

GOVERNMENT OF INDIA
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY
RAJYA SABHA
STARRED QUESTION NO. *60
TO BE ANSWERED ON: 07.02.2025

CURRENT STATUS OF AI HARDWARE INFRASTRUCTURE

***60 SHRI KARTIKEYA SHARMA:**

Will the Minister of Electronics and Information Technology be pleased to state:

- (a) the current status of Artificial Intelligence (AI) hardware infrastructure in the country and the future plans to enhance it under the IndiaAI Mission, the details thereof;
- (b) the delivery schedule for 10,000 GPUs to be procured under the mission, and their utilization to advance AI research and development, the details thereof; and
- (c) the projections for skilled workforce required in the next two years and the steps being taken to address the current workforce gap in the AI sector, the details thereof?

ANSWER

MINISTER FOR ELECTRONICS AND INFORMATION TECHNOLOGY
(SHRI ASHWINI VAISHNAW)

- (a) to (c): A Statement is laid on the Table of the House.

**STATEMENT REFERRED TO IN THE REPLY TO RAJYA SABHA STARRED
QUESTION NO. *60 FOR 07.02.2025 REGARDING CURRENT STATUS OF AI
HARDWARE INFRASTRUCTURE**

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(a) to (c): The Government of India is committed to establishing a robust and inclusive AI ecosystem, aligning with the Hon'ble Prime Minister's vision to democratize the use of technology.

India is regarded as the skills capital in technology and Artificial Intelligence. The most reliable rankings in AI place India among the top countries with AI skills, AI capabilities, and policies to use AI.

Stanford University has ranked India among the top four countries in the Global and National AI vibrancy ranking based on 42 indicators.

GitHub, which is a community of developers has ranked India at the top with the global share of 24% of all projects.

As per the NASSCOM report "Advancing India's AI skills" published on August 2024, the AI talent in India is expected to grow from 6 lakh – 6.5 lakh professionals to more than 12.5 lakh professionals over the years 2022- 27 at a 15 percent CAGR.

The Ministry of Electronics and Information Technology (MeitY) has taken significant steps to enhance the AI hardware infrastructure and to address rising demand for professionals in AI, such as:

i). IndiaAI Mission: Union Cabinet led by Hon'ble Prime Minister has approved the IndiaAI Mission on 7th March 2024, a strategic initiative to establish a robust and inclusive AI ecosystem that aligns with the country's development goals. This mission is driven by a vision to position India as a global leader in artificial intelligence by focusing on following seven foundational pillars:

i). IndiaAI Compute Capacity: The IndiaAI compute pillar envisions building a high-end scalable AI computing ecosystem comprising AI compute infrastructure of 10,000 or more Graphics Processing Units (GPUs).

Towards this, IndiaAI Independent Business Division (IBD) published a Request for Empanelment (RFE) on August 16, 2024, to empanel AI services on cloud including GPUs. 19 bidders had submitted proposals to empanel their AI cloud services, out of which 10 bidders qualified for financial bid opening.

Against the target of 10,000 GPUs outlined in the IndiaAI compute pillar, technically qualified bidders have submitted 18,693 GPUs for empanelment. It may also be noted that 15,120 of the proposed GPUs for empanelment include high precision GPUs.

Out of 18,693 GPUs offered, 14,461 GPUs are already installed on the bidder's infrastructure and are available for immediate use. Additionally, there is further GPU capacity available with the bidders who were not technically qualified.

The prices quoted by the bidders are highly competitive and average discount from market prices for all GPUs is 42 %. Average discount from market prices for higher precision GPUs is 47%. Average rate per GPU is ₹115.85/hour and average rate per higher precision GPU is ₹150/hour.

To keep pace with the changes in technologies, IndiaAI enabled a continuous empanelment process inviting fresh proposals from the empaneled agencies for onboarding new GPUs and discovering any revised rates.

ii). IndiaAI Innovation Centre (IAIC): The AI Innovation Centre aims to develop and deploy indigenous Large Multimodal Models (LMMs) trained on India-specific data. A Call for Proposals has been launched under this pillar to support the development of foundational AI models, inviting startups, researchers, and entrepreneurs to collaborate

on creating state-of-the-art AI models using Indian datasets. This initiative aims to establish indigenous AI models, which can be Large Multimodal Models, Large Language Models (LLM), or Small Language Models (SLM), to address India-specific challenges across various sectors.

- iii). **IndiaAI Datasets Platform:** The IndiaAI Datasets Platform (IDP) seeks to enhance access, quality, and utilization of public sector datasets to make them AI-ready. The IDP aims to function as a unified data platform, integrating datasets from all existing data platforms as well as onboarding non-government data contributors and providing new-age AI-centric features.
- iv). **IndiaAI Application Development Initiative:** The IndiaAI Application Development Initiative aims to develop, scale, and promote the adoption of impactful AI solutions to effectively tackle significant problem statements.

IndiaAI Innovation challenge was launched on 13th August 2024 for the themes of healthcare, agriculture, improved governance, climate change & disaster management and assistive technologies for learning disabilities. The Innovation Challenge was open to Indian innovators, startups, non-profits, students, academic/R&D organizations, and companies. A total of 900 applications have been received across the five focus areas.

IndiaAI also launched the ‘CyberGuard AI Hackathon: Cybercrime prevention’ in collaboration with the Indian Cybercrime Coordination Centre (I4C). Participants were expected to develop sophisticated AI solutions leveraging Natural Language Processing (NLP) models that can be used to analyse, classify, and improve the accuracy of citizen-reported cybercrime incidents on NCRP (National Cybercrime Report Portal).

- v). **IndiaAI FutureSkills:** IndiaAI FutureSkills Pillar envisions to augment the number of graduates, post-graduate and PhDs in AI domain. Further, it envisions setting up Data and AI Labs in Tier 2 and Tier 3 cities across India, to impart foundational-level courses in Data and AI.

. IndiaAI fellowships are being awarded annually to 400 B.Tech and 500 M.Tech students working in AI domain from All India Council for Technical Education (AICTE) recognized engineering institutions.

IndiaAI has established IndiaAI Data Lab in National Institute of Electronics & Information Technology (NIELIT’s) Delhi centre and ICET, Nagaland. Additionally, IndiaAI in collaboration with NIELIT plans to establish 27 data labs in Tier 2 and Tier 3 cities across the country, details of which are placed at Annexure I.

- vi). **IndiaAI Startup Financing:** IndiaAI Startup Financing pillar is to provide support to AI startups at all stages. Multiple rounds of stakeholder consultations have been held to deliberate on the scheme for supporting AI Startups at pre-seed, seed and growth stage.
- vii). **Safe & Trusted AI:** This pillar enables the implementation of Responsible AI projects including the development of indigenous tools and frameworks, self-assessment checklists for innovators, and other guidelines and governance frameworks. Eight Responsible AI projects have been selected to address the need for robust guardrails to ensure the responsible development, deployment, and adoption of AI technologies. The projects cover a range of critical themes, including Machine Unlearning, Synthetic Data Generation, AI Bias Mitigation, Ethical AI Frameworks, Privacy-Enhancing Tools, Explainable AI, AI Governance Testing, and Algorithm Auditing Tools. The details of the selected projects are given at Annexure II.

ii). AI Research, Analytics and Knowledge Dissemination Platform (AIRAWAT): MeitY along with CDAC has implemented the project on AIRAWAT (AI Research, Analytics and Knowledge Dissemination Platform) for providing a common compute platform for AI research and knowledge assimilation. This AI computing infrastructure is being used by all technology innovation hubs, research labs, scientific communities, industry and start-ups, and institutions with National Knowledge Network.

The 200 AI Petaflops AIRAWAT PoC (40 Nodes or 320 A100 GPUs) integrated with 210 AI Petaflops of PARAM Siddhi - AI (42 Nodes or 336 A100 GPUs) has been ranked 75th in Top500 List in year 2023, putting India among top supercomputing league.

iii). National Supercomputing Mission (NSM): The Government of India launched the National Supercomputing Mission (NSM) in 2015 to build indigenous capacity for high-end supercomputing systems, and reduce dependency on foreign technologies.

Under NSM, an aggregate of 1132 GPUs are under various stages of commissioning with the largest being PARAM RUDRA 20PF system at C-DAC Bangalore with 640 GPUs and next to it the 400 GPU AI facility at IIT Delhi.

iv). FutureSkills PRIME: MeitY and NASSCOM have collaborated to upskill the professionals through FutureSkills Prime programme. The programme is aimed at re-skilling/up-skilling of IT professionals in 10 new/emerging technologies namely Artificial Intelligence, Big Data Analytics, Robotic Process Automation, Additive Manufacturing/ 3D Printing, Cloud Computing, Social & Mobile, Cyber Security, Augmented/Virtual Reality, Internet of Things and Blockchain. Besides the online mode, 40 centres of CDAC and NIELIT are also implementing the Blended Learning mode, Training of Trainers, and Government Official training programmes. So far, 8.65 Lakh candidates have enrolled/trained in various courses. Out of these, 4.34 lakh+ candidates have successfully completed their courses, which includes 1.68 lakh+ candidates who have completed training in AI and Big Data Analytics. Currently, the platform offers 157 courses in AI and Big Data Analytics. In addition, C-DAC/NIELIT Centres have trained 2,994 GoT trainers in AI under the programme.

v). YuvAi initiative for Skilling and Capacity Building: MeitY has collaborated with the All-India Council for Technical Education (AICTE) and Meta, to launch the “YuvAi initiative for Skilling and Capacity Building”. This program aims to bridge the AI talent gap in the country by empowering students and young developers aged 18-30 to leverage open-source large language models (LLMs) to address real-world challenges. It aims to build capacity in generative AI skills, utilizing open-source LLMs while fostering AI innovation across key sectors. This goal is to train numerous developers, and entrepreneurs, contributing significantly to India’s AI ecosystem across critical sectors such as healthcare, education, agriculture, smart cities, and financial inclusion.

List of Data & AI labs planned by IndiaAI in collaboration with NIELIT in Tier 2 and Tier 3 cities across the country:

S.No.	NIELIT Centre	State/UT
1	Itanagar	Arunachal Pradesh
2	Tezpur	Assam
3	Guwahati	Assam
4	Silchar	Assam
5	Patna	Bihar
6	Buxar	Bihar
7	Muzaffarpur	Bihar
8	Kurukshetra	Haryana
9	Shimla	Himachal Pradesh
10	Srinagar	J&K
11	Jammu	J&K
12	Ranchi	Jharkhand
13	Calicut	Kerala
14	Leh	Ladakh
15	Aurangabad	Maharashtra
16	Imphal	Manipur
17	Shillong	Meghalaya
18	Aizawl	Mizoram
19	Kohima	Nagaland
20	Bhubaneswar	Odisha
21	Ropar	Punjab
22	Bikaner	Rajasthan
23	Gangtok	Sikkim
24	Agartala	Tripura
25	Gorakhpur	Uttar Pradesh
26	Lucknow	Uttar Pradesh
27	Haridwar	Uttarakhand

The details of the selected projects under “Safe & Trusted AI” Pillar are as under:

NAME OF THE THEME	SELECTED APPLICANT	TITLE OF THE PROJECT
Machine Unlearning	IIT Jodhpur	Machine Unlearning in Generative Foundation Models
Synthetic Data Generation	IIT Roorkee	Design and Development of Method for Generating Synthetic Data for Mitigating Bias in Datasets; and Framework for Mitigating Bias in Machine Learning Pipeline for Responsible AI
AI Bias Mitigation Strategy	National Institute of Technology Raipur	Development of Responsible Artificial Intelligence for Bias Mitigation in Health Care Systems
Explainable AI Framework	DIAT Pune and Mindgraph Technology Pvt. Ltd.	Enabling Explainable and Privacy Preserving AI for Security
Privacy Enhancing Strategy	IIT Delhi, IIIT Delhi, IIT Dharwad and Telecommunication Engineering Center (TEC)	Robust Privacy-Preserving Machine Learning Models
AI Ethical Certification Framework	IIIT Delhi and Telecommunication Engineering Center (TEC)	Tools for assessing fairness of AI model
AI Algorithm Auditing Tool	Civic Data Labs	ParakhAI - An open-source framework and toolkit for Participatory Algorithmic Auditing
AI Governance Testing Framework	Amrita Vishwa Vidyapeetham and Telecommunication Engineering Center (TEC)	Track-LLM, Transparency, Risk Assessment, Context & Knowledge for Large Language Models
