to the uneven global distribution of data resources to improve data representation from countries in the Global South, while avoiding single-model dominance in global governance to ensure developing nations have adequate voice in the global governance system.

(d) Collaborating with Low-and Middle-Income Countries to Explore Affordable and Sustainable Capacity-Building Models

The international community should promote regionally tailored AI development models that align technological approaches with local needs, while reducing over-reliance on traditional high-energy computing paths through innovations like distributed computing architectures, lightweight model development, and renewable energy-powered computing centers to lower deployment barriers. It should strengthen global AI education networks by encouraging technology-advanced nations to open talent exchange channels to developing countries through short-term training, distance learning, and transnational joint programs, while supporting their infrastructure development and digital and intelligent transformation.

(e) Leveraging International Multilateral Governance Mechanisms to Safeguard AI for Sustainable Development

All parties should support the UN-centered multilateral cooperation mechanism to advance international AI governance collaboration under the UN framework, with focused efforts on deepening coordination in key areas including capacity-building, risk monitoring and assessment, safety control, ethical norm consensus, technical standard interoperability, and multilateral financing support. Simultaneously, by harnessing international organizations and mechanisms to foster multi-stakeholder dialogue, we must coordinate policy alignment, consolidate comparative strengths, and share actionable insights—rallying global collaboration to establish an inclusive and equitable governance framework for AI. This concerted effort will decisively unlock AI's transformative potential to advance the achievement of the global SDGs.

Appendix: Applications and Case Studies

1. AI Empowers Optimization of Resource Allocation and Climate Change Response (SDG2 Zero Hunger, SDG7 Affordable and Clean Energy, SDG9 Industry, Innovation and Infrastructure, SDG13 Climate Action)

Huawei Cloud Pangu Weather AI Model Empowers Extreme Weather Prediction
SDG1 No Poverty, SDG9 Industry, Innovation and Infrastructure, SDG13 Climate Action

The U.S. National Institute of Food and Agriculture's "Arboretum" Promotes AI-Empo -wered Agriculture and Ecology
SDG2 Zero Hunger, SDG13 Climate Action,SDG15 Life on Land

China Telecom's Self-developed AI Energy-Saving System Focuses on Data Center Optimization and Green Computing
SDG7 Affordable and Clean Energy, SDG13 Climate Action

2. AI Empowers Environmental and Ecological Protection (SDG13 Climate Action, SDG14 Life Below Water, SDG15 Life on Land)

Guacamaya Project: Using AI to Pretect the Amazon Rainforest
SDG13 Climate Action, SDG14 Life Below Water, SDG15 Life on Land

Australian Institute of Marine Science Develops ReefCloud Platform to Facilitate Coral Reef Tracking and Monitoring
SDG14 Life Below Water

Tencent's "Wildlife Friends Program": AI Technology Supporting Biodiversity Conservation
SDG13 Climate Action, SDG14 Life Below Water, SDG15 Life on Land

3. AI Enhances Inclusive Education and Literacy (SDG4 Quality Education, SDG10 Reduced Inequalities)

Lenovo AI Science Museum Empowers Rural Students to Access Cutting-Edge Technologies
SDG4 Quality Education, SDG10 Reduced Inequalities

Long-term AI Builds Culturalink to Weave a Global Cultural Network, Connecting History and Fostering Innovation to Shape the Future
SDG4 Quality Education, SDG10 Reduced Inequalities, SDG11 Sustainable Cities and Communities

The Finnish Center for AI (FCAI) Establishes a Multi-level Educational Ecosystem for AI Literacy for All
SDG4 Quality Education, SDG10 Reduced Inequalities

4. AI Empowers Vulnerable Groups for Social Equity (SDG3 Good Health and Well-being, SDG5 Gender Equality, SDG10 Reduced Inequalities)

Tencent Red Umbrella Program: Safeguarding Women's Health with AI
SDG3 Good Health and Well-being, SDG5 Gender Equality, SDG10 Reduced Inequalities

The Centre for Perceptual and Interactive Intelligence (CPII): Using AI to Assist People with Communication Disabilities
SDG3 Good Health and Well-being, SDG10 Reduced Inequalities, SDG11 Sustainable Cities and Communities

Arab Information and Communication Technology Organization (AICTO) Uses AI to Empower Women's Leadership
SDG5 Gender Equality, SDG10 Reduced Inequalities

The China Mobile "Smart Village Doctors Platform" Initiates a New Model of Rural Medical Care in Jilin
SDG3 Good Health and Well-being, SDG10 Reduced Inequalities

5. AI Empowers Industrial Transformation and Income Increase (SDG1 No Poverty, SDG8 Decent Work and Economic Growth, SDG9 Industry, Innovation and Infrastructure, SDG10 Reduced Inequalities)

China Mobile Uses AI Technology to Solve the Financing Problems in the Animal Husbandry Industry

SDG1 No Poverty, SDG8 Decent Work and Economic Growth, SDG9 Industry, Innovation and Infrastructure, SDG10 Reduced Inequalities

Nankai University Faculty and Students Utilize AI Technology to Design Miao Cultural and Creative Products

SDG1 No Poverty, SDG4 Quality Education, SDG8 Decent Work and Economic Growth, SDG10 Reduced Inequalities

Xingchen MaaS Platform: Promoting Industry Customers' Intelligent Transformation and the Industrialization Implementation of Large Model Technologies

SDG9 Industry, Innovation and Infrastructure, SDG11 Sustainable Cities and Communities

6. AI Empowers Sustainable Ecology and Collaborative Platforms (SDG9 Industry, Innovation and Infrastructure, SDG17 Partnerships for the Goals)

Alibaba Cloud ModelScope Community: Building an Open-Source AI Ecosystem

SDG9 Industry, Innovation and Infrastructure, SDG17 Partnerships for the Goals

Arab AI4SD Platform Assists in Bridging the Information Divide

SDG9 Industry, Innovation and Infrastructure, SDG17 Partnerships for the Goals

Evernote's Intelligent Collaboration System Builds a Knowledge Sharing Platform

SDG9 Industry, Innovation and Infrastructure, SDG17 Partnerships for the Goals

The Cooperate Open Intelligent Computing Industry Alliance Advances a New AI Ecosystem

SDG9 Industry, Innovation and Infrastructure, SDG17 Partnerships for the Goals

Cyber Security Association of China Officially Releases Chinese Internet Corpus Resource Platform

SDG9 Industry, Innovation and Infrastructure, SDG17 Partnerships for the Goals

7. AI Empowers Good Governance and Security Guarantee (SDG11 Sustainable Cities and Communities, SDG16 Peace, Justice and Strong Institutions)

The "MinYiTong" System of People's Daily Realizes Public Opinion Perception and Risk Early Warning

SDG9 Industry, Innovation and Infrastructure, SDG11 Sustainable Cities and Communities, SDG16 Peace, Justice and Strong Institutions

The 360 Security Large Model Safeguards Industry Applications

SDG9 Industry, Innovation and Infrastructure, SDG11 Sustainable Cities and Communities, SDG16 Peace, Justice and Strong Institutions

The China Academy of Information and Communications Technology Establishes a Chinese Benchmark Testing System for Large Model Security

SDG9 Industry, Innovation and Infrastructure, SDG16 Peace, Justice and Strong Institutions

DAS Security HENGNAO AI Security Agent Escorts the Cybersecurity of the Asian Winter Games

SDG9 Industry, Innovation and Infrastructure, SDG16 Peace, Justice and Strong Institutions

China Internet Network Information Center: Developing AI to Empower Rapid Filtering & Deep Adversarial Detection for Combating AI Phishing Fraud

SDG9 Industry, Innovation and Infrastructure, SDG16 Peace, Justice and Strong Institutions

China Electronics Standardization Institute Collaborates with Fudan University to Release "Generative AI Service Security Benchmark Test Suite"

SDG9 Industry, Innovation and Infrastructure, SDG16 Peace, Justice and Strong Institutions

1. AI Empowers Optimization of Resource Allocation and Climate Change Response (SDG2 Zero Hunger, SDG7 Affordable and Clean Energy, SDG9 Industry, Innovation and Infrastructure, SDG13 Climate Action)

Huawei Cloud Pangu Weather AI Model Empowers Extreme Weather Prediction[1].

Madagascar is located in a region prone to tropical cyclones, where local fishermen face significant climate risks due to limited access to traditional meteorological information. In 2023, the non-profit organization Mitao Forecast introduced the Huawei Cloud Pangu Weather AI Model, leveraging its high-precision prediction capabilities to extend weather forecasts from three days to ten days. Through over 3,000 weather forecast boards, the model delivers multidimensional meteorological data to 600,000 to 750,000 fishermen. In early 2024, the model accurately located the landfall site of Typhoon “Alvaro” and provided early warnings to fishermen, helping them take protective measures.

The U.S. National Institute of Food and Agriculture’ s “Arboretum” Promotes AI-Empowered Agriculture and Ecology[2].

A team of scientists funded by the U.S. National Institute of Food and Agriculture (NIFA) has released a massive dataset of flora and fauna to spur the development of AI tools. The dataset includes 134.6 million expert-verified, captioned images of nearly 327,000 plant and animal species. It aims to improve pest control strategies, reduce crop losses, increase agricultural yields, and optimize agricultural resource use to lower food prices. Additionally, the dataset will provide more efficient tools for biodiversity conservation, positively impacting global food security, ecosystem preservation, and climate change mitigation.

China Telecom’ s Self-developed AI Energy-Saving System Focuses on Data Center Optimization and Green Computing[3].

China Telecom’ s self-developed AI energy-saving system significantly reduces electricity consumption and costs. The AI energy-saving system has been widely deployed in base stations, IT cloud servers, and A/B-class server rooms. By monitoring equipment operation and environmental information in real-time, it intelligently shuts down and restarts idle equipment, and intelligently adjusts the wind speed frequency of the cooling system in server rooms and data centers. This results in an annual electricity saving of 800 million kWh and cost savings of approximately 520 million yuan. In 2024, China Telecom actively implemented green development initiatives, achieving a cumulative total of 28 nationally certified green data centers in China. The company has consistently promoted AI-powered energy conservation for base stations and equipment rooms, delivering an annualized electricity savings exceeding 1 billion kWh. Meanwhile, its carbon emissions per unit of telecom service volume decreased by 19.2% year-on-year.

2. AI Empowers Environmental and Ecological Protection (SDG13 Climate Action, SDG14 Life Below Water, SDG15 Life on Land)

Guacamaya Project: Using AI to Protect the Amazon Rainforest[4].

The Amazon rainforest, the world’ s largest tropical rainforest, plays a significant role in carbon absorption, climate regulation, and biodiversity conservation. However, deforestation remains a major threat to its sustainability. In response, the Guacamaya Project, led by Universidad de los Andes, Instituto SINCHI, Instituto Humboldt,

1 https://www.huawei.com/cn/gallery/videos/2024/mitao-forecast-madagascar
2 https://www.nifa.usda.gov/about-nifa/impacts/nifa-funded-scientists-spur-research-artificial-intelligence-release-massive
3 https://www.c114.com.cn/news/117/a1275451.html; https://www.c114finance.comsina.cn/news2025-03-26/117/a1275451detail-ineqxcef9511378.d.html
4 https://parispeaceforum.org/projects/project-guacamaya/

Planet Labs PBC and Microsoft AI for Good Lab, leverages AI and cloud computing technologies to monitor deforestation and protect biodiversity. By analyzing satellite data, wildlife images, and acoustic recordings, the project enables faster and more effective conservation actions.

Australian Institute of Marine Science Develops ReefCloud Platform to Facilitate Coral Reef Tracking and Monitoring[1].

Developed by the Australian Institute of Marine Science (AIMS) in collaboration with the Palau International Coral Reef Center, Fiji's Wildlife Conservation Society and other institutions, ReefCloud is a digital tool that utilizes machine learning and advanced analytics to rapidly extract and share data from coral reef images worldwide. The platform transforms traditional monitoring approaches by enabling real-time collaboration among global coral reef monitoring communities. It standardizes reef composition analysis with 80-90% accuracy, operating 700 times faster than manual assessments, thereby significantly conserving management resources. Through facial recognition-like technology, the system identifies approximately 7 million parameters from coral color, shape and size in user-submitted survey photos. This enables accurate coral type identification and tracks reef changes over time, providing critical decision-making support for long-term coral reef conservation. Currently ReefCloud is being regularly used in Australia, Palau, Fiji, Solomon Islands, Vanuatu and the Maldives.

Tencent's "Wildlife Friends Program": AI Technology Supporting Biodiversity Conservation[2].

Tencent has established a digital system for public participation in ecological conservation, centered around the "Wild Friends Program" . By developing the "Tencent Snow Leopard AI Recognition System", the mini program "Bird Watching Assistant" and the "Species Eye" biodiversity AI model, the program enhances the efficiency of snow leopard habitat monitoring and the visualization of bird migration data, lowers the threshold for citizen science participation, and provides high-quality observational databases for scientific research. Meanwhile, in collaboration with various organizations, Tencent has created an integrated toolchain combining "digital collaboration, cloud data management, and AI recognition", offering standardized solutions for species identification and conservation. The species AI model is capable of identifying 289 endangered species, with the recognition accuracy all above 73% and the accuracy of snow leopard identification above 95%.

3. AI Enhances Inclusive Education and Literacy (SDG4 Quality Education, SDG10 Reduced Inequalities)

Lenovo AI Science Museum Empowers Rural Students to Access Cutting-Edge Technologies[3].

Lenovo has built an AI Science Museum in the Central Primary School of Heshi Town, Xiushui County, a former national-level poverty-stricken county in China. By showcasing application scenarios such as AI voice painting, AR metaverse, and AI sports, it provides new teaching methods and tools for rural schools and enhances the teaching quality. The museum is open to the public for free and, through inviting guests, recruiting volunteers, and linking with international projects, it helps local children continuously access new knowledge and connect with a new world. The museum has successfully attracted more students and study groups from the surrounding Xiushui County, and it has welcomed over 6,000 visitors so far.

1 https://www.aims.gov.au/research/technology/reefcloud
2 https://techforgood.qq.com/projects/detail/313
3 https://wap.peopleapp.com/article/7208432/7051788

Long-term AI Builds Culturalink to Weave a Global Cultural Network, Connecting History and Fostering Innovation to Shape the Future[1].

Culturalink is an AI-powered global cultural analysis, linking, and interaction system platform designed to deeply explore and connect material cultural heritage, intangible cultural heritage, and other cultural content worldwide. The platform architecture of Culturalink includes both the data engine and the intelligence engine. For the data engine, it covers cultural data from 172 countries, including all UNESCO World Heritage Sites with an extension to 1,725 tangible cultural heritages, and encompasses 10,565 intangible cultural items.

The Finnish Center for AI (FCAI) Establishes a Multi-level Educational Ecosystem for AI Literacy for All[2].

The FCAI has built a multi-level educational and dissemination ecosystem, ranging from the introductory MOOC "Elements of AI", which has reached 550,000 learners worldwide and has been recognized as the world's best MOOC, to advanced courses on ethics and societal impacts, and further to Python technical training, forming a tiered knowledge system. Additionally, FCAI has launched robot programming clubs and campus collaborations to cultivate teenagers' interest in AI. Its human-centric ethical orientation has reshaped the paradigm of technical education, establishing Finland as a benchmark in the field of responsible AI dissemination.

4. AI Empowers Vulnerable Groups for Social Equity (SDG3 Good Health and Well-being, SDG5 Gender Equality, SDG10 Reduced Inequalities)

Tencent Red Umbrella Program: Safeguarding Women's Health with AI[3].

The Red Umbrella Program leverages AI technology to precisely empower cervical cancer prevention and treatment. By using an AI-assisted diagnostic system, it achieves automatic marking of suspicious cervical lesions and generates visual diagnostic suggestions. The plan helps grassroots doctors quickly identify risk points, significantly improving the efficiency of early screening in remote areas. At the level of building grassroots medical capacity, relying on an AI training system, it conducts personalized assessments of doctors' operational skills through gamified simulation scenarios and adaptive learning algorithms, generating targeted training courses. This aids in the standardized upgrade of diagnostic and treatment levels in underdeveloped regions.

The Centre for Perceptual and Interactive Intelligence (CPII): Using AI to Assist People with Communication Disabilities[4].

The CPII in Hong Kong is committed to applying AI-based speech and language technologies to support people with communication disabilities. Its specific objectives include constructing a core language model localized in Hong Kong and its personalized sub-models for symbol prediction and recommendation for non-verbal AAC users; developing deep learning algorithms inspired by neurolinguistics to achieve intelligent recommendation of AAC symbols; and developing multimodal human-computer interaction methods to accommodate users' physical or cognitive limitations.

Arab Information and Communication Technology Organization (AICTO) Uses AI to Empower Women's Leadership[5].

The AICTO is leveraging AI to equip Arab women with essential skills, in-depth knowledge, and

1 https://culturalink.ai/en
2 https://fcai.fi/mission
3 https://ssv.tencent.com/domain/health-welfare
4 https://cpii.hk/zh/rp2-2/
5 https://www.aicto.org/ar/

strategic leadership capabilities. By establishing an inclusive ecosystem, local women not only have the opportunity to contribute to the development of AI but are also poised to lead and foster sustainable growth, social equity, and regional innovation. This initiative further aims to bridge the gender gap and shape Arab women into influential leaders capable of leveraging AI to address pressing challenges, shape industry trends, and contribute to the socio-economic development of their communities and beyond.

The China Mobile "Smart Village Doctors Platform" Initiates a New Model of Rural Medical Care in Jilin[1].

China Mobile, in collaboration with its partners, has developed the "Smart Village Doctors Platform". The platform realizes front-end data collection through 5G terminal devices and customized apps, and provides functions such as Village Doctors Connectivity, AI-assisted diagnosis and treatment, intelligent follow-up, telemedicine, family doctor services, and quantitative assessment of Village Doctors work. The AI-assisted diagnosis system analyzes patient medical records entered by doctors in real time, offering smart analysis and disease assessment. It generates treatment plans for various common diseases, helping village Doctors' improve diagnostic accuracy, optimize clinical decision-making, and enhance the quality of healthcare services in rural medical institutions. Since its launch, the platform has covered all administrative villages in Jilin Province, serving 2,907 village doctors and benefiting over 300,000 villagers.

5. AI Empowers Industrial Transformation and Income Increase (SDG1 No Poverty, SDG8 Decent Work and Economic Growth, SDG9 Industry, Innovation and Infrastructure, SDG10 Reduced Inequalities)

China Mobile Uses AI Technology to Solve the Financing Problems in the Animal Husbandry Industry[2].

China Mobile innovatively utilized "inclusive finance + technological empowerment" to create a smart livestock management cloud platform. Through Internet of Things technology, it realized the innovative model of "live cattle mortgage", helping Huiniu Cooperative successfully obtain a loan of 2 million yuan. Under the traditional model, the cattle breeding industry would have difficulty obtaining loans when expanding the breeding scale due to the lack of effective collateral; China Mobile, by deploying Bluetooth ear tags, AI video monitoring and wireless sensor networks, created a supervision system with functions of live livestock positioning and tracking, vital sign monitoring, intelligent inventory and data collection, to grasp the location and health status of mortgaged cattle in real time and promote the implementation of "live livestock mortgage loans".

Nankai University Faculty and Students Utilize AI Technology to Design Miao Cultural and Creative Products[3].

The team led by Professor Tao Feng from Nankai University has designed and created over 500 AI artworks and more than 10 promotional videos for Nanmeng Village, Leishan County, Guizhou Province. They have also held and implemented plans such as the AI Art Report Exhibition, the

1 https://www.10086.cn/download/csrreport/cmcc_2023_csr_report_full_cn.pdf
2 https://agri.hainan.gov.cn/hnsnyt/ywdt/zwdt/202306/t20230630_3444906.html
3 https://news.nankai.edu.cn/zhxw/system/2024/05/29/030061914.shtml

Intelligent Art Research Program, and the Artist Residency Program. The faculty and students explored the combination of AI aesthetics and traditional Miao culture, used intelligent art to help the development of local industries such as tea and textiles, and promoted local cultural tourism development through intelligent art. During the implementation of the project, they publicized and popularized the application of AI technology to villagers, reducing the educational gap in ethnic minority areas.

Xingchen MaaS Platform: Promoting Industry Customers' Intelligent Transformation and the Industrialization Implementation of Large Model Technologies[1].

China Telecom, in collaboration with partners such as NETNIC, Inspur, iFLYTEK, Zhipu AI, and Baichuan AI, jointly released the Xingchen MaaS platform, providing industry customers with a full-process large model solution from assessment, selection, deployment to application. This platform integrates resources from multiple self-developed and ecological large model partners, supports multi-cloud computing power scheduling, large model selection and configuration, and application scenario innovation, helping users easily realize the selection and deployment of large models. Through the end-to-end service model, the Xingchen MaaS platform empowers the intelligent transformation of multiple industries and promotes the industrialization landing of large model technologies.

6. AI Empowers Sustainable Ecology and Collaborative Platforms (SDG9 Industry, Innovation and Infrastructure, SDG17 Partnerships for the Goals)

Alibaba Cloud ModelScope Community: Building an Open-Source AI Ecosystem[2].

Alibaba Cloud, in partnership with the Open Source Development Committee of the China Computer Federation, jointly launched the AI model community "ModelScope" in November 2022. ModelScope community is based on the MaaS (Model as a Service) concept, aiming at the full lifecycle of model exploration, environment installation, inference verification, and training optimization. It open-sources model-related technologies and services, providing more than 15,000 high-quality AI models that comprehensively cover all modalities and major fields. The community has gathered 6 million AI developers, with cumulative model download numbers exceeding 100 million times. It has become the open-source launch platform for the latest advanced large models such as LlaMa, Stable Diffusion, and Qwen, both domestically and internationally.

Arab AI4SD Platform Assists in Bridging the Information Divide[3].

The United Nations Development Programme and the United Arab Emirates have launched the AI4SD platform, which utilizes AI technology to bridge the information gap and empower agricultural and environmental resilience, climate adaptation, water resource management, promote social cohesion and reduce inequality. The AI4SD platform is committed to providing actionable data insights, early warnings, predictive capabilities and scenario analyses, which is conducive to comprehensively addressing the data scarcity issue in the region and promoting sustainable development in the region. By addressing the data scarcity issue in the region, it will ultimately benefit the entire Arab region.

1 https://netnic.com.cn/news/info_544.html
2 https://www.modelscope.cn/home
3 https://ai4sd.info/

Evernote's Intelligent Collaboration System Builds a Knowledge Sharing Platform[1].

Evernote's intelligent collaboration system integrates large language models, OCR handwriting recognition, and generative AI mind mapping to form a cross-scenario knowledge processing hub. Through lightweight toolkits like NoteIt+ScanIt, it can be rapidly deployed in regions with weak digital infrastructure, while the smart reading tool iMark breaks language and cultural barriers. The cloud-synced EverPEN hardware system provides a physical-digital fusion gateway for cross-border collaboration. This platform enhances document processing efficiency by 40% and reduces knowledge management costs by 35% for enterprises, while empowering critical sectors such as education and healthcare in developing countries through modular service packages. Combining intelligent tool development, localized scenario adaptation, and sustainable development principles, this platform architecture not only builds standardized knowledge-sharing interfaces for multinational corporations but also provides scalable technological infrastructure for global knowledge connectivity.

The Cooperative Open Intelligent Computing Industry Alliance Advances a New AI Ecosystem[2].

ZTE Corporation, as one of the founding members, has established the Cooperative Open Intelligent Computing Industry Alliance (COIA). Committed to an open, shared, and collaborative approach, COIA aims to empower a sustainable ecosystem and cooperation platform. The alliance brings together leading enterprises and research institutions, including ByteDance, China Mobile, China Unicom, H3C, Digital China and Intel, focusing on AI computing platforms and fundamental resource services. It drives advancements and industry applications in large-scale model training, inference mechanisms, and synthetic data technologies. Through open-source collaboration and technology sharing, COIA will accelerate the application of AI technologies, facilitating digital transformation and intelligent restructuring while promoting the development of new productive forces. Looking ahead, COIA will continue to deepen industry collaboration, explore scenario-based solutions and hardware-software integration, and ensure the security of technological research through its Safety Committee. The alliance is set to become a key driving force behind global technological innovation and industrial intelligence development.

Cyber Security Association of China Officially Releases Chinese Internet Corpus Resource Platform[3].

Cyber Security Association of China (CSAC), in collaboration with partners from industry, academia, research, and application sectors in AI, has jointly established the Chinese Internet Corpus Resource Platform. This platform provides public access to foundational Chinese internet corpora for display and download. Featuring multi-category classification by industry domain, content modality, and data volume, the platform currently hosts 27 corpus datasets, with a total data volume of approximately 2.7TB. Moving forward, the platform will leverage its corpus co-construction and sharing mechanism to continuously integrate high-quality Chinese internet corpora. It will further explore services such as compliance assessment of data sources, quality evaluation, and security testing, aiming

1 https://baijiahao.baidu.com/s?id=1821751136157797728&wfr=spider&for=pc
2 https://www.zte.com.cn/china/about/news/20241220c1.html
3 https://www.cac.gov.cn/2025-01/10/c_1738209436031064.htm

to foster a healthy and sustainable ecosystem for the development and utilization of Chinese internet corpora. These efforts are designed to advance and support the growth of the large AI model industry.

7. AI Empowers Good Governance and Security Guarantee (SDG11 Sustainable Cities and Communities, SDG16 Peace, Justice and Strong Institutions)

The "MinYiTong" System of People's Daily Realizes Public Opinion Perception and Risk Early Warning[1].

The "MinYiTong" system of People's Daily Online employs large model technology to focus on online public engagement and grassroots governance. It provides Party and government departments at all levels with services such as multi-source data aggregation and analysis, one-click processing of public messages, and real-time monitoring of social conditions and public opinion. "MinYiTong" uses intelligent methods to process public messages, automatically screens out repetitive demands and accurately forwards them for handling, reducing the transactional burden on grassroots cadres. The system breaks down data barriers between departments, enables cross-regional collaboration to handle complex issues, simultaneously monitors public opinion hotspots 24 hours a day, and establishes a direct reporting mechanism for emergency matters. Difficult problems can be directly escalated to the main officials for supervision with one click. This technical solution not only guarantees the efficiency of responding to public opinions but also strengthens the implementation of responsibilities through the full-process digital trace. It has been first implemented in Hebei, Inner Mongolia and other regions, significantly improving the processing efficiency of public appeals, providing a "efficient, transparent, and intelligent prediction" digital upgrade path for grassroots governance.

The 360 Security Large Model Safeguards Industry Applications[2].

360, based on the Security Large Model, focuses on conducting specialized training in areas such as analysis and judgment, threat traceability, and email detection, and launches over 100 security digital expert intelligent agents. In 2024, it serves more than 200 customers in industries such as government, finance, energy, and transportation, safeguarding various industrial applications. During the service for a certain energy enterprise, the 360 Security Large Model empowers security operations to handle an average of 5 billion logs per day, automatically blocks 65,600 malicious IPs, detects nearly 100 malicious emails, saves an average of 23.17 person-days of operation costs per day, and the defense system's protection rate reaches 100%, achieving intelligent full-process coverage of security assurance for industry applications.

The China Academy of Information and Communications Technology Establishes a Chinese Benchmark Testing System for Large Model Security[3].

In April 2024, the China Academy of Information and Communications Technology (CAICT), in collaboration with the AI Safety Governance Committee of the Artificial Intelligence Industry Alliance (AIIA) and 30 partner organizations, launched the AI Safety Benchmark. It aims to establish a Chinese benchmark testing system for large model safety, adhering to principles of fairness, industry application, and scenario-driven evaluation. The benchmark focuses on

1 https://baijiahao.baidu.com/s?id=1824767183311673488&wfr=spider&for=pc
2 https://mp.weixin.qq.com/s/HD92eTuPRpR_c3l0bZzejw
3 http://www.caict.ac.cn/

enhancing safety capabilities in areas such as red-line, data security, and AI ethics, covering 20 dimensions including value alignment, legal compliance, privacy protection, and fairness. Through continuous iterations, the AI Safety Benchmark has released four rounds of testing results. The overall test dataset includes 500,000+ original prompt samples and 80+ attack templates, generating a total of 40 million attack samples. So far, the benchmark has been used to test leading global large language models and large vision models for more than 100 times.

DAS-Security HENGNAO AI Security Agent Escorts the Cybersecurity of the Asian Winter Games[1].

Relying on its self-developed HENGNAO AI Security Agent platform, DAS-Security has built a comprehensive cybersecurity protection system for the 2025 Harbin Asian Winter Games. DAS-Security has implemented 10 major AI security agents (seven general-purpose AI security agents & three specialized AI security agents), achieving a full-process upgrade from protection, analysis, traceability, notification to management. During this servicing period, it intercepted nearly 1.8 million attacks, analyzed and blocked more than 13,000 malicious IPs, laying a solid and indestructible cybersecurity barrier for the smooth progress of the event, ensuring that the competition was not disturbed in cyberspace and was carried out smoothly and orderly.

China Internet Network Information Center: Developing AI to Empower Rapid Filtering & Deep Adversarial Detection for Combating AI Phishing Fraud[2].

The China Internet Network Information Center has developed a deep adversarial detection technology to counter AI-driven phishing fraud. By adopting a "rapid filtering & deep adversarial" detection framework, this technology enables efficient detection and analysis of large-scale phishing activities in complex scenarios. Applied to China's national domain name abuse governance services, this system has detected and handled over 120,000 phishing websites in the past five years, reducing the average lifespan of phishing sites from 12 days to less than 4 days. This has helped prevent potential economic losses worth hundreds of billions of yuan for internet users. Additionally, this breakthrough has significantly improved China's domain name auditing and abuse governance services, setting a new industry benchmark for domain name security and regulatory excellence.

China Electronics Standardization Institute Collaborates with Fudan University to Release "Generative AI Service Security Benchmark Test Suite"[3].

China Electronics Standardization Institute (CESI), in collaboration with Fudan University, has released the "Generative AI Service Security Benchmark Test Suite" to support the security evaluation of TC260-003 Basic Security Requirements for Generative Artificial Intelligence Services. The test suite enables comprehensive security risk assessments under TC260-003, covering 5 major categories and 31 subcategories of security risks, including over 1,000 risk topics, with a total scale exceeding 1 million test cases. Designed to meet the security capability development needs of large model enterprises, it establishes multiple adversarial intensity levels (basic, intermediate, expert) and supports customized test question sets tailored to specific models, forming a multi-tier security capability framework. Furthermore, through dynamic and regular updates to test questions, the suite provides ongoing security assessment services for large model enterprises, continuously driving improvements in their security capabilities.

1 https://www.dbappsecurity.com.cn/content/details4756_29490.html
2 China Internet Network Information Center: Key Technologies and Applications of Deep Adversarial Learning for AI Phishing Fraud Prevention, included in the 2024 World Internet Conference Leading Technology Award Collection "The Charm of Technology".
3 https://www.cesi.cn/

World Internet Conference Specialized Committee on Artificial Intelligence

The Specialized Committee on Artificial Intelligence, as the first professional branch of World Internet Conference, was established in 2024, including three programs: Standards Program, AI Safety and Governance Program, and Industry Program. The Committee brings together leading experts and professionals in the field of AI from international organizations, think tanks, research institutes, professional associations and industry, which is dedicated to fostering international cooperation and coordinated development, and aims to facilitate global sharing of AI achievements. Through thematic seminars, outcome sharing, and initiative releases, it continuously consolidates international consensus and supports inclusive and sustainable AI development.

Governing AI for Good and for All —Empowering Global Sustainable Development

How to Cite This Report:

Zeng Yi, Seán Ó hÉigeartaigh, Lu Enmeng, Wang Jin, Wang Zhengqi, Guo Xiaoyang, Fan Jinyu, Huangfu Cunqing, Kang Yanrong, Han Kaiyu, Ammar Younas, Zhang Rong, Wang Xingguang, Nada Laabidi, Qiao Qian, Cheng Ming, Hu Naying, Guo Sumin, Zhang Yanting, Chen Jingjing, Lin Lin, Wu Shuyan, Liu Yue, Zhao Ying, Deng Jie, Chen Fengxian, Liu Weichen, Wang Feng, Wang Jianbing, Xia Wenhui, Wang Xin, Li Huawei, Edson Prestes, Li Na, Pascale Fung, Duan Weiwen, Jimena Sofia Viveros Alvarez, Xi Jingjing, Hu Yongqi, Yao Xin, Peng Tao, Tao Feng, Wang Tong, Ye Chenhui, Yang Yaodong, Gu Wenjie, Deng Wenjie, Zhai Jiahuan, Li Daren, Wang Mengyin, Cao Jianfeng, Helen Meng, Zhang Jiji, Tang Xinhua, Liu Chang, Xia Hehua, Serge Stinckwich, Bernd Holznagel, Dame Wendy Hall, Tan Zhixing, Meng Wei, Xiao Jianwu, Yang Zhongliang, Zhou Yuan, Zhou Kai, Zhang Linghan, John Yeoh, Gong Xinqi, Qiao Yu, Nirosha Ananda, Charuka Senal Damunupola, Christoph Lüitge, Zhang Xueli, Liang Hao. (2025). “Governing AI for Good and for All—Empowering Global Sustainable Development”. Beijing: World Internet Conference (WIC).

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