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To

Ministry of Information Technology and Telecommunication (MoITT)

Pakistan

Subject: Comments on the Draft National Artificial Intelligence Policy

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It is important to note that the statements provided by Dr. Ammar Younas represent his personal views and do not necessarily reflect the opinions of the organizations to which he is or was affiliated collectively.

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In his capacity as an independent technology law expert, Dr. Ammar presents these observations to Pakistan's Ministry of Information Technology and Telecommunication (MoITT) concerning the published draft of the National Artificial Intelligence Policy, commonly known as the 'Draft AI Policy'.

Dr. Ammar acknowledges the scope of the Draft AI Policy, which aims to create a comprehensive AI ecosystem in Pakistan, covering aspects such as awareness, skill development, standardization, and ethical use. While he recognizes the policy as a commendable starting point, he also identifies several areas where *potential improvements* can be made.

Dr. Ammar highlights an observation regarding the Draft AI Policy, which appears to *primarily focus* on conceptualizing *the current state of AI*. However, he emphasizes the need to consider the future of AI development, encompassing both technical advancements and governance aspects. While the policy lays a foundation for the existing AI landscape, it is essential to anticipate the emergence of new tools, technologies, and challenges that will shape the future trajectory of AI. Therefore, his comments primarily revolve around addressing the future-oriented aspects of AI development, encompassing technical advancements, ethical considerations, and robust governance frameworks.

Embracing Long-Term Relevance and Transformation

It is essential to acknowledge that AI represents a rapidly evolving field, with new technologies and advancements emerging frequently. As we draft policies related to artificial intelligence, it is crucial to consider their long-term relevance and adaptability to future developments of AI and New Innovation Technologies.

In light of this understanding, it is recommended that the policy framework be designed with flexibility and scalability in mind. Instead of focusing solely on current AI technologies, the policy should establish a foundation that can accommodate future innovations and advancements. This can be achieved by incorporating principles and guidelines that are adaptable and future-proof, enabling the policy to remain relevant and effective as new technologies emerge.

By adopting a forward-thinking and adaptable approach, we can develop an AI policy that not only addresses the current landscape but also remains responsive to future developments. This will enable us to harness the full potential of AI technologies while effectively addressing emerging challenges and opportunities.

Dr. Ammar Younas urges the Ministry of Information Technology and Telecommunication (MoITT) to diligently implement the 4th Pillar of the National AI Policy, which

focuses on Transformation & Evolution. As outlined in the draft, this pillar aims to establish sector-specific roadmaps, incorporating governance measures, to facilitate the necessary progression towards widespread AI adoption. The draft also identifies key interventions, such as industrial transformation and sandboxing, to expedite this process. Additionally, this pillar addresses challenges pertaining to awareness and adaptation (G1) as well as data standardization and accessibility (G2).

Dr. Ammar underscores the significance of proactively responding to the evolving landscape and demands within this pillar. He emphasizes the need to embrace change and adapt accordingly, recognizing the substantial historical opportunities presented in the field of artificial intelligence. By diligently monitoring and analyzing global development trends, we can effectively strategize and align our efforts to lead the emerging AI trends on a global scale. This proactive approach not only fuels economic and social development but also contributes to national security, propelling a significant leap in our country's competitiveness.

Outlined below are some situations that exemplify the importance of addressing these aspects:

1. Pakistan's Artificial Intelligence Ethics Principles: Ensuring Safe, Secure, and Reliable AI"

The Draft AI Policy of Pakistan recognizes the significance of ethical AI utilization but lacks detailed explanations regarding the criteria and boundaries for its application. Additionally, it ***overlooks*** *the considerations related to the ethical production of AI hardware and software. Furthermore, It doesn't provide any guidance on how moral values should be integrated into AI systems, specifically in terms of determining the type of morality that should be installed to enable autonomous decision-making.*

In the current draft of the policy, ethical challenges related to artificial intelligence are mentioned under the broader category of market challenges. *However, Dr. Ammar Younas emphasizes the* ***need for a separate and dedicated pillar*** *within the National AI Policy specifically focused on addressing the ethical challenges arising from AI.*

Ethical considerations are of utmost importance in the development and deployment of artificial intelligence technologies. As AI continues to advance and become increasingly integrated into various aspects of society, it brings forth a range of ethical implications and concerns. These include issues such as privacy, bias, transparency, accountability, and the overall societal impact of AI systems.

By establishing a separate pillar dedicated to ethics, the policy can provide comprehensive guidance and frameworks to navigate these complex ethical challenges. This pillar should encompass guidelines, principles, and best practices

that ensure responsible and ethical AI development, deployment, and use.

The dedicated ethical pillar should address various aspects, including the establishment of ethical standards and frameworks for AI systems, guidelines for data privacy and security, mechanisms for addressing algorithmic bias and fairness, frameworks for ensuring transparency and explainability of AI systems, and mechanisms for accountability and responsible AI governance.

It is crucial to highlight that the incorporation of AI ethics within the National AI Policy is not only a concern specific to Pakistan but a global imperative. Countries worldwide are recognizing the significance of addressing ethical challenges associated with AI and are incorporating them into their policy frameworks.

Examples from other countries, such as China's implementation of ethical principles for AI in various domains, further highlight the importance of considering case-specific ethical principles. China's initiatives, such as ethical principles for AI targeting children, sustainable development, and military use, exemplify how specific ethical frameworks can be developed to address diverse contexts and applications.

By including a dedicated pillar on AI ethics within the National AI Policy, Pakistan would align itself with international best practices and demonstrate its commitment

to responsible AI development. It would also ensure that ethical considerations are given due importance and are integrated into the core framework of AI adoption.

Under this new pillar of Ethical AI, Pakistan should introduce its own ethical AI principles named as **"Pakistan's Artificial Intelligence Ethics Principles"** which should be designed to ensure AI is safe, secure and reliable.

2. Achieving Global Recognition: Pakistan's Commitment to Enhancing Its Rating in International AI Indexes and Rating Systems

Pakistan should strongly consider incorporating into its Draft AI Policy a commitment to enhancing its rating and standing in international indexes and rating systems related to artificial intelligence (AI). By explicitly stating this objective, Pakistan can demonstrate its dedication to continuous improvement, competitiveness, and recognition in the global AI landscape.

Acknowledging the significance of international indexes and ratings in assessing AI capabilities, progress, and readiness, Pakistan can set a clear aim to elevate its position within these assessments. This can be achieved through concerted efforts to enhance various dimensions of AI development, including research and development investments, talent acquisition and retention, policy and

governance frameworks, infrastructure development, and industry collaboration.

By actively participating in and leveraging the insights provided by reputable international indexes, such as the Global AI Index published by Tortoise Media, the AI Index by Stanford University's Institute for Human-Centered Artificial Intelligence (HAI), the Global AI Talent Index developed by the World Intellectual Property Organization (WIPO), the AI Readiness Index created by Oxford Insights, and the AI Ethics Index developed by The Ethics Institute, Pakistan can benchmark its AI progress against global standards and identify areas for growth and improvement.

Furthermore, *striving to improve its rating in international indexes and rating systems will not only enhance Pakistan's visibility and recognition in the global AI community but also attract investment, collaboration, and partnerships with international stakeholders*. It will demonstrate Pakistan's seriousness in fostering an enabling environment for AI innovation and its aspirations to become a competitive player on the global AI stage.

By including this commitment in the national AI policy, Pakistan can establish a framework that promotes accountability, transparency, and progress assessment at the local level. The policy will provide a mechanism to monitor and evaluate the extent to which different ministries and sectors embrace AI, allowing for an effective assessment of their AI readiness, implementation, and impact.

Through the evaluation process, the policy will identify areas where specific departments and ministries can improve their AI adoption, utilization, and proficiency. It will serve as a tool to identify best practices, share knowledge, and foster collaboration among government entities.

In conclusion, Pakistan should include in its Draft AI Policy a clear commitment to enhancing its rating in international indexes and rating systems. By setting this objective and implementing targeted strategies to improve its AI capabilities, Pakistan can position itself as a leading player in the global AI landscape, fostering innovation, attracting investment, and reaping the social and economic benefits of AI advancements.

3. Promoting Sustainable AI: Addressing Energy Consumption and Environmental Impact in Pakistan's AI Policy

In light of Pakistan's energy crisis and the growing concerns related to the technical aspects and energy consumption of AI systems, it is imperative to address these issues in the national AI policy. *The impact of AI technologies, particularly large-scale language models, on carbon footprints, increased energy consumption, and*

excessive water usage for cooling servers has been well-documented in scientific literature.

Recognizing the significance of sustainable production and use of AI, Pakistan should proactively incorporate measures to promote environmentally responsible practices within its AI policy framework. This includes encouraging the development and adoption of energy-efficient AI models, algorithms, and computing infrastructure.

One approach could be the establishment of guidelines and standards that encourage the optimization of AI models for energy efficiency without compromising performance. This can involve incentivizing research and development efforts focused on developing energy-efficient algorithms and architectures, as well as promoting best practices for training and deployment of AI models that minimize energy consumption.

Additionally, *the policy can encourage the adoption of sustainable data center practices to reduce the environmental impact associated with AI infrastructure. This may include measures such as implementing efficient cooling systems, exploring renewable energy sources for powering AI systems, and promoting responsible data management practices to minimize unnecessary storage and processing requirements.*

Collaboration between the government, industry stakeholders, and research institutions can play a crucial

role in advancing sustainable AI practices. Encouraging partnerships and knowledge sharing can facilitate the exchange of expertise and experiences, enabling the development and adoption of sustainable AI technologies tailored to Pakistan's specific needs and challenges.

Furthermore, the policy should address the importance of ongoing monitoring, evaluation, and reporting of energy consumption and environmental impact associated with AI systems. By collecting empirical data and fostering transparency, policymakers can gain insights into the environmental implications of AI adoption and make informed decisions to mitigate any negative effects.

By incorporating provisions for promoting sustainable production and use of AI within the national AI policy, Pakistan demonstrates its commitment to addressing the energy crisis and minimizing the environmental impact of AI technologies. Such measures not only contribute to the country's sustainability goals but also position Pakistan as a responsible player in the global AI community, encouraging innovation and collaboration towards a more sustainable future.

4. Promoting International Collaboration in AI Governance: A Crucial Dimension for Pakistan's Draft AI Policy

The Draft AI Policy of Pakistan recognizes the significance of international collaboration in AI-based research and innovative solutions as a means to enhance AI proliferation

within the country. While this emphasis on technical AI development is commendable, ***it is important to highlight the need for international collaboration to extend beyond technical aspects and encompass AI governance as well.***

AI governance plays a crucial role in ensuring that AI technologies are developed, deployed, and utilized in a responsible and ethical manner. It encompasses areas such as policy frameworks, legal regulations, ethical guidelines, transparency, accountability, and public engagement. By incorporating international collaboration in AI governance, Pakistan can benefit from the experiences, best practices, and expertise of other countries and international organizations.

Engaging in international collaboration related to AI governance will allow Pakistan to gain valuable insights into effective governance models, regulatory approaches, and ethical frameworks. It will help in understanding and addressing the complex challenges associated with AI, including privacy concerns, algorithmic bias, transparency, and societal impact. By learning from global experiences and engaging in knowledge sharing, Pakistan can develop robust governance mechanisms tailored to its specific context and needs.

Furthermore, international collaboration in AI governance can foster partnerships with international organizations, academic institutions, and industry experts. These partnerships can contribute to capacity building, knowledge transfer, and the establishment of networks that facilitate

the exchange of ideas, research collaborations, and policy development. Such collaborations can also enhance Pakistan's credibility and visibility in the global AI community, opening doors for further opportunities and collaborations.

Incorporating the importance of international collaboration in AI governance into the Draft AI Policy of Pakistan will demonstrate a holistic approach to AI development. It will emphasize the recognition that technical advancements in AI must go hand in hand with strong governance frameworks to ensure responsible and beneficial use of AI technologies. By actively engaging in international collaboration in AI governance, Pakistan can leverage global expertise, enhance its governance capabilities, and establish itself as a responsible player in the global AI landscape.

Two practical suggestions can be considered to enhance international collaboration in AI governance.

1: To effectively address potential criticism from western think tanks, it is crucial for Pakistan to adopt a glocalized approach. This entails leveraging global guidelines while simultaneously tailoring them to suit local priorities, standards, and preferences. By striking a balance between international best practices and local needs, Pakistan can ensure that the AI policy is not only aligned with global trends but also caters to the unique requirements and aspirations of our nation. An example of it is “Pakistan’s AI Ethics Principles” mentioned above.

2: Considering China's prominent position as a global leader in artificial intelligence and its friendly relations with Pakistan, there are valuable lessons we can learn from China's experience. China has encountered similar challenges, including criticism of its policies on the grounds of lacking democratic principles and human rights. However, it has demonstrated that by establishing local mechanisms, formulating well-crafted policies, and enacting appropriate regulations and laws, significant progress can be achieved. Hence, if Pakistan seeks to adopt or learn from any nation's advancements in AI, China serves as an exemplary model due to its proven success in leveraging local resources and expertise to drive AI research and development.

Conclusion

Dr. Younas believes that these recommendations would help to ensure that the Draft AI Policy is successful in achieving its goals.

- The National AI Policy should include a dedicated pillar focused on Ethical AI, encompassing the integration of "Pakistan's AI Ethics Principles".
- A regulatory framework should be established to address sustainable AI practices, including considerations of energy consumption and environmental impact.
- The promotion of international collaboration in AI governance should be emphasized, along with the

inclusion of projects specifically related to the governance of AI.

We commend the Ministry of Information Technology and Telecommunication (MoITT) for taking the initiative to develop a National AI Policy for Pakistan. We are pleased to offer our humble input and are available for further discussions on these thoughts, if required.

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