Navigating the Global Landscape of Artificial Intelligence Cooperation

I. Introduction: The Imperative for Global AI Cooperation

Artificial Intelligence (AI) stands as a defining technology of the 21st century, possessing a profound capacity to reshape economies, societies, and the very fabric of daily life across the globe.[1] Its potential benefits are vast, offering transformative advancements in critical areas such as healthcare diagnostics and treatment, scientific discovery, environmental sustainability, and overall productivity.[1] As a general-purpose technology, AI's influence permeates nearly every sector, promising efficiency gains and novel solutions to complex problems.[4]

However, this transformative potential is intrinsically linked with significant global risks. The development and deployment of AI systems raise serious concerns regarding inherent biases leading to discrimination, the erosion of privacy through enhanced surveillance capabilities, and threats to fundamental human rights and democratic values.[3] Furthermore, AI introduces challenges related to job displacement through automation [2], novel security threats including the development of lethal autonomous weapons (LAWS) and sophisticated cybercrime tools, the potential for widespread disinformation, and significant environmental costs associated with large-scale computation.[2] This duality, the immense promise juxtaposed with potentially severe risks, forms the core rationale for international cooperation.

The inherently transnational nature of AI—spanning cross-border data flows, globally distributed development teams, and international deployment—renders purely national approaches to governance insufficient.[3] The opportunities AI presents, such as accelerating progress towards the Sustainable Development Goals (SDGs) [1] or tackling climate change [4], are global in scope and benefit from collective action. Likewise, the risks associated with AI safety [20], security [12], and ethical alignment [3] transcend borders and demand coordinated mitigation strategies. Consequently, international cooperation is not merely beneficial but essential for navigating the complexities of AI, harnessing its potential for collective good, and mitigating its shared dangers.

A sense of urgency permeates international discussions, driven by the observation that the rapid evolution of AI technology is significantly outpacing the development of effective governance frameworks.[11] This dynamic creates a situation where international cooperation often appears reactive, striving to establish norms and

regulations for technologies already in deployment or rapidly emerging.[13]

This report provides a comprehensive analysis of the current state of international cooperation on AI. It maps the complex ecosystem of actors involved, examines the key thematic pillars guiding collaborative efforts, identifies the primary challenges hindering progress, and explores opportunities for strengthening global partnerships. The objective is to offer a structured, evidence-based overview of the landscape, informing policymakers, researchers, and strategists engaged in shaping the future of global AI governance. The report follows a logical structure, beginning with an overview of the actors, delving into thematic priorities, analyzing challenges and opportunities, and concluding with strategic recommendations.

II. The Ecosystem of International AI Cooperation

The global effort to govern and guide the development of Artificial Intelligence involves a diverse and expanding array of actors operating at multiple levels. This ecosystem includes established multilateral organizations adapting their mandates, dedicated intergovernmental partnerships, influential regional blocs, and numerous bilateral agreements. Understanding the roles, initiatives, and interactions of these key players is crucial for navigating the complex landscape of international AI cooperation.

A. Multilateral Organizations and Platforms

Several international organizations serve as central hubs for dialogue, standard-setting, and coordinated action on AI.

- **United Nations (UN) System:** The UN and its specialized agencies play a pivotal role, addressing AI from various angles:
    - **ITU (International Telecommunication Union):** As the UN agency for digital technologies, the ITU spearheads the "AI for Good" platform, explicitly linking AI development to the achievement of the Sustainable Development Goals (SDGs).[18] Its flagship AI for Good Global Summit, held annually in Geneva (next scheduled for July 8-11, 2025), provides a neutral venue for knowledge exchange and partnership building among AI innovators, policymakers, and implementers.[18] The "Innovate for Impact" challenge encourages the development of AI solutions for the SDGs.[18] The ITU also facilitates crucial pre-standardization work through focus groups on topics like AI for Health (with WHO), AI for Road Safety (with UNECE), AI & Multimedia Authenticity, and AI Native for Telecom Networks.[18] Furthermore, it contributes significantly to AI governance discourse, notably through inputs to the UN System white paper on AI governance.[18] This work is conducted in partnership with over 40

UN agencies and the Government of Switzerland.[25]

- **UNESCO (UN Educational, Scientific and Cultural Organization):** UNESCO champions the ethical dimension of AI. Its landmark achievement is the "Recommendation on the Ethics of Artificial Intelligence," adopted unanimously by 193 Member States in November 2021.[22] This Recommendation provides the first global normative framework grounded in human rights, dignity, and sustainability.[22] To support implementation, UNESCO is developing key tools: the Global AI Ethics and Governance Observatory serves as a knowledge hub [29]; the Readiness Assessment Methodology (RAM) helps countries evaluate their preparedness for ethical AI implementation [29]; and the Ethical Impact Assessment (EIA) methodology guides the evaluation of AI systems' societal and human rights impacts.[29] UNESCO actively partners with entities like the EU to accelerate the global adoption of these ethical guidelines, particularly in lower-income countries.[32]
- **OHCHR (Office of the High Commissioner for Human Rights):** OHCHR focuses squarely on the human rights implications of AI and digital technologies, with a strong emphasis on the right to privacy.[10] It publishes influential reports mandated by the Human Rights Council, such as A/HRC/56/45 mapping the work of UN human rights bodies on digital tech [33], A/HRC/51/17 analyzing digital privacy risks (including spyware and surveillance) and calling for moratoria/bans on high-risk AI systems [10], and A/HRC/48/31 examining AI and facial recognition impacts.[10] A key initiative is the B-Tech Project, which provides guidance on applying the UN Guiding Principles on Business and Human Rights (UNGPs) in the tech sector, including a planned workstream specifically on AI Human Rights Due Diligence (HRDD).[33]
- **UNICRI (UN Interregional Crime and Justice Research Institute):** UNICRI addresses the intersection of AI with crime, security, and the justice system.[14] Its Centre for AI and Robotics in The Hague investigates both the beneficial applications of AI in law enforcement and the risks of its malicious use by criminals and terrorists (e.g., deepfakes, AI-enhanced cybercrime).[14] UNICRI promotes responsible AI innovation in policing, developing resources like the Toolkit for Responsible AI Innovation in Law Enforcement (in partnership with INTERPOL) [14], and publishes research on topics including AI & Robotics for Law Enforcement [47], public perceptions of AI in policing [48], and the use of algorithms for terrorist purposes.[14]
- **UN Secretary-General's AI Advisory Body:** This high-level, multi-stakeholder body was convened to provide strategic recommendations on the international governance of AI.[49] Its final report, "Governing AI for

Humanity" (September 2024), calls for a globally inclusive, distributed, and cooperative governance architecture anchored in the UN Charter, human rights, and the SDGs.[16] The report identifies critical gaps in representation, coordination, and implementation within the current AI governance landscape and proposes institutional functions to address them.[16] Its recommendations were informed by extensive global consultations with over 2,000 participants.[49]
    - **UN Global Pulse:** Functioning as the UN Secretary-General's Innovation Lab, Global Pulse explores and mainstreams the use of big data and AI for sustainable development, humanitarian action, and peace.[52] Its DISHA (Data Insights for Social & Humanitarian Action) initiative, a multi-partner effort involving Google.org, foundations, academia, and other UN bodies (UNDP, UNOSAT, WFP), aims to accelerate ethical access to data and AI solutions.[52] DISHA projects focus on practical applications like AI-driven post-disaster damage assessment and socio-economic mapping using mobile data.[53] Global Pulse also runs an Accelerator programme to support innovation scaling within the UN system.[52]
    - **UNIDIR (UN Institute for Disarmament Research):** UNIDIR provides independent research on disarmament and international security, including the security implications of AI.[24] Its Security and Technology Programme specifically examines AI.[55] UNIDIR publishes analyses on AI in the military domain, the challenges posed by LAWS in relation to International Humanitarian Law (IHL), AI's impact on regional security dynamics, and the intersection of AI with other emerging technologies like quantum computing and synthetic data.[24] Its work directly informs discussions on international norms for military AI applications.[56]
- **OECD (Organisation for Economic Co-operation and Development):** The OECD has been highly influential in shaping international AI policy.
    - It developed the OECD AI Principles in 2019, establishing the first intergovernmental standard focused on promoting innovative and trustworthy AI that respects human rights and democratic values.[3] These principles emphasize inclusive growth, human-centred values, transparency, robustness, and accountability.[3]
    - The OECD.AI Policy Observatory acts as a global reference point, providing data, analysis, and policy guidance on AI.[57] It hosts valuable tools like the AI Incidents Monitor (AIM), tracking real-world AI failures and risks, and the Catalogue of Tools & Metrics for Trustworthy AI.[57]
    - Since July 2024, the OECD works in an integrated partnership with GPAI, providing secretariat support and aligning work programmes to enhance

global coordination.[58]
    - The OECD also plays a key role in supporting G7 initiatives, such as hosting the reporting framework for the voluntary Hiroshima AI Process Code of Conduct.[57]
- **GPAI (Global Partnership on Artificial Intelligence):** GPAI is a multi-stakeholder initiative, currently comprising 44 member countries, dedicated to bridging the gap between theory and practice in responsible AI development and use.[58]
    - Guided by the OECD AI Principles, GPAI convenes experts from government, industry, academia, and civil society.[58]
    - Its work is organized through expert working groups focusing on themes such as Responsible AI (RAI) [62], Data Governance [62], the Future of Work, and Innovation & Commercialization.[61]
    - GPAI produces practical reports and supports projects, including the RAI Strategy for the Environment (RAISE) [63], work on social media governance [63], a framework for data governance [66], and recommendations on AI and Climate Action.[4]
    - The integrated partnership with the OECD, established in July 2024, aims to leverage synergies, enhance efficiency, and promote inclusive participation in global AI governance efforts.[58] GPAI's work is further supported by dedicated Expert Support Centres in Canada, France, and Japan.[58]
- **G7 (Group of Seven):** This forum of leading industrial democracies has become increasingly active in AI governance.
    - The G7 engages in high-level discussions on AI's economic and societal implications, focusing on governance, safety, and security.[11]
    - It launched the Hiroshima AI Process in 2023, a dedicated track for discussing generative AI, which resulted in the development of International Guiding Principles and a voluntary International Code of Conduct for Organizations Developing Advanced AI Systems.[11] A reporting framework for this Code, hosted by the OECD, was launched in 2025 to promote transparency.[57]
    - A key theme in G7 discussions is the need for interoperability between different national and regional AI governance frameworks, recognizing that approaches may vary while striving for common goals like trustworthy AI.[11]
    - Regular meetings of G7 Digital and Tech Ministers drive the agenda forward.[11] Canada's 2025 G7 Presidency has identified AI as a core theme.[69]
- **G20 (Group of Twenty):** Representing the world's largest economies, the G20 addresses AI primarily through the lens of the digital economy, innovation, and sustainable development.
    - In 2019, the G20 endorsed non-binding G20 AI Principles, drawing heavily

from the OECD Principles and emphasizing a human-centered approach.[70]
    - It champions the concept of "Data Free Flow with Trust" (DFFT), seeking to facilitate cross-border data flows essential for AI development while addressing concerns related to privacy, security, and intellectual property rights.[70]
    - AI features prominently in discussions within the G20 Digital Economy Working Group.[70]
    - The 2025 South African G20 Presidency established a dedicated Task Force on Artificial Intelligence, Data Governance and Innovation for Sustainable Development, signaling a heightened focus. This task force aims to foster a more inclusive approach to global AI governance and includes a specific initiative, "AI for Africa," reflecting the presidency's priorities.[73]
- **European Union (EU):** The EU has taken a leading role in AI regulation, aiming to set global standards.
    - The EU AI Act (Regulation (EU) 2024/1689) is the world's first comprehensive, legally binding framework for AI.[75] It adopts a risk-based approach, imposing stricter obligations on high-risk AI systems while banning certain unacceptable uses.[75] The Act aims to ensure safety, transparency, non-discrimination, and respect for fundamental rights.[75]
    - The European AI Office, established within the Commission, is central to the AI Act's implementation and enforcement, particularly for general-purpose AI models.[80] It also serves as the EU's hub for AI expertise and international cooperation.[80]
    - The EU actively promotes its approach to trustworthy AI internationally and engages in bilateral digital partnerships (e.g., with Japan [71] and Canada [82]) and multilateral forums to foster alignment and cooperation.[80]
    - The 'GenAI4EU' initiative aims to bolster Europe's AI innovation capacity by supporting startups and SMEs in developing trustworthy AI applications.[80]
- **World Bank:** The World Bank addresses AI through the lens of development and poverty reduction.
    - Its GovTech Global Program includes an Artificial Intelligence Working Group, co-chaired by Estonia and Nigeria, bringing together governments, private sector, and international organizations to foster knowledge exchange and develop policy tools for AI adoption in the public sector, particularly in developing countries.[86]
    - The Development Impact Group (DIME) AI Team focuses on leveraging AI for impact evaluation and development programming.[87] Its initiatives include ImpactAI (using LLMs to synthesize research for better development finance decisions), ZeroHungerAI (using AI and non-traditional data to predict food

crises), and SocialAI (developing AI for low-resource languages and contexts, tackling issues like hate speech and bias).[87]
    - The World Bank collaborates with partners like Google.org and the Gates Foundation to advance its AI for development agenda.[87]

Table 1: Key International Actors in AI Cooperation

Organization	Key AI Mandate/Focus	Major Initiatives/Outputs	Key Snippets
UN System			
ITU	AI for SDGs, Standard-setting, Governance	AI for Good Global Summits & Platform, Innovate for Impact Challenge, AI Standards Focus Groups (Health, Road Safety, etc.), Contributions to UN AI Governance White Paper	18
UNESCO	Ethics of AI, Implementation Support	Recommendation on the Ethics of AI (2021), Global AI Ethics & Governance Observatory, Readiness Assessment Methodology (RAM), Ethical Impact Assessment (EIA) Methodology	22
OHCHR	AI & Human Rights (esp. Privacy)	B-Tech Project (AI HRDD workstream), Reports (A/HRC/56/45, A/HRC/51/17, A/HRC/48/31), Key Asks for State	10

		Regulation	
UNICRI	AI & Crime, Security, Justice	Centre for AI & Robotics, Toolkit for Responsible AI in Law Enforcement, Reports on AI & Law Enforcement, Malicious Use of AI (Terrorism, Cybercrime), AI for Safer Children initiatives	14
UN AI Advisory Body	International AI Governance Recommendations	Final Report: "Governing AI for Humanity" (Sept 2024), Proposals for global governance architecture, Addressing representation/coordination/implementation gaps	16
UN Global Pulse	AI for Development, Humanitarian Action, Peace	DISHA Initiative (Damage Assessment, Socio-economic Mapping), UN Global Pulse Accelerator Programme	52
UNIDIR	AI & International Security, Disarmament	Security and Technology Programme, Research & Reports on Military AI, LAWS, IHL, Regional Security Impacts	24
Other Multilaterals			
OECD	Trustworthy AI	OECD AI Principles	3

	Principles, Policy Analysis, Data	(2019), OECD.AI Policy Observatory (incl. AIM, Tools Catalogue), Secretariat for GPAI, Support for G7 Hiroshima Process Reporting Framework	
GPAI	Responsible AI Development & Use (Multistakeholder)	Expert Working Groups (RAI, Data Governance, etc.), Projects & Reports (RAISE, Social Media Gov., Data Gov. Framework), Integrated Partnership with OECD	58
Intergovernmental Fora			
G7	AI Governance, Safety, Security, Economic Impacts	Hiroshima AI Process, International Guiding Principles & Code of Conduct (for advanced AI developers), Focus on Interoperability, AI Safety Summits (input/follow-up)	11
G20	AI Principles, Digital Economy, Data Flows, Development	G20 AI Principles (2019, based on OECD), Promotion of Data Free Flow with Trust (DFFT), Digital Economy Working Group, 2025 Task Force on AI, Data Gov. & Innovation for SDGs (South Africa Presidency)	70

Regional Actors			
European Union (EU)	Comprehensive AI Regulation, Trustworthy AI Promotion	EU AI Act (Regulation (EU) 2024/1689), European AI Office, 'GenAI4EU' Initiative, Bilateral Digital Partnerships (Japan, Canada, etc.)	[75]
Financial Institutions			
World Bank	AI for Development, GovTech, Impact Evaluation	AI Working Group (GovTech), DIME AI Team (ImpactAI, ZeroHungerAI, SocialAI), Partnerships (Google.org, Gates Foundation)	[86]

This complex web of actors and initiatives reveals both significant momentum and inherent challenges. The sheer number of organizations involved, each with distinct mandates and priorities, creates a dynamic but potentially fragmented landscape.[16] While this diversity can foster innovation and address AI from multiple perspectives, it also necessitates strong coordination to avoid duplication of effort and the emergence of conflicting standards or governance approaches.

B. Bilateral and Regional Cooperation

Alongside multilateral efforts, bilateral agreements and regional initiatives play a crucial role in advancing AI cooperation, often focusing on specific technical or strategic objectives.

- **Key Bilateral Agreements:** Several high-profile agreements signal deepening collaboration between key AI players:
  - The **UK-US Memorandum of Understanding (MoU) on AI Safety**, signed in April 2024, represents a significant step towards operational collaboration.[20] It establishes a formal partnership between the two nations' AI Safety Institutes, aiming to develop shared approaches to AI model evaluation, conduct joint testing exercises, collaborate on technical safety research, facilitate policy alignment, enable personnel exchanges, and promote international safety

standards.[20] This focused, technical collaboration between leading AI nations can generate practical methodologies and insights potentially applicable in broader multilateral contexts.
    - The **EU engages in numerous digital partnerships**, including those with Canada [82] and Japan.[71] These partnerships often encompass AI, focusing on shared values like human-centricity, research collaboration (e.g., Canada's association with Horizon Europe Pillar II [89]), regulatory dialogue, and promoting interoperable governance frameworks.[81] The EU-Japan Digital Partnership, for instance, explicitly references cooperation within the G7 Hiroshima AI Process and includes a protocol on digital trade and data flows within their Economic Partnership Agreement (EPA).[71]
    - Other notable bilateral MoUs on AI cooperation have been signed between countries like the Republic of Korea and Singapore (2022), Australia and Singapore (2024), and Australia and the Republic of Korea (2024), indicating active AI diplomacy, particularly in the Asia-Pacific region.[90]
- **Regional Trends and Dynamics:**
    - **Asia-Pacific:** This region has emerged as a hub for incorporating AI provisions into Preferential Trade Agreements (PTAs). As of early 2025, 14 out of 16 global trade agreements with AI clauses originated from APAC economies, led by Singapore, the Republic of Korea, Australia, and New Zealand.[90] These agreements typically focus on fostering cooperation on emerging technologies, research sharing, and promoting responsible business use of AI, often referencing OECD AI Principles or GPAI.[90] Initiatives like the UN ESCAP's Regional Digital Trade Integration Index (RDTII) aim to support regulatory alignment in the region.[90]
    - **Europe:** Beyond the EU AI Act, the Council of Europe has developed its Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law, which Canada has signed, indicating broader European efforts towards rights-based AI governance.[69] Strategic research partnerships, such as the one between EMBL and ELLIS focusing on AI in life sciences, also bolster regional capabilities.[91]
    - **China's International Engagement:** China actively participates in global AI safety summits (Bletchley, Seoul, Paris) and its companies engage with international initiatives (e.g., Zhipu AI signing Frontier AI Safety Commitments).[92] The government launched its "Global AI Governance Initiative" in 2023 and established the China AI Safety and Development Association (CNAISDA) to facilitate international dialogue.[92] However, geopolitical competition and differing governance philosophies mean China's inclusion in some Western-led technical forums, like the International Network

of AISIs (INAISI), remains contested.[92]

The evolution of AI cooperation shows a clear trend towards formalization. Early efforts focused on establishing high-level principles (e.g., OECD 2019, G20 2019). More recently, the focus has shifted towards creating concrete operational structures and agreements. Examples include the establishment of the EU AI Office [80], the formation of national AI Safety Institutes and their bilateral partnerships (UK-US MoU [20]), and the integration of the OECD and GPAI.[58] This maturation reflects a move from defining 'what' responsible AI entails to figuring out 'how' to achieve and govern it collaboratively. Bilateral agreements, particularly those focused on technical aspects like safety research, often serve as testbeds for practical collaboration, potentially generating models and standards that can inform and accelerate progress within larger multilateral frameworks.[20]

III. Thematic Pillars of AI Cooperation

International cooperation on AI is coalescing around several key thematic pillars, reflecting the multifaceted nature of the technology and its impacts. These pillars include establishing governance frameworks grounded in ethics and human rights, ensuring the safety and security of AI systems, harnessing AI for sustainable development, and addressing the foundational issues of data governance and digital infrastructure.

A. Governance, Ethics, and Human Rights

This pillar is arguably the most active area of international AI cooperation, driven by the need to align rapid technological advancement with societal values and legal frameworks.

- **Developing International Norms and Principles:** A notable convergence exists around core values and principles for trustworthy AI across major international initiatives. Principles such as human-centricity, fairness, transparency, accountability, safety, security, privacy, and respect for human rights are consistently emphasized in the OECD AI Principles [3], the UNESCO Recommendation on the Ethics of AI [22], and the G20 AI Principles.[70] The ongoing challenge lies in translating these widely accepted principles into concrete, actionable, and globally relevant policies and technical standards.[68]
- **Human Rights Due Diligence (HRDD) and Impact Assessments (EIA):** There is growing recognition that proactive assessment of AI's human rights impacts is essential. OHCHR's B-Tech Project advocates for applying the UNGPs to the tech sector and is developing a workstream focused on mainstreaming HRDD into AI

design and development.[33] Similarly, UNESCO is creating an EIA methodology as a key tool to support its Ethics Recommendation.[28] These assessments are intended to identify potential harms, particularly to marginalized groups, ensure non-discrimination, protect privacy, and incorporate public participation.[30] Calls for making such assessments mandatory, especially for high-risk applications, are increasing.[10]

- **Striving for Interoperable Governance Frameworks:** As different nations and regions develop their own AI regulations (e.g., the EU AI Act), ensuring these frameworks can work together—or are at least interoperable—is crucial to avoid fragmenting the global digital economy and hindering innovation. The G7 has explicitly made interoperability a goal.[11] The UN AI Advisory Body's report identified coordination gaps as a major challenge and proposed mechanisms to enhance interoperability and shared understanding.[16] The integration of the OECD and GPAI also aims to foster more coordinated international efforts.[59] The EU AI Act, while potentially setting a global benchmark, also raises practical questions about its interoperability with other regulatory approaches.[75]
- **Ethical Considerations:** Ethical considerations permeate nearly all discussions on AI cooperation. Key focus areas include mitigating algorithmic bias and ensuring fairness [6], enhancing transparency and explainability of AI systems [3], establishing clear lines of accountability [3], and safeguarding privacy and data protection.[3] The rapid rise of generative AI has intensified ethical debates around issues like intellectual property, disinformation, and authenticity [23], while emerging fields like neurotechnology also present new ethical frontiers.[29]

B. AI Safety and Security

Ensuring that AI systems are safe, secure, and do not pose unacceptable risks is a major driver of international cooperation, particularly concerning advanced AI models.

- **Collaborative Safety Research and Testing:** Recognizing that AI safety is a shared global challenge, nations are increasingly collaborating on technical research and evaluation. The UK-US AI Safety Institutes partnership is a prime example, focusing on developing shared evaluation methodologies, conducting joint testing on models, and advancing scientific knowledge of frontier AI capabilities and risks.[20] The series of global AI Safety Summits (Bletchley 2023, Seoul 2024, Paris 2025) provides high-level platforms for international dialogue on safety.[21] The International AI Safety Report 2025, commissioned following the Bletchley Summit and involving experts from 33 countries and international organizations, aims to create a shared, evidence-based understanding of advanced AI risks.[94]

- **Risk Management Frameworks and Standards:** A risk-based approach to AI governance is gaining traction, exemplified by the EU AI Act's tiered system.[75] International efforts focus on developing robust risk assessment methodologies, defining risk thresholds for advanced AI models (where risks become "intolerable" unless mitigated) [21], and establishing standards for safety testing.[20] The OECD.AI Policy Observatory includes the AI Incidents Monitor (AIM) to track real-world failures and inform risk management strategies.[57] The UN AI Advisory Body also recommended establishing an AI standards exchange to promote common definitions and evaluation metrics.[16]
- **Addressing Security Threats:** AI presents a dual-use challenge, offering potential security benefits while also creating new threats:
    - **AI and Crime:** UNICRI leads efforts to understand and counter the malicious use of AI by criminals and terrorists, including the generation of deepfakes, AI-enhanced malware, sophisticated social engineering, and potential misuse for terrorist purposes.[14] Simultaneously, it explores and promotes the responsible use of AI in law enforcement for investigation and prevention, while addressing associated ethical and human rights concerns.[47] Effective governance is needed to manage these risks.[24]
    - **Lethal Autonomous Weapons Systems (LAWS):** The potential development and deployment of LAWS remain a highly contentious issue in international security forums. Discussions continue within the UN framework, including the General Assembly [12] and the Convention on Conventional Weapons (CCW) Group of Governmental Experts.[13] Key debates revolve around ensuring meaningful human control over the use of force, compliance with International Humanitarian Law (IHL) principles (distinction, proportionality, precaution), the Martens Clause, and ethical red lines.[12] There are ongoing calls from the UN Secretary-General, the ICRC, and numerous states for new legally binding rules or prohibitions on certain types of LAWS.[12] UNIDIR actively contributes research on LAWS, IHL, and related security implications.[56]
    - **Cybersecurity:** AI is transforming the cybersecurity landscape. It enhances defensive capabilities through improved threat detection and response but also empowers attackers with more sophisticated tools for intrusion, evasion, and disinformation campaigns.[8] Ensuring the cybersecurity of AI systems themselves (protecting models and data) is also a critical challenge.[8]

C. AI for Sustainable Development (AI4SDGs)

Leveraging AI to accelerate progress towards the UN Sustainable Development Goals is a significant and growing area of international cooperation, framed as "AI for Good."

- **Key Initiatives and Platforms:** Several major initiatives explicitly target AI4SDGs. The **ITU's AI for Good** platform is central, hosting global summits, challenges, and fostering partnerships aimed at applying AI to achieve the SDGs.[18] The **World Bank's DIME AI** team develops practical AI applications for development challenges through projects like ImpactAI (evidence synthesis), ZeroHungerAI (food crisis prediction), and SocialAI (AI for low-resource contexts).[87] **UN Global Pulse's DISHA** initiative focuses on ethical data and AI access for humanitarian and development goals, with projects on damage assessment and socio-economic mapping.[52] **GPAI** has dedicated workstreams on AI and the Environment/Climate Action.[4] The **Coalition for Sustainable AI**, launched at the 2025 Paris AI Action Summit, brings together governments, companies, and international organizations (including UNEP and ITU) to align AI with environmental goals.[17]
- **Funding, Actors, and Specific Project Examples:** These initiatives rely on multi-stakeholder partnerships and diverse funding sources. ITU's AI for Good involves over 40 UN agencies, the Swiss government, and corporate sponsors.[25] The World Bank and UN Global Pulse partner with philanthropic organizations (Google.org, Gates Foundation, McGovern Foundation), academic institutions, and private sector entities (McKinsey).[53] The Coalition for Sustainable AI includes numerous tech companies, countries, and international bodies.[17] Concrete examples of AI4SDG applications include AI for optimizing crop placement and monitoring crop health [1], diagnosing plant diseases via mobile apps [96], improving medical diagnostics [2], predicting natural disasters [62], optimizing energy systems and building efficiency [4], monitoring deforestation [4], and facilitating post-disaster recovery.[53]
- **Focus Areas:** AI4SDG efforts span a wide range of goals, prominently including Good Health and Well-being (SDG 3), Zero Hunger (SDG 2), Climate Action (SDG 13), Sustainable Cities and Communities (SDG 11), Industry, Innovation and Infrastructure (SDG 9), Quality Education (SDG 4), Reduced Inequalities (SDG 10), Peace, Justice and Strong Institutions (SDG 16), and Partnerships for the Goals (SDG 17).[1]

Table 2: Overview of Major AI for SDGs Initiatives

Initiative/Platform	Lead Actor(s)	Key Focus/Projects	SDG Links (Examples)	Funding/Partners (Examples)	Key Snippets

AI for Good	ITU	Global Summits, Innovate for Impact Challenge, AI Standards Focus Groups (Health, etc.), Partnership Building	All SDGs, esp. Health (3), Climate (13), Innovation (9), Partnerships (17)	40+ UN Agencies, Switzerland, Sponsors (Deloitte, Microsoft, AWS, etc.)	18
DIME AI	World Bank (Development Impact Group)	ImpactAI (Evidence Synthesis), ZeroHunger AI (Food Crisis Prediction), SocialAI (Low-resource contexts, Bias Mitig.)	Poverty (1), Hunger (2), Health (3), Inequality (10), Peace/Justice (16), Innovation (9)	Google.org, Gates Foundation	87
DISHA	UN Global Pulse	Damage Assessment (AI/Satellite Imagery), Socio-economic Mapping (Mobile Data, Poverty Estimation)	Poverty (1), Hunger (2), Sustainable Cities (11), Partnerships (17)	Google.org, JFI, McKinsey, McGovern Foundation, UNDP, UNOSAT, WFP	52
GPAI Climate/Environment	GPAI (Responsible AI WG / Climate Action Committee)	Responsible AI Strategy for the Environment (RAISE), Recommendations for Govt. Action on AI &	Climate Action (13), Life on Land (15), Life Below Water (14), Sustainable Cities (11)	GPAI Member Countries, Expert Community	4

		Climate			
Coalition for Sustainable AI	France, UNEP, ITU, +100 partners	Platform for engagement, Initiatives hub for AI & environment (decarbonization, pollution, biodiversity, oceans)	Climate Action (13), Life on Land (15), Life Below Water (14), Clean Water (6)	37 Tech Companies, 11 Countries, 5 International Orgs (initial)	[17]

D. Data Governance and Digital Infrastructure

Underpinning all AI development and cooperation are fundamental issues related to data and the infrastructure needed to process it.

- **Cross-Border Data Flows:** Facilitating the flow of data across borders is essential for training and deploying global AI models, yet it must be balanced with other considerations. The G20's "Data Free Flow with Trust" (DFFT) initiative seeks to enable data flows while addressing privacy, security, and intellectual property concerns.[70] Trade agreements, particularly in the Asia-Pacific, increasingly include provisions on data flows, data localization, and non-discriminatory treatment of digital products.[71] The EU-Japan EPA, for example, now includes a protocol on free data flow.[71] However, achieving global consensus remains challenging, as evidenced by ongoing WTO negotiations.[71]
- **Privacy and Data Protection in AI:** The vast amounts of data, often personal, required to train AI systems make privacy a paramount concern.[6] International principles (OECD [3], UNESCO [22], G20 [70]) consistently highlight the need for robust data protection. Regulations like the EU's GDPR and AI Act set high standards.[6] OHCHR reports detail the risks of AI-driven surveillance and data misuse.[10] Balancing data access for innovation with fundamental privacy rights is a key governance challenge.
- **Data Quality and Bias:** The adage "garbage in, garbage out" applies strongly to AI. The performance, fairness, and reliability of AI systems are directly dependent on the quality, representativeness, and integrity of the data used for training and operation.[8] Biased, incomplete, or inaccurate training data inevitably leads to biased and potentially discriminatory AI outcomes.[7] Effective data governance frameworks are therefore essential, covering the entire data lifecycle—collection, use, sharing, archiving, and deletion—in a manner consistent with human rights and ethical principles.[62] GPAI's Data Governance Working Group specifically

focuses on these issues.[62]

- **Building Capacity and Infrastructure Globally:** Significant disparities exist in AI-related infrastructure (computing power, data centers) and human capital (skills, expertise) globally.[86] The UN AI Advisory Body explicitly noted representation gaps in governance discussions, particularly affecting the Global South.[16] Bridging this digital and AI divide requires concerted international efforts and investment.[1] Initiatives like the World Bank's AI Working Group [86], UNESCO's support for Member States [32], ITU's AI for Good capacity building programs [27], and UN Global Pulse's focus on low-resource contexts [52] aim to enhance infrastructure, develop skills, and ensure more equitable participation in the AI revolution. Addressing data scarcity for low-resource languages is also a critical aspect of inclusive AI development.[87]

Analyzing these thematic pillars reveals variations in emphasis among international actors. While there is broad agreement on the importance of ethics and human rights, specific actors lead in certain areas: the G7, UK, and US demonstrate a strong focus on AI safety and security [11]; UNESCO is the primary standard-bearer for ethics [22]; the ITU champions AI for SDGs [25]; while the G20 and OECD often emphasize economic dimensions and data governance.[3] This specialization can be efficient but risks incoherence if not well-coordinated. Furthermore, across all pillars, there is a growing understanding that purely technical solutions—such as developing less biased algorithms or better safety tests—are insufficient on their own. They must be embedded within comprehensive governance frameworks that include robust oversight, clear accountability, and meaningful human control.[3] The AI4SDGs narrative, while powerful, also faces the practical challenge of translating potential into tangible, equitable benefits globally, especially given the significant data, infrastructure, and capacity gaps in many developing countries.[2] Targeted international support is crucial to ensure AI truly serves sustainable development for all.

IV. Overcoming Challenges, Seizing Opportunities

Despite significant progress in establishing platforms and principles for international AI cooperation, numerous challenges hinder the development of effective and globally accepted governance. However, these challenges also present opportunities for strengthening collaboration and ensuring AI develops in a beneficial and responsible manner.

A. Key Challenges

- **Fragmentation and Coordination Gaps:** The AI governance landscape is

populated by a multitude of international organizations, intergovernmental forums, regional bodies, and national initiatives.[16] While this reflects broad engagement, it also leads to a risk of fragmentation, duplication of effort, and the development of potentially incompatible standards and regulations. Ensuring coherence and effective coordination among these diverse actors remains a primary challenge.[7]

- **Implementation Gaps:** A significant gap exists between the agreement on high-level principles (such as fairness, transparency, safety) and their practical implementation and enforcement.[7] Translating ethical guidelines and safety commitments into concrete technical standards, verifiable metrics, and effective regulatory mechanisms is complex and ongoing. The lack of globally agreed-upon tools for evaluation and auditing hinders accountability.[57]
- **Ensuring Global South Inclusion:** There is a persistent risk that the benefits of AI will accrue primarily to developed nations, widening existing digital and economic divides.[17] Developing countries often lack the necessary digital infrastructure, data resources, technical expertise, and financial capacity to fully participate in AI development and deployment.[1] Furthermore, their voices and perspectives may be underrepresented in international governance discussions, leading to frameworks that do not adequately address their needs or contexts.[16] Addressing data scarcity and bias related to low-resource languages and specific cultural contexts is also crucial for inclusivity.[87]
- **Geopolitical Tensions and Competition:** Strategic competition, particularly between major AI powers like the US and China, can complicate international cooperation efforts.[7] National security concerns and the pursuit of technological leadership can sometimes override collaborative goals. Differing political systems and regulatory philosophies (e.g., the EU's rights-based regulation vs. potentially more laissez-faire approaches) also create friction and challenges for harmonization.[23]
- **Resource Disparities:** The capacity to invest in AI research and development, implement sophisticated governance measures, and enforce regulations varies significantly across countries.[86] This disparity affects the ability of many nations to engage meaningfully in international standard-setting and cooperation initiatives.
- **Balancing Innovation with Regulation:** Striking the right balance between fostering AI innovation and implementing necessary safeguards is a delicate act.[7] Overly prescriptive or burdensome regulation could stifle beneficial advancements, while insufficient oversight could lead to significant harms. Finding agile and proportionate governance approaches is essential.[104]
- **Pace of Technological Change:** AI technology is evolving at an unprecedented

speed, often outpacing the ability of policymakers and international bodies to develop timely and relevant governance frameworks.[7] This necessitates adaptive and future-proof governance mechanisms capable of responding to new developments.[49]

The core tension underpinning many of these challenges lies in the inherent conflict between the aspiration for universal principles and globally harmonized standards, and the complex reality of divergent national interests, capabilities, values, and regulatory philosophies.[11] This tension manifests in the observed fragmentation and the difficulties in achieving genuine interoperability and widespread adoption of common frameworks.

B. Opportunities

Despite the challenges, significant opportunities exist to enhance international AI cooperation:

- **Harmonizing Standards and Interoperability:** Leveraging established platforms like the OECD, GPAI, and G7 processes offers opportunities to develop common technical standards (e.g., for safety testing, risk assessment, data formats) and promote interoperability between different governance frameworks.[11] This can reduce compliance burdens for industry and facilitate international collaboration.
- **Enhancing Capacity Building:** There is a clear need and opportunity to significantly scale up initiatives aimed at supporting developing countries. This includes providing resources for building AI skills, improving digital infrastructure, strengthening governance capacity, and ensuring equitable access to data and AI tools.[27] International organizations like the World Bank, ITU, and UNESCO are well-positioned to lead these efforts.[27]
- **Fostering Joint Research and Development:** International collaboration can accelerate progress in critical research areas. This includes joint projects on AI safety evaluation methodologies, techniques for mitigating bias in diverse cultural and linguistic contexts, developing more energy-efficient AI models, and advancing AI applications for specific global challenges like climate change or pandemic preparedness.[4] Platforms like the EU's Horizon Europe can facilitate such collaborations.[89]
- **Leveraging AI for Global Public Goods:** Focusing cooperative efforts on using AI to address shared global challenges—climate change mitigation and adaptation [4], global health monitoring and response [2], humanitarian aid delivery [53], and achieving the SDGs—can build consensus and demonstrate the tangible benefits of international collaboration.
- **Strengthening Multistakeholder Dialogue:** Continued and enhanced dialogue

involving governments, the private sector (including large companies and SMEs/startups), academia, civil society organizations, and technical communities is crucial.[16] Platforms like GPAI and the UN AI Advisory Body consultations provide models for inclusive processes that can build broader understanding and buy-in for governance approaches.

- **Promoting Regulatory Sandboxes and Pilot Projects:** International collaboration on regulatory sandboxes [75] and joint pilot projects can provide safe spaces to test innovative AI applications and governance approaches, allowing for shared learning and the development of best practices before wider deployment.

Addressing the previously identified "implementation gap" [16]—the challenge of translating agreed-upon principles into effective, globally coordinated practices—is arguably the most critical opportunity and the necessary next step for international AI cooperation. This requires moving beyond declarations and dialogues towards building the practical infrastructure of governance: investing in capacity building, developing concrete technical standards and evaluation metrics, and establishing robust monitoring and accountability mechanisms.[29] Success in this phase will determine whether the potential of global AI cooperation can be fully realized.

V. Conclusion and Strategic Recommendations

The landscape of international cooperation on Artificial Intelligence is dynamic, complex, and rapidly evolving. Driven by the technology's profound dual potential for societal benefit and significant risk, a diverse ecosystem of multilateral organizations, intergovernmental forums, regional blocs, and bilateral partnerships has emerged. Significant progress has been made in establishing foundational principles centered on trustworthy, human-centric, and ethical AI, exemplified by the OECD AI Principles, the UNESCO Recommendation on the Ethics of AI, and the G20 AI Principles. Platforms like the ITU's AI for Good, the OECD.AI Policy Observatory, and GPAI facilitate dialogue, research, and the sharing of best practices. High-level political attention, demonstrated by G7 and G20 initiatives and the UN Secretary-General's AI Advisory Body, underscores the global importance attributed to AI governance.

However, this burgeoning ecosystem faces substantial challenges. Fragmentation and potential duplication of effort persist across initiatives. A critical gap remains between high-level principles and their concrete implementation and enforcement globally. Ensuring the inclusive participation and equitable benefit-sharing for developing countries is paramount yet difficult to achieve due to resource and capacity disparities. Geopolitical competition and divergent regulatory philosophies further complicate efforts towards harmonization and interoperability. The sheer pace of AI

advancement continuously challenges the adaptability of governance frameworks.

The future effectiveness of international AI cooperation hinges on transitioning from principle-setting to building robust, practical mechanisms for coordination, implementation, monitoring, and capacity building.[16] The focus must shift towards operationalizing governance to ensure that AI develops and is deployed in alignment with shared values and global goals, particularly the SDGs, while mitigating systemic risks. A multi-layered governance approach, combining binding regulations in certain contexts (like the EU AI Act [75]) with flexible, interoperable standards and voluntary codes (promoted by OECD and G7 [3]), appears more pragmatic in the near term than pursuing a single, universal treaty.[12]

Based on the analysis of the current landscape, the following strategic recommendations are proposed to strengthen global collaboration on AI:

1. **Enhance Coordination Mechanisms:** Establish clearer mechanisms for coordination and information sharing between key international bodies (e.g., relevant UN agencies, OECD/GPAI, G7/G20, World Bank) to minimize redundancy, leverage synergies, and promote a more coherent global approach. This could involve developing shared strategic roadmaps or undertaking more joint initiatives on specific issues.
2. **Prioritize Interoperability:** Actively support the development of technical standards (e.g., for data formats, API protocols, safety testing metrics) and governance tools (e.g., risk assessment frameworks, auditing procedures) that promote interoperability between different national and regional AI regulatory systems. Build upon the work initiated by the G7 and OECD in this area.[11]
3. **Bridge the Implementation Gap:** Invest heavily in developing and disseminating practical tools, metrics, and methodologies for assessing AI systems' compliance with ethical principles and safety requirements. Support initiatives like the OECD Catalogue of Tools & Metrics [57] and UNESCO's EIA methodology.[29] Establish clearer pathways for accountability and redress when AI systems cause harm.
4. **Scale Up Capacity Building:** Dramatically increase targeted funding and programs dedicated to building AI capacity in developing countries. This must encompass technical skills training, support for digital infrastructure development, assistance in formulating national AI strategies and governance frameworks, and ensuring meaningful participation of Global South representatives in international AI forums.[27]
5. **Foster Targeted Joint Research:** Promote and fund international collaborative research focused on critical, shared challenges. Priority areas should include robust and reliable AI safety evaluation techniques, methods for mitigating bias

across diverse cultural and linguistic contexts, improving the energy efficiency of AI computation, and developing scalable AI solutions for high-impact SDG areas (e.g., climate adaptation, public health in low-resource settings).[4]

6. **Strengthen Multistakeholder Engagement:** Ensure that international AI governance processes are genuinely multistakeholder, providing structured and meaningful opportunities for input from civil society, academia, the technical community, and the private sector, including SMEs and startups alongside larger corporations. Transparency in these processes is key to building broad legitimacy and trust.[16]
7. **Promote Collaborative Regulatory Experimentation:** Encourage international cooperation in establishing and sharing learnings from regulatory sandboxes [75] and cross-border pilot projects. This can allow for the safe testing of innovative AI applications and adaptive governance approaches in real-world settings before wider implementation.

Navigating the future of AI requires a concerted global effort. By addressing the challenges of fragmentation and implementation, prioritizing inclusivity, and focusing on practical collaboration, the international community can work towards harnessing the transformative power of AI for the benefit of all humanity while mitigating its inherent risks. The path forward demands not only continued dialogue but also concrete investment in the mechanisms and capacities needed for effective global AI governance.

Karya yang dikutip

1. UN DESA Policy Brief No. 174: Leveraging strategic foresight to mitigate artificial intelligence (AI) risk in public sectors, diakses Mei 8, 2025, https://desapublications.un.org/policy-briefs/un-desa-policy-brief-no-174-leveraging-strategic-foresight-mitigate-artificial
2. open-research-europe.ec.europa.eu, diakses Mei 8, 2025, https://open-research-europe.ec.europa.eu/articles/5-117/v1/pdf?article_uuid=a5dd2268-6e79-4dc8-9c97-111f9e5c4dd1
3. AI principles - OECD, diakses Mei 8, 2025, https://www.oecd.org/en/topics/ai-principles.html
4. CLIMATE CHANGE AND AI - Global Partnership on Artificial Intelligence - GPAI, diakses Mei 8, 2025, https://www.gpai.ai/projects/climate-change-and-ai.pdf
5. Breaking Down AI Safety: Why Focused Dialogue Matters | TechPolicy.Press, diakses Mei 8, 2025, https://www.techpolicy.press/breaking-down-ai-safety-why-focused-dialogue-matters/
6. Full article: AI Ethics: Integrating Transparency, Fairness, and Privacy in AI Development, diakses Mei 8, 2025,

https://www.tandfonline.com/doi/full/10.1080/08839514.2025.2463722
7. (PDF) AI Governance: A Systematic Literature Review - ResearchGate, diakses Mei 8, 2025, https://www.researchgate.net/publication/382523579_AI_Governance_A_Systematic_Literature_Review
8. The Security Risks of Artificial Intelligence Applications on the Healthcare System, diakses Mei 8, 2025, https://karger.com/sjh/article/5/1/52/915938/The-Security-Risks-of-Artificial-Intelligence
9. AI and cybersecurity: a risk society perspective - Frontiers, diakses Mei 8, 2025, https://www.frontiersin.org/journals/computer-science/articles/10.3389/fcomp.2024.1462250/full
10. Contribution to the CSTD secretariat's Report on twenty-year review of WSIS implementation and follow-up by the Office of the - UNCTAD, diakses Mei 8, 2025, https://unctad.org/system/files/non-official-document/wsis20_c21_ohchr_en.pdf
11. G7 - Center for AI and Digital Policy, diakses Mei 8, 2025, https://www.caidp.org/resources/g7/
12. Lethal Autonomous Weapons Systems & International Law: Growing Momentum Towards a New International Treaty | ASIL, diakses Mei 8, 2025, https://www.asil.org/insights/volume/29/issue/1
13. UN head calls for a ban - Stop Killer Robots, diakses Mei 8, 2025, https://www.stopkillerrobots.org/news/unban/
14. Artificial intelligence (AI) | UNICRI :: United Nations Interregional ..., diakses Mei 8, 2025, https://unicri.it/taxonomy/term/112?combine=&page=3
15. Artificial Intelligence and Robotics | UNICRI :: United Nations ..., diakses Mei 8, 2025, https://unicri.it/topics/ai_robotics
16. Governing AI for Humanity: UN Report Proposes Global Framework for AI Oversight, diakses Mei 8, 2025, https://www.techuk.org/resource/governing-ai-for-humanity-un-report-proposes-global-framework-for-ai-oversight.html
17. Paris Summit Launches Coalition for Sustainable AI - SDG Knowledge Hub, diakses Mei 8, 2025, https://sdg.iisd.org/news/paris-summit-launches-coalition-for-sustainable-ai/
18. Innovate for Impact - AI for Good, diakses Mei 8, 2025, https://aiforgood.itu.int/innovate-for-impact-2025/
19. Artificial Intelligence for Climate Action in Developing Countries: Opportunities, Challenges and Risks - UNFCCC, diakses Mei 8, 2025, https://unfccc.int/ttclear/misc_/StaticFiles/gnwoerk_static/AI4climateaction/28da5d97d7824d16b7f68a225c0e3493/a4553e8f70f74be3bc37c929b73d9974.pdf
20. Collaboration on the safety of AI: UK-US memorandum of understanding - GOV.UK, diakses Mei 8, 2025, https://www.gov.uk/government/publications/collaboration-on-the-safety-of-ai-uk-us-memorandum-of-understanding/collaboration-on-the-safety-of-ai-uk-us-memorandum-of-understanding

21. Frontier AI Safety Commitments, AI Seoul Summit 2024 - GOV.UK, diakses Mei 8, 2025, https://www.gov.uk/government/publications/frontier-ai-safety-commitments-ai-seoul-summit-2024/frontier-ai-safety-commitments-ai-seoul-summit-2024
22. Ethics of Artificial Intelligence | UNESCO, diakses Mei 8, 2025, https://www.unesco.org/en/artificial-intelligence/recommendation-ethics
23. France's AI Action Summit - CSIS, diakses Mei 8, 2025, https://www.csis.org/analysis/frances-ai-action-summit
24. Global Conference on AI, Security and Ethics - UNIDIR, diakses Mei 8, 2025, https://unidir.org/wp-content/uploads/2025/04/AISE25_posters.pdf
25. ITU AI for Good - Wikipedia, diakses Mei 8, 2025, https://en.wikipedia.org/wiki/ITU_AI_for_Good
26. AI For Good Global Summit 2025 - SDG Knowledge Hub, diakses Mei 8, 2025, https://sdg.iisd.org/events/ai-for-good-global-summit-2025/
27. About us - AI for Good, diakses Mei 8, 2025, https://aiforgood.itu.int/about/
28. Recommendation on the ethics of artificial intelligence, diakses Mei 8, 2025, https://digitallibrary.un.org/record/4062376?v=pdf
29. Global AI Ethics and Governance Observatory - UNESCO, diakses Mei 8, 2025, https://www.unesco.org/ethics-ai/en
30. Report of the Social and Human Sciences Commission (SHS), diakses Mei 8, 2025, https://unesdoc.unesco.org/ark:/48223/pf0000379920
31. Global AI Ethics and Governance Observatory - UNESCO, diakses Mei 8, 2025, https://www.unesco.org/ethics-ai/es/homepage
32. Artificial intelligence: Partnership between UNESCO and the EU to speed up the implementation of ethical rules, diakses Mei 8, 2025, https://www.unesco.org/en/articles/artificial-intelligence-partnership-between-unesco-and-eu-speed-implementation-ethical-rules
33. OHCHR and privacy in the digital age | OHCHR, diakses Mei 8, 2025, https://www.ohchr.org/en/privacy-in-the-digital-age
34. diakses Januari 1, 1970, https://www.ohchr.org/en/issues/digital-age-and-human-rights/b-tech-project
35. B-Tech Project | OHCHR, diakses Mei 8, 2025, https://www.ohchr.org/en/b-tech
36. human rights and new and emerging digital technologies - Official Document System - the United Nations, diakses Mei 8, 2025, https://documents.un.org/api/symbol/access?j=G2410322&t=doc
37. Human Rights Council (HRC)*, diakses Mei 8, 2025, https://www.nmun.org/assets/documents/conferences/ny/ny25b-res-hrc.pdf
38. Human rights compliant uses of digital technologies by law enforcement for the facilitation of peaceful protests - ohchr, diakses Mei 8, 2025, https://www.ohchr.org/sites/default/files/2024-03/Toolkit-law-enforcement-Component-on-Digital-Technologies.pdf
39. A/HRC/51/17: The right to privacy in the digital age | OHCHR, diakses Mei 8, 2025, https://www.ohchr.org/en/documents/thematic-reports/ahrc5117-right-privacy-digital-age
40. Digital Technologies and Human Rights: a Legal Framework - International

Commission of Jurists, diakses Mei 8, 2025, https://www.icj.org/wp-content/uploads/2022/05/Digital-Technologies-and-Human-Rights-Briefing-Paper-FINAL-VERSION-May-2022.pdf
41. A/HRC/56/68 - General Assembly - the United Nations, diakses Mei 8, 2025, https://docs.un.org/en/A/HRC/56/68
42. diakses Januari 1, 1970, https://www.ohchr.org/en/documents/thematic-reports/ahrc4831-right-privacy-digital-age
43. diakses Januari 1, 1970, https://www.ohchr.org/en/calls-for-input/reports/report-right-privacy-digital-age-hrc-res-4813
44. Thematic focus | OHCHR, diakses Mei 8, 2025, https://www.ohchr.org/en/b-tech/thematic-focus
45. B-Tech Project - ohchr, diakses Mei 8, 2025, https://www.ohchr.org/en/business-and-human-rights/b-tech-project
46. Homepage | UNICRI :: United Nations Interregional Crime and Justice Research Institute, diakses Mei 8, 2025, https://www.unicri.org/
47. Artificial Intelligence and Robotics for Law Enforcement | UNICRI :: United Nations Interregional Crime and Justice Research Institute, diakses Mei 8, 2025, https://unicri.org/artificial-intelligence-and-robotics-law-enforcement
48. “Not Just Another Tool" Report on Public Perceptions of AI in Law Enforcement, November 2024 | UNICRI :: United Nations Interregional Crime and Justice Research Institute, diakses Mei 8, 2025, https://unicri.org/Publications/Public-Perceptions-AI-Law-Enforcement
49. AI Advisory Body | United Nations, diakses Mei 8, 2025, https://www.un.org/en/ai-advisory-body
50. High-Level Advisory Body on Artificial Intelligence | Office for Digital and Emerging Technologies - the United Nations, diakses Mei 8, 2025, https://www.un.org/digital-emerging-technologies/ai-advisory-body
51. Key Takeaways from the UN Report: 'Governing AI for Humanity' - Fenwick, diakses Mei 8, 2025, https://www.fenwick.com/insights/publications/key-takeaways-from-the-un-report-governing-ai-for-humanity
52. UN Global Pulse, diakses Mei 8, 2025, https://www.unglobalpulse.org/un-global-pulse-at-the-sti-forum-2025/
53. Disha - UN Global Pulse, diakses Mei 8, 2025, https://disha.unglobalpulse.org/
54. Data Insights for Social and Humanitarian Action ... - UN Global Pulse, diakses Mei 8, 2025, https://www.unglobalpulse.org/project/data-insights-for-social-and-humanitarian-action-disha/
55. UNIDIR | Building a more secure world., diakses Mei 8, 2025, https://unidir.org/
56. Publications ⟶ UNIDIR, diakses Mei 8, 2025, https://unidir.org/publications
57. The OECD Artificial Intelligence Policy Observatory - OECD.AI, diakses Mei 8, 2025, https://oecd.ai/
58. About the Global Partnership on Artificial Intelligence (GPAI) - OECD.AI, diakses

Mei 8, 2025, https://oecd.ai/en/about/what-we-do
59. Global Partnership on Artificial Intelligence - OECD, diakses Mei 8, 2025, https://www.oecd.org/en/about/programmes/global-partnership-on-artificial-intelligence.html
60. How the G7's new AI reporting framework could shape the future of AI governance, diakses Mei 8, 2025, https://oecd.ai/en/wonk/how-the-g7s-new-ai-reporting-framework-could-shape-the-future-of-ai-governance
61. Global Partnership on Artificial Intelligence - Wikipedia, diakses Mei 8, 2025, https://en.wikipedia.org/wiki/Global_Partnership_on_Artificial_Intelligence
62. Data Governance Working Group Report - Global Partnership on Artificial Intelligence - GPAI, diakses Mei 8, 2025, https://gpai.ai/projects/data-governance/gpai-data-governance-wg-report-2022.pdf
63. Responsible AI Working Group Report - Global Partnership on Artificial Intelligence - GPAI, diakses Mei 8, 2025, https://gpai.ai/projects/responsible-ai/gpai-responsible-ai-wg-report-november-2021.pdf
64. Responsible AI - Global Partnership on Artificial Intelligence - GPAI, diakses Mei 8, 2025, https://www.gpai.ai/projects/responsible-ai/
65. Our work - GPAI, diakses Mei 8, 2025, https://gpai.ai/projects/
66. Data Governance Working Group A Framework Paper for GPAI's Work on Data Governance 2.0 - Global Partnership on Artificial Intelligence - GPAI, diakses Mei 8, 2025, https://gpai.ai/projects/data-governance/Data%20Governance%20-%20A%20Framework%20Paper%20for%20GPAI%E2%80%99s%20Work%20on%20Data%20Governance%202.0%20.pdf
67. Artificial Intelligence (AI) - United States Department of State, diakses Mei 8, 2025, https://2021-2025.state.gov/artificial-intelligence/
68. Final G7 digital joint ministerial statement (2024) - G7/G20 Documents Database, diakses Mei 8, 2025, https://g7g20-documents.org/database/document/2024-g7-italy-ministerial-meetings-science-and-technology-ministers-ministers-language-final-g7-digital-joint-ministerial-statement
69. Canada signs the Council of Europe Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law, diakses Mei 8, 2025, https://www.canada.ca/en/global-affairs/news/2025/02/canada-signs-the-council-of-europe-framework-convention-on-artificial-intelligence-and-human-rights-democracy-and-the-rule-of-law.html
70. G20 - Center for AI and Digital Policy, diakses Mei 8, 2025, https://www.caidp.org/resources/g20/
71. Working Party 3 Digital Innovation and Mobility Working Party Leaders, diakses Mei 8, 2025, https://www.eu-japan.eu/sites/default/files/brt/pastmeetings/2025/brt2025_wp3_

en_final.pdf
72. G20 Insights - The Global Solutions Initiative, diakses Mei 8, 2025, https://www.global-solutions-initiative.org/resources/g20-insights/
73. First Meeting of Task Force 3 on Artificial Intelligence, Data Governance and Innovation for Sustainable Development - G20 Summit, diakses Mei 8, 2025, https://g20.org/track-news/first-meeting-of-the-task-force-on-artificial-intelligence-data-governance-and-innovation-for-sustainable-development/
74. Second Meeting of Task Force 3 on Artificial Intelligence, Data Governance, and Innovation for Sustainable Development - G20 South Africa, diakses Mei 8, 2025, https://g20.org/track-news/second-meeting-of-the-task-force-on-artificial-intelligence-data-governance-and-innovation-for-sustainable-development/
75. EU AI Act: first regulation on artificial intelligence | Topics - European Parliament, diakses Mei 8, 2025, https://www.europarl.europa.eu/topics/en/article/20230601STO93804/eu-ai-act-first-regulation-on-artificial-intelligence
76. EU AI Act - EU Artificial Intelligence Act, diakses Mei 8, 2025, https://www.euaiact.com/
77. AI Act Published in the Official Journal of the EU - Hunton Andrews Kurth LLP, diakses Mei 8, 2025, https://www.hunton.com/privacy-and-information-security-law/ai-act-published-in-the-official-journal-of-the-eu
78. Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artifici, diakses Mei 8, 2025, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202401689
79. Regulation - EU - 2024/1689 - EN - EUR-Lex - European Union, diakses Mei 8, 2025, https://eur-lex.europa.eu/eli/reg/2024/1689/oj/eng
80. European AI Office | Shaping Europe's digital future, diakses Mei 8, 2025, https://digital-strategy.ec.europa.eu/en/policies/ai-office
81. EU-Japan: Shaping the future of AI and quantum technologies | Epthinktank, diakses Mei 8, 2025, https://epthinktank.eu/2025/04/11/eu-japan-shaping-the-future-of-ai-and-quantum-technologies/
82. Joint Cooperation Committee Report on the State of the EU-Canada Relationship (March 2023 to February 2025), diakses Mei 8, 2025, https://www.international.gc.ca/transparency-transparence/canada-eu-ue/2023-2025.aspx?lang=eng
83. Prime Minister to travel to Paris and Brussels to strengthen transatlantic co-operation and advance global progress on AI, diakses Mei 8, 2025, https://www.pm.gc.ca/en/news/news-releases/2025/02/05/prime-minister-travel-paris-and-brussels-strengthen-transatlantic
84. EEAS: The Diplomatic Service of the European Union, diakses Mei 8, 2025, https://www.eeas.europa.eu/_en
85. Commission sets course for Europe's AI leadership with an ambitious AI Continent Action Plan, diakses Mei 8, 2025, https://ec.europa.eu/commission/presscorner/detail/en/ip_25_1013

86. artificial intelligence - World Bank, diakses Mei 8, 2025, https://www.worldbank.org/en/programs/govtech/artificial-intelligence
87. DIME Artificial Intelligence - World Bank, diakses Mei 8, 2025, https://www.worldbank.org/en/about/unit/unit-dec/impactevaluation/ai
88. US and UK announce new partnership focused on AI security, standards, and R&D, diakses Mei 8, 2025, https://us.fi-group.com/us-and-uk-announce-new-partnership-focused-on-ai-security-standards-and-rd/
89. International cooperation with Canada in research and innovation - European Union, diakses Mei 8, 2025, https://research-and-innovation.ec.europa.eu/strategy/strategy-research-and-innovation/europe-world/international-cooperation/bilateral-cooperation-science-and-technology-agreements-non-eu-countries/canada_en
90. How can governments tap on trade agreements to drive AI safety and governance?, diakses Mei 8, 2025, https://govinsider.asia/intl-en/article/how-can-governments-tap-on-trade-agreements-to-drive-ai-safety-and-governance
91. New strategic partnership for AI in the sciences | EMBL, diakses Mei 8, 2025, https://www.embl.org/news/connections/new-strategic-partnership-for-ai-in-the-sciences/
92. What do we know about China's new AI safety institute? - DigiChina, diakses Mei 8, 2025, https://digichina.stanford.edu/work/what-do-we-know-about-chinas-new-ai-safety-institute/
93. Pledge for a Trustworthy AI in the World of Work - Élysée, diakses Mei 8, 2025, https://www.elysee.fr/emmanuel-macron/2025/02/11/pledge-for-a-trustworthy-ai-in-the-world-of-work
94. International AI Safety Report 2025 - GOV.UK, diakses Mei 8, 2025, https://www.gov.uk/government/publications/international-ai-safety-report-2025
95. International Telecommunication Union (ITU) | Department of Economic and Social Affairs, diakses Mei 8, 2025, https://sdgs.un.org/un-system-sdg-implementation/international-telecommunication-union-itu-56894
96. Deploying digitalisation and artificial intelligence in sustainable development research - Scholarly Commons @CWRU, diakses Mei 8, 2025, https://commons.case.edu/cgi/viewcontent.cgi?filename=0&article=1645&context=facultyworks&type=additional
97. Projects - IndoNLP, diakses Mei 8, 2025, https://indonlp.github.io/projects.html
98. [2203.13357] One Country, 700+ Languages: NLP Challenges for Underrepresented Languages and Dialects in Indonesia - arXiv, diakses Mei 8, 2025, https://arxiv.org/abs/2203.13357
99. Building Efficient and Effective OpenQA Systems for Low-Resource Languages - arXiv, diakses Mei 8, 2025, https://arxiv.org/abs/2401.03590
100. [Literature Review] Building Efficient and Effective OpenQA Systems for Low-Resource Languages - Moonlight, diakses Mei 8, 2025,

https://www.themoonlight.io/review/building-efficient-and-effective-openqa-systems-for-low-resource-languages
101. Chatbots and Multilingual Support: Enhancing User ... - SmythOS, diakses Mei 8, 2025, https://smythos.com/ai-agents/chatbots/chatbots-and-multilingual-support/
102. Fine-Tuning Small Language Models for Indonesian Languages, Trivan Menezes, UG '25 (19115) - Princeton Media Central, diakses Mei 8, 2025, https://mediacentral.princeton.edu/media/Fine-Tuning+Small+Language+Models+for+Indonesian+Languages%2C+Trivan+Menezes%2C+UG+25+%2819115%29/1_nil56g8g
103. Recent developments on AI in federal government institutions | Canada | Global law firm, diakses Mei 8, 2025, https://www.nortonrosefulbright.com/en-ca/knowledge/publications/01b26022/recent-developments-on-ai-in-federal-government-institutions
104. U.S. AI Innovation Stronger with Reasonable Safety Regulations - INHR, diakses Mei 8, 2025, https://inhr.org/responsible-ai-standards/f/us-ai-innovation-stronger-with-reasonable-safety-regulations