



**Citation:** Saleh, Syed Muhammad, and Rasool, Aisha. Global AI Policy and Its Relevance in Pakistan: Laying Down Recommendations for Pakistan to Gain Significant Geo-Political Advantage. Islamabad: Indus Journal of Law and Social Sciences, Vol. III, no. II (Fall 2024).



Cite Us



[https://doi.org/10.70540/ijlss.2024\(III-II\).04](https://doi.org/10.70540/ijlss.2024(III-II).04) -

## Global AI Policy and its Relevance in Pakistan: Laying down Recommendations for Pakistan to Gain Significant Geo-political Advantage

Pages: 1– 12

Vol.III, No.II (Fall 2024)

p- ISSN:3078-3666

e- ISSN:3078-3283

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**Doi:** 10.70540/ijlss.2024(III-II).04

**Doi Link:** [https://doi.org/10.70540/ijlss.2024\(III-II\).04](https://doi.org/10.70540/ijlss.2024(III-II).04)

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**Abstract:** *In a world torn by conflicts mushrooming near the “homeland of the pure” incessantly and tempestuously, the growing fear of its flames reaching out to Pakistan is enough to keep the academics on their toes at least. The fear factor is spiked by the continuous enhancement in AI technologies and its usage in modern warfare, may it be economic, social or combat. This research paper seeks to identify and elaborate policy initiatives taken by global superpowers such as China, United States and the European Union and how their policies have significantly impacted the global geo-political theatre whilst discussing how, can Pakistan learn from these policies and recommend, a roadmap for policymakers in the long journey to integration of AI into Pakistan’s strategic consideration..*

### Keywords:

Artificial Intelligence Policy; AI Governance; Geo-Politics; Pakistan AI Strategy; AI in Defence; Public–Private Partnerships; AI Diplomacy; Global AI Regulation; European Union AI Act; United States AI Policy; China AI Strategy.

## 1. INTRODUCTION

The world, as we know it today, is quickly pacing towards a technology plateau and history for the first time is witnessing a parallel reality standing in its face. With that said, the face of the globe is witnessing a rapid change in its nomenclature with Artificial Intelligence quickly taking over every domain. The global superpowers are in a rush to cope with this alternative reality knocking on its door in the wake of conflicts, sustaining like an anathema injected into an already decaying body. Keeping all these scenarios in mind, the world leadership is in a race to circumscribe the domain of Artificial Intelligence in congruence with one's own ideology and interests, threatening to influence the global geo-politics to a totalitarian system. To put things into context, we need to understand what AI is and how dangerous and harmful it can be if left unregulated and unharnessed<sup>1</sup>. Artificial intelligence networks were first created to comprehend how synapses function within the human brain. With the help of advancements in processing power, more. In the second half of the 20th century, elaborate neural networks were developed to tackle issues like image and voice recognition. According to Gahnberg, the idea that "INTELLIGENCE" is a vague measure of a system's performance and that the main feature, This very phenomena is explicated by the total capacity of an AI system to act as an autonomous establishment in a certain environment. which appears to be intelligence dependent. Problems in the growing regions of the prolific thus have grown significantly. Although AI applications can improve society, they also come with new risks which governments must properly manage and may have unanticipated impacts. Since AI systems learn from data in addition to already programmed rules, they may display unexpected behaviors that could endanger the safety of their users in response to unforeseen circumstances that the system does not have the training to manage and ambiguities in human-machine interactions<sup>2</sup>.

## 2. Artificial Intelligence: A challenge for governance

Because securing data and data-driven organizations from adversary intrusion and exploitation is the "*de riguer*" In terms of present governance, governments around the world are seeing it becoming harder and harder to control the extent and rate of AI deployment. The development and governance of robotics (AI) has significant effects. It can either bring

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<sup>1</sup>Gahnberg, C. (2021). The governance of artificial agency. In Policy and society

<sup>2</sup> He, J., Baxter, S. L., Xu, J., Xu, J., Zhou, X., & Zhang, K. (2019). The practical implementation of artificial intelligence technologies in medicine. *Nature Medicine*, 25(1), 30–36.

our societies into a time of wealth and automated work combined with human intellect and creativity, or it can bring us to a time when computers make it harder for us to establish stable democracies, find jobs, and distinguish between what is true and what is not. This also raises ethical concerns about the commercialization of AI and the healthiness of engaging in what many commentators refer to as the "AI wars," which are based on the business theory that firms are unlikely to emphasize AI safety enough to compete with their rivals. Under many legal frameworks, liability and culpability for harms brought on by the usage of AI applications are still unclear<sup>3</sup> thus it is projected that due to the automation of manual and repetitive tasks in industries like manufacturing, transportation, data analysis, and service, which is made possible by chatbots, machine learning algorithms, and driverless cars, millions of jobs that are not evenly distributed within and between nations could fall short.<sup>4</sup> The tremendous level of confusion and complexity in the AI field makes it difficult for governments to create and execute efficient AI regulations. The nature of AI presents several difficulties because it is a highly unexpected, unsolvable, and nonlinear problem, which makes it hard for governments to establish late, specific goals in their policies<sup>5</sup>.

### **3. Artificial Intelligence in Pakistan: Confronting the Challenge**

The Islamic Republic of Pakistan, though having a very minimal share in the technological sphere of market and industry, is witnessing a tumultuous vicissitude in its geo-political and social landscape, and its primary influence is driven principally by the quick development of technology, especially AI. In order to boost cyber security by facilitating real-time detection and reaction to cyber threats and averting data breaches, the government had planned to create its first AI Policy. The Digital Pakistan Vision, particularly introduces contemporary technology to position the nation for strength, serves as the foundation for the AI policy. In the age of the fourth industrial revolution and data-driven, digitalized governments. This strategy represents a critical turning point in the AI-powered revolution in Pakistan. The strategy emphasizes how crucial it is to use PPPs to promote

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<sup>3</sup>Leenes, R., Palmerini, E., Koops, B. J., Bertolini, A., Salvini, P., & Lucivero, F. (2017). Regulatory challenges of robotics: Some guidelines for addressing legal and ethical issues. *Law, Innovation and Technology*, 9(1), 1–44.

<sup>4</sup>Linkov, I., Trump, B., Poinsette-Jones, K., & Florin, M. V. (2018). Governance strategies for a sustainable digital world. *Sustainability*, 10(2), 440.

<sup>5</sup>Gasser, U., & Almeida, V. A. (2017). A layered model for AI governance. *IEEE Internet Computing*, 21(6), 58–62.

cooperation between the public and private sectors. The approach fosters the useful and productive use of AI, fostering creativity and knowledge-sharing that was lacking within recent legislative actions. In furtherance of pursuing the technological-ideologue that was envisioned, the Digital Nation Act 2025 was promulgated on 29<sup>th</sup> January 2025, in a bid to structure the digital policy into an institutional establishment. The legislature has indeed acted to showcase a strong political intent in the promotion of digital transformation, as seen by the participation of senior government officials in the NDC. With the goal of removing duplications and streamlining processes at all governmental levels, the National Digital Master Plan offers an organized approach to digital activities. The Act must, however, address issues with data protection, decentralization of authority, transparent finance plans, and the protection of digital liberties if it is to be both equitable and effective. To achieve the Act's goals without sacrificing individual rights, it will be essential to engage with civil society, maintain transparency, and incorporate worldwide best practices. For all the seemingly “visionary” approach adopted in these legislative enactments, they are still void of any streamlined road map aiming to enhance the nation’s digital literacy, paramount to the upbringing and sound capitalization of the potential translated into benefit. At present, Pakistan’s enormous potential is stuck in “third gear” due to a lack of considerable backing and ill-preparation in meeting the modern-day requirements which is evident in Pakistan's ranking 98<sup>th</sup> out of 194 countries on the Artificial Intelligence Investment Potential Index. According to Dr. Abid Qaiyum Suleri, who heads the Sustainable Development Policy Institute (SDPI) and is a member of the advisory board of the Asian Development Bank Institute, *“While Pakistan boasts a young, tech-savvy population that could drive AI innovation, there remains a significant skills gap. The workforce largely lacks the specialized training needed to compete globally in AI and data science. Suleri also argues that “the absence of proper infrastructure to capture, store, and process data means that AI applications cannot reach their full potential in the Pakistani context”*<sup>6</sup>. The solution lies in adaptive and resolute measures that are kinetic enough to catapult Pakistan’s potential into the limelight, attracting investment and, resultantly gaining a significant geopolitical advantage in the region.

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<sup>6</sup> Subhani, S. (2025) 'Pakistan’s AI potential stuck in third gear,' The News International, 31 March. <https://www.thenews.com.pk/print/1297009-pakistan-s-ai-potential-stuck-in-third-gear>.

#### **4. The Global Response to Artificial Intelligence: Policy formations and their impact on the current world order**

Like every turnover in history, the advancement in a new spectrum of technology has pushed global powers into a constant race to gain the upper hand in a bid to lead the global platform. So is the case with Artificial Intelligence as well. The fact that Artificial Intelligence is powered by Machine Learning systems, its inherent opacity and unpredictability is becoming an increasing governance concern<sup>7</sup>, endangering the critical technological infrastructure upon which the global ecosystem is reliant for smooth and efficient functioning. The European Union leads the legislative imperative with the enactment of the EU Artificial Intelligence Act 2024, building a comprehensive and well-calibrated document guiding principles for the regulation of Artificial Intelligence. With special emphasis placed on the protection of personal information, asserting the need to circumscribe certain freedoms of the AI's generative and retention capabilities<sup>8</sup> is the mandate of the said act. Furthermore, there are certain guidelines for service providers to provide a clear bifurcation between content whether pictorial or animated, of being original or manipulated or artificially generated. The framework laid down by the European Union is holistically premised on the secure surfacing of artificial technology in the social ecosphere of Europe, and what makes it even more poised and composed in comparison to statutes of other fellow nations is that it is largely bereft of any bureaucratic red-tapism. Charmed by the security imperatives envisioned in the act, investment ventures have seen an exponential rise in the continent post-promulgation of the above said and, the cherry on top, is the European Union's AI Continent Plan which has resulted in a 55 percent rise in investment in the start of 2025 and that too by private venture capitalists<sup>9</sup>. With all of a promising future, a sudden overture of history has changed the dynamics of global trade and politics at a 180-degree angle. This change is powered by the election of Donald Trump as the president of the United States and his imposition of tariffs on almost 57 countries with the bulk of it centred

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<sup>7</sup> Lim, H. S. M., & Taeihagh, A. (2019). Algorithmic decision-making in AVs: Understanding ethical and technical concerns for smart cities. *Sustainability*, 11(20), 5791

<sup>8</sup> Article 50: Transparency obligations for providers and deployers of certain AI systems | EU Artificial Intelligence Act (no date). <https://artificialintelligenceact.eu/article/50/>.

<sup>9</sup> Davies, P. (2025) 'Investment in the EU's AI start-ups is on the rise, but could Trump's trade war threaten that?,' Euronews, 14 April. <https://www.euronews.com/next/2025/04/14/investment-in-the-eus-ai-start-ups-is-on-the-rise-but-could-trumps-trade-war-threaten-that>.

on China. This episode has been marked as the “Trump-China Tariff War” and threatens to spur a crack in the current global economic system.

Now, a question that arises is, how would this Cold War affect the policy on Artificial Intelligence various countries are sustaining, especially when AI itself is the bone of contention between the two global hegemony, i.e. China and the United States, for example. The US is using steps like fiscal protectionism and export limitations on semiconductor chips in an attempt to keep its position as the leader in AI technology and limit China's advances<sup>10</sup>. This worsens technical rivals, messes up AI supply chains, and prevents international agreement on AI governance. For years, artificial intelligence has been a major arena of competition on a global scale, but the emergence of generative AI has raised the ante considerably. Because generative AI can produce original content, including writing, images, and code, it is a disruptive force in a variety of industries, in contrast to traditional AI, which mostly depends on data processing and pattern recognition. The market-driven paradigm used in the United States allows private enterprises to drive innovation with little intervention from the government. This strategy promotes competition, risk-taking by innovators, and venture capital investment, all of which accelerate technical innovation. However, it frequently lacks centralized governance for security and ethical consequences, which can result in issues with misinformation, algorithmic bias, and data privacy. To dive deep into the ideology of the adaptations adopted by the United States for its policy on regulating, a thorough look at the United States Artificial Intelligence Initiative would suffice to complete the picture needed finishing for make a sound understanding of how the US operates in this domain. The United States Artificial Intelligence Initiative, primarily spearheaded by the strategic national response to the revolutionary potential of artificial intelligence is the United States Artificial Intelligence Initiative, which is mainly led by the White House Office of Science and Technology Policy (OSTP) and backed by various government agencies. It encompasses an extensive variety of initiatives and laws designed to protect national interests, guarantee moral AI development, and bolster America's position in AI research. When this Executive Order went into effect in February 2019, it created an integrated strategy to AI leadership and fundamentally changed U.S. AI policy. It encompasses a wide array of policies and. It has five main objectives such as marking

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<sup>10</sup> Khan, J.W.C.M., Jess Zichen Hu, Furqan (2024) OXGS Report | Navigating geopolitics in AI governance. [https://oxgs.org/2024/04/08/oxgs-report-navigating-geopolitics-in-ai-governance/?utm\\_source=chatgpt.com](https://oxgs.org/2024/04/08/oxgs-report-navigating-geopolitics-in-ai-governance/?utm_source=chatgpt.com).

financing for AI innovations a top priority for all federal agencies, opening the door to AI researchers and developers to have access to government datasets and computer resources, empowering and colliding with them. In order to equip American workers and students with the expertise and skills necessary to thrive in an AI-driven economy, Technology and moral standards for the use and assessment of AI will be created by the National Institute of Standards and Technology (NIST). Furthermore, NIST will advocate and support international AI standards that align with American interests and values within groups such as the OECD, G7, and GPAI. The National Institutes of Health (NIH), Department of Energy (DOE), Defense Advanced Research Projects Agency (DARPA), and National Science Foundation (NSF) are key funding agencies<sup>11</sup>. Juxtaposed to the European Union, the United States stands at a lower-ground than the former but since it spear-heads the corporative investment chunk in AI, the perfunctory policy initiative provides makes the legislative landscape somewhat of an un-chartered territory for the government although there are signs of pressing initiatives being perennially as the on-going status-quo warrants as such. In December 2024, Congress released the “Bipartisan House Task Force Report on AI,” streamlining legislative recommendations for Congress to be kept in consideration while regulating advances in AI in the future. The highlight of its recommendations constitutes data-protectionism to obviate any obstacle in the safe custody of critical databases and to limit the causation of any damage that might be irretrievable. The Department of Defence has reiterated with an ambitious vision of upscaling their research on the ever-diversified modules of Artificial Intelligence and to construct and formidable protection mechanism, capable of mitigating any threat arising from the developments in AI. The overall structure of the recommendations is grounded in security and protectionism, though charged with the need of capitalizing on opportunities for innovation and creativity<sup>12</sup>. These measures, resulting from the drastic change in scenarios on the political frontier, have ignited notable changes in the global geopolitica llandscape.

### **5. Strategic Purpose of AI as a tool for deterrence:**

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<sup>11</sup> National Artificial Intelligence Initiative (2022). report.

<https://www.uspto.gov/sites/default/files/documents/National-Artificial-Intelligence-Initiative-Overview.pdf>.

<sup>12</sup> House Bipartisan Task Force on Artificial Intelligence delivers report (2024).

<https://science.house.gov/2024/12/house-bipartisan-task-force-on-artificial-intelligence-delivers-report>.



The way that artificial intelligence (AI) is being integrated into contemporary combat is drastically changing the nature of conflict and restructuring the strategic environment on a regional and worldwide scale. Employing AI technology serves a strategic requirement for Pakistan and goes beyond a simple technological change. This shift not only reflects but also redefines long-standing geopolitical realities, such as its conflict with Afghanistan, its role as a key player in the global War on Terror, its rivalry with India, and its aspirations for regional peace. In an effort to better navigate the unknowns of the 21st-century security landscape, Pakistan is increasingly looking to artificial intelligence (AI) as a tool and perspective. Pakistan's history and location have greatly influenced its strategic culture, which prioritizes deterrence, operational effectiveness, and asymmetrical tactics. This deterrent system has been boosted by AI's contribution to surveillance and reconnaissance, which enables Pakistan to precisely and instantly identify and address threats. However there are numerous challenge in the way of Pakistan's defense industry's use of AI. A significant obstacle is the lack of funding. Pakistan runs the risk of increasing its reliance on foreign technologies in the absence of these initiatives, which could jeopardize its future strategic independence. Cybersecurity is a further significant issue. System sabotage and data tampering are a couple of adversarial assaults that can naturally target AI systems. Building a strong security framework and specialized units to safeguard AI infrastructure is therefore now a top priority requirement rather than an option.<sup>13</sup>

## **6. Policy Recommendations for Pakistan: Roadmap to Geo-political dominance**

Pakistan occupies a very critical position geographically which ultimately lands an inherent dominating role of a regional actor in its basket. The rest of its significance can be gauged by its military might and political influence in the region and beyond. With the incessant advent of Artificial Intelligence as a key factor in geo-politics, Pakistan's developing IT sector and somewhat dwindling governance can grab an opportunity to fill the regional void of key technological players in Artificial Intelligence, granting palpable geo-political distinction. These are as follows:

### **6.1 Formation of Public-Private Industry linkages**

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<sup>13</sup><https://valdaiclub.com/a/highlights/strategic-implications-and-regional-dynamics-of-ai/>



Pakistan's Digital Economy (specifically its share in the AI market) is set to be valued at around 861.12 million in 2025<sup>14</sup>. This potential is gauged by course changing measures taken by its domestic market, drastically treading towards digital platforms in a bid to counter employment and financial issues. Pakistan's digital economy totals around 15 billion dollars with the amount suggestive of a welcoming increment of up to 150 billion dollars by 2035<sup>15</sup>. Pakistan can capitalize on this magnanimous potential in a bid to seek FDI from countries looking for a marketplace after being hit by the ongoing global trade war. The landscape is open to further technological innovations, especially in the field of health, education, industry and cyber-security<sup>16</sup>. Governmental advent of public-private partnerships vis-à-vis installation of small and medium tech enterprises with financial incentives and investment attracted from various local investors through an integrated national economic policy will exponentially increase Pakistan's tech infrastructure and provide security to foreign investors.

## **6.2 Talent Export and Brain Gain through AI**

Pakistan can consolidate its position as a regional hub for talented professional installations in Artificial Intelligence by encouraging return of Pakistani Diaspora and constructing a diverse array of special engagement platforms aimed at inter-connectivity between local talent with the expats and by offering lucrative incentives primarily focused at fast track visas, security and protection which would further enable Pakistan in harnessing a sound eco-system for accumulating considerable amount of a technological prowess in the region. A nearby example is China's "A Thousand Talents Program", aimed at recruiting high-level experts in science and technology from abroad among the Chinese diaspora living in different parts of the world<sup>17</sup>.

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<sup>14</sup> Statista (no date) Artificial Intelligence - Pakistan | Market forecast.

<https://www.statista.com/outlook/tmo/artificial-intelligence/pakistan>.

<sup>15</sup> Sattar, A. (2025) 'Pakistan's digital leap: trillion-dollar opportunity,' Brecorder, 22 April.

[https://www.brecorder.com/news/40358813#:~:text=Pakistan's%20digital%20economy%20\(DE\)%20has,%2412%E2%80%9315%20billion%20in%202023](https://www.brecorder.com/news/40358813#:~:text=Pakistan's%20digital%20economy%20(DE)%20has,%2412%E2%80%9315%20billion%20in%202023).

<sup>16</sup> AI investment trends 2025: Beyond the bubble | J.P. Morgan Asset Management (no date).

<https://am.jpmorgan.com/se/en/asset-management/per/insights/market-insights/investment-outlook/ai-investment/>.

<sup>17</sup> Jia, H. (2018) 'China's plan to recruit talented researchers,' Nature, 553(7688), p. S8.

<https://doi.org/10.1038/d41586-018-00538-z>.

### **6.3 AI Diplomacy**

Engage in talks and resolutions on AI that are driven by the United Nations. The UN General Assembly passed the first resolution on AI, focusing on the development of safe and egalitarian AI. By designating specialized AI representatives to speak on Pakistan's behalf at the UN forum, Pakistan can help create international AI regulations that take developing countries' interests into account. To work together on responsible AI development, apply to join GPAI (Global Partnership on Artificial Intelligence). To close the gap between AI theory and practice, GPAI brings together specialists from a variety of fields. Participate in the working groups of GPAI to exchange ideas and gain knowledge about international best practices. Organize GPAI-related events to highlight Pakistan's progress in AI.

#### **Conclusion:**

The ethical and legal implications of AI in military applications pose considerable challenges. The use of autonomous weaponry raises issues regarding accountability and compliance with international humanitarian laws. Pakistan recognizes these issues, as shown by its support for global norms on military artificial intelligence. Pakistan aims to promote responsible AI use while maintaining national security through its participation in international dialogues.

For Pakistan, integrating AI into its defense strategies marks a pivotal transition that boosts deterrence, enhances operational efficiency, and supports unconventional strategies. As the nature of warfare changes, Pakistan needs to evolve to sustain its position both regionally and globally. AI presents an opportunity to achieve strategic equality with its opponents and facilitate a future characterized by stability and sovereignty.

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