India’s AI Challenge

Mains: *GS-III- Science & Technology*

Why in News?

The Microsoft’s Global AI Diffusion Q1 2026 Report was released recently.

What are the key findings of the report?

- **AI Usage** – It reveals that AI usage reached *17.8% of the world's working-age population*.
- **AI adoption** – In the Global North is *accelerating at twice* the pace of the Global South accentuating a widening technological divide.

Key Global Findings

- **Top Adopters** – The United Arab Emirates leads worldwide with 70.1% adoption, followed by Singapore and Ireland.
- **Biggest Growth Surge** – Asia dominated quarter-over-quarter growth, led by South Korea (+6.4% points) and Japan.
- **Widening Gap** – Adoption sits at 27.5% in the Global North versus 15.4% in the Global South, highlighting severe systemic disparities in access to frontier models, electricity, internet connectivity, and digital skills.
- **United States Breakdown** – Despite pioneering AI infrastructure, the U.S. ranks 21st globally, with 31.3% of its working-age population utilizing generative AI.

India’s Position *– Despite growing AI awareness through the India AI Impact Summit, India ranks* ***64th globally****.*

Adoption Rate *– **17.6%,** far behind leading nations, highlights systemic weaknesses in infrastructure and talent development.*

What about the status of India’s AI ecosystem?

- **Training Ecosystem Gap** – India’s education and training ecosystem produces people who use AI, not people who build it.
- More than 90% of Indian employees already work with generative AI tools, yet, an 82.9% shortage in the deeper GenAI skills needed to take models into production (Quess Corp study).

- **Salary Trends** – The shortage of deep skills is highly rewarded -
- Median salaries for AI graduates doubled to Rs.20 lakh (104% rise), with the top quartile clearing Rs.45 lakh (Scaler India AI Workforce Report 2026, validated by B2K Analytics).
- **Rising Demand for Engineers** – The fastest-growing AI role is a Forward Deployed Engineer, who connects models to real business workflows, tests whether they perform, and keeps them running in production.
- **Global Demand** – Postings for these engineers rose nearly 800% in 2025, with salaries between USD 150K–500K.
- India supply only approximately 250 open roles, far below global demand.
- **India's Narrow Options** – India faces two main choices, both requiring strong engineering depth
    - Build domestic models — e.g., Sarvam's $234M raise shows appetite.
    - Deploy open-weight models locally — often Chinese stacks like Qwen and DeepSeek, which create long-term dependency risks.

What is the role of Universities in AI & other countries measures?

- **Role of Universities in AI Adoption** – Private bootcamps cannot scale; universities must lead in producing deployment-ready graduates - they shape not just research but the speed and quality of AI diffusion.
- **China's Example** – Between 2021 and 2025, Chinese universities revoked or suspended about 12,200-degree programmes.
- Introduced roughly 10,200 new ones in AI, robotics, semiconductors, and advanced manufacturing & together affecting more than 30% of the country's degree offerings.
- **UAE's Approach** – UAE universities have been central to its lead in AI adoption through
    - Aligning their programmes with applied AI,
    - Building dedicated institutions such as the Mohamed bin Zayed University of Artificial Intelligence (MBZUAI), and
    - Tying academic training to the national AI strategy.
- The broader lesson is that universities matter not only as research centres but as institutions that set the speed and quality of a country's AI adoption.

What are the 4 key functions for India in the context of universities?

- **Curriculum Reforms** – Replace outdated programmes on industry cycles with practice-based degrees in data engineering, model fine-tuning, evaluation and MLOps, not theory alone.
- **Embedded Learning** – Adopt dual-study/co-op model so every degree includes supervised work shipping real systems, through industry-linked capstones and apprenticeships.
- **Campus as a Living Lab** – A university that deploys AI in teaching hospitals, libraries and administration to give students real-world production experience and demonstrates diffusion in miniature.
- **Faculty and Compute** – Faculty exchanges with firms, retraining of existing professors, and pooled compute close the resource gap that keeps most campuses

theoretical.

What are the key challenges?

- **India's Core Challenge** – India adds AI users quickly and builds far too few of the engineers who can put those models to work, which imbalance risks slowing India's competitiveness in the global AI race.
- **Policy Challenge** – The Brookings report stresses that AI diffusion should be treated as a deliberate policy challenge, not left to market forces.
- For India, this means stronger government-led strategies to close the adoption gap and build sovereign AI capacity.
- **Restricted Access to Deployment Infrastructure** – Deployment depends on access, but access is tightening.
- U.S. export controls on advanced chips and restrictions on frontier-model access mean a workforce trained only to call imported models through an API holds a capability that can be revoked from abroad.
- **Sovereignty Risk** – Tool literacy alone (knowing how to use AI apps) does not guarantee resilience or sovereignty.
- India must develop the engineering capacity to build and run models independently.

What is the way forward for India?

- **National AI Talent Mission** – India urgently needs a coordinated AI talent mission.
- NITI Aayog projects a $250–300 billion services revenue shortfall by 2035 without one.
- The shift from billing for effort to delivering outcomes — *"human + agent + platform" models* requires the Forward Deployed Engineer (FDE) layer, which India currently lacks.
- **Three Parallel Tracks –** India need to run the tracks in parallel.
    - **Employer-led competence building** – For example, the TCS–Anthropic partnership (June 2026) gives 50,000 associates access to Claude.
    - Certification through TCS iON and LTM's AI 1000 programme, training 1,000+ AI-certified engineers, including FDEs.
    - **Practice-based credentials** – It will set jointly by academia and industry, that test production competence rather than tool familiarity.
    - **Higher-Education Reform** – It holds universities accountable for deployment-ready graduates, with curricula refreshed on industry cycles, faculty embedded in real systems, and continuing-education tracks.
- **Separate Pipelines** – Engineer & researcher pipelines funded as separate investments, because no single pathway produces both.
- **Strengthen Coordination** – India's market has proven it can scale literacy, now it must strengthen coordination mechanisms, which can translate widespread participation into deeper diffusion resilience.

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Reference

The Hindu | Why India must build, not just consume, AI

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