

ERGO

Analysing developments impacting business

INDIA AI REPORT 2023

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On 14 October 2023, the Ministry of Electronics and Information Technology (MeitY) published the IndiaAI Report 2023 (Report). The Report is a collaboration of seven working groups which provided practical considerations and recommendations on India's artificial intelligence (AI) ecosystem. The aim is to make 'governance smarter and more data-led'. According to the Report, AI is expected to add USD 967 billion to the Indian economy by 2035 and USD 450-500 billion to India's GDP by 2025 (10% of the country's USD 5 trillion GDP target). The Report builds upon the already existing initiatives such as the Draft National Data Governance Policy 2022, to augment a nationwide AI ecosystem.

India has a mission-centric approach towards building a national AI ecosystem, with the objective of 'AI for All'. The Report is an important development in laying out the infrastructure and recommendations for this ecosystem. Recent measures undertaken by the Government in this domain have placed India at the fifth spot, globally, in the value of private investment in AI and in the number of newly funded AI companies, in the Stanford AI Index Report 2023. In this Ergo, we provide a brief summary of the proposals of the seven working groups towards establishing the AI ecosystem.

Working Group 1 | Centres of Excellence

It is proposed that Centres of Excellence (COEs) will be set up and shall comprise of experts from academia, industry, and research entities to develop scalable solutions across sectors. Working Group 1 has laid down the principles of governance of operational aspects of three proposed COEs. They will focus on one or multiple economic or social sectors such as FinTech, healthcare, etc. The role of COEs will be to set priorities and agendas for AI and to identify key challenges and opportunities. The Report lays down principles such as autonomy and self-sustainability. The aim is to conduct foundational research including on computer robotics, machine learning, etc. It is envisaged that the COEs will be set-up as a 'Hub & Spoke' model.

Working Group 2 | India Dataset Platform

The Report defines datasets as 'structured collections of data that are organised and presented in a specific format or structure. Such datasets consist of individual data points or records that are related to a particular subject or domain.' The datasets can be of various types such as including numbers, texts, metadata, etc. Datasets are key in training and developing AI models. Hence, it is imperative that high-level datasets are acquired and utilised to develop AI models that can solve complex issues across domains. The Report envisions taking active steps within Government ministries to identify and utilise existing data and set clear expectations towards their priorities and objectives. It is imperative that this is handled ethically and not in breach of citizens' privacy. For this, instead of a central

data repository, a federated approach has been proposed wherein data remains distributed across multiple independent systems or organisations.

Working Group 3 | Institutional Capacity and Design of NDMO

In 2022, the MeitY had released the Draft National Data Governance Policy (NDGP). The NDGP provides a framework for data collection, management, processing, storage, and access processes and systems through the National Data Management Office (NDMO).

NDMO will be set up as an independent institution by the MeitY as per Section 6 of the NDGP. The functions of NDMO include: (i) data integrity and audit; (ii) data management; and (iii) data regulation. The Report also provides a draft order that lays down the tenure and appointment in the NDMO. Essentially, NDMO is envisaged to be a government body responsible for policies, guidelines, rules and standards related to data management in the whole of the government ecosystem. For the initial rollout, timelines for rules, guidelines and standards are envisaged under the Report.

Working Group 4 | IndiaAI Future Design

'IndiaAI Future Design' is a scheme envisaged for startups. The intent is to design and develop funding mechanisms for AI startups and ecosystem development. The Report lays down key stakeholders in the AI startup ecosystem and they are: (i) data; (ii) infrastructure; (iii) knowledge / expertise; (iv) funding; (v) industry; and (vi) procurement.

It is proposed that the scheme may focus on three priority sectors, i.e., (i) governance (digital public infrastructure); (ii) healthcare; and (iii) agriculture. Applications will be open for five years from 1 July 2023 and will be assessed and appraised on an ongoing basis. The Report lays down the governing mechanism and approval structure of the scheme as well.

Working Group 5 | IndiaAI FutureSkills

In the recent years, AI has become more sophisticated than ever with limitless possibilities. Users are generally not aware that they are interacting with an AI system. This working group emphasises on the need for systematic upskill and training for high-end research and development. The Report suggests a model curriculum and repository, collaborative and competitive ecosystem across educational institutions, upskilling and collaborative efforts in startups and MSMEs, research fellowships, etc.

With this view in mind, the Report envisages a framework where AI development in various sectors such as healthcare, finance, etc., will require efforts from both AI enablers and end-users. The aim is to create a talent pool and skilled contributors.

Working Group 6 | IndiaAI Future Labs Compute

The Report addresses the computing technology required to develop AI effectively in India (i.e., AI computing systems). AI computing systems include hardware and infrastructure, as well as software including cloud structure to analyse, process and store AI applications. The National Supercomputing Mission (NSM) is a key initiative in developing computing capacity, however, the Report envisions further development in this area. A three-tier structure is proposed which includes both training and inference for deployment of AI resources. Here as well, data structures play a key role in setting up of these structures. The pricing model like the India Dataset Platform, is proposed to be a 'pay-as-you-go' model.

India's population has a strong startup ecosystem and digital footprint in a rapidly growing economy. Technologies such as PARAM Siddhi, India's fastest supercomputers specifically designed for AI applications, are already introduced. The Report proposes a nation-wide AI infrastructure as there are challenges in the current framework. These challenges include but are not limited to: (i) accessibility; (ii) costs; (iii) data privacy and security; and (iv) skilled workforce. The Indian Government has taken various initiatives towards developing an AI

computing ecosystem, such as the National AI strategy and private sector AI investments, telecommunications maturity, access to various international supply chains, and so on.

Working Group 7 | Semicon IndiaAI Chipsets

AI chipsets have implications across various sectors. To quote the Report, "In healthcare, it provides image analysis and diagnostic tools. In autonomous vehicles, it enables rapid and accurate perception of the environment. In financial services, AI chipsets facilitate fraud detection and algorithmic trading. Moreover, they contribute to advancements in natural language processing, recommendation systems, and robotics".

The Report lays down design approaches for AI chips, for enhancing performance of novel architectures. AI chips are used across applications and industries such as for autonomous vehicles, cloud computing and data centres, and so on. The Report also analyses and proposes criteria for assessing AI hardware and software.

Comment

The Report is a key development in the technology and data protection sector, as it proposes a nation-wide structure of AI advancement in India. Some key initiatives and schemes are already in force. The Government will have access to vast data generated by different entities, organisations and even citizens, and with the enactment of the Digital Data Protection Act, 2023 (DPDP Act) and with the 'Digital India Act' around the corner, it will be interesting to see how the Government develops the AI landscape. Data privacy and ethical usage of AI also play a key role in protecting the sanctity of the AI structures.

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