

INDIAN INITIATIVES FOR DEVELOPMENT OF AI AND DIGITAL SKILLS

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ABSTRACT

This paper discusses the initiatives taken up by Government of India for development of AI and digital skills. Technology plays a critical role in shaping the future of the youth. Inclusive education plays a critical role in training youth in AI skills. There is a need for modernising curriculum to include digital and soft skills through smarter collaborations. This will support in creating work based learning opportunities. Skill Crisis is deepening as technology advances. It is estimated that there are nearly 450 million youth in the world who lack adequate skills to success in labour market. It is also observed that one out five persons aged 15-35 remain disengaged because of lack of opportunities at skill development. These skill gaps affect vulnerable groups disproportionately. There is a serious observation that there is severe gender disparity in digital sector as 90 % of the young women remain offline. It is also estimated through a study by **World Economic Forum** that nearly 40 of the skills sets no longer match the needs of the future job market. It is also studied that 22% of the jobs are expected to transform by 2030 due to technological disruption. Thus closing skills gaps is critical for the future of Youth. offering free online courses in AI coding cyber security entrepreneurship and career development is all needed.

Key Words: AI & digital skills , Initiatives , challenges

INTRODUCTION:

India holds 16% of the world's AI talent there by driving AI powered automation, financial technologies and health care. 78 % of the small and medium businesses in India are using AI reported revenue growth. Indian AI market is projected to grow at 25-35%. AI talent demand is expected to reach one million by 2026. According to **Technology & Innovation Report** by UN Trade and Development 2025, India ranks 10th globally in AI investments by Public sector. India has been emerging as a key market for AI platforms as it is accounting for the largest share of Chat GPTs mobile app users and India is having the third largest **User base** for Deep Seek in 2025

AI regulation in India – India's regulation frame work includes the **Information and Technology Act** of 2000 **Principles of Responsible AI** 2021 and **National Artificial Intelligence Act** strategy of 2018. These regulations are supporting AI segment with ensuring safety, transparency and accountability. India is actively shaping **Inter National AI Regulation** framework by hosting the **Global INDIA AI Summit** in 2024. According to **Stanford AI Index Report Of 2024** , India ranks first in Global AI skill penetration with 263% of AI talent growth since 2016 and there is a 14 times rise in AI skilled work force during 2016-2023. Rising number of tech incubators which has made India as the third largest start up eco system in the entire world. By the end of 2024 it was estimated that the total number of active incubators in India was over 1100 representing a significant growth in India's Digital support infrastructure.

1. **Strengthening AI infrastructure** – The Government of India has invested high-end computing center with 15893 graphics processing units which is nine times more than Deep Seek and two thirds of Chat GPT capacity.
2. **Opening GPU market place-** has allowed start ups to access affordable high performance computing. India has lacuna is developing GPU for which India has been dependent on foreign countries.
3. **India AI dataset Plat form** – This provides high quality anonymised data sets for AI research and development. India has established AI centres of excellence COEs in health care and agriculture.
4. **Budgetary allocation-** Union budget has allocated 500 crore for AI sector in 2025 Union budget.
5. **The National Education Policy of 2020** - The National Education Policy was designed to integrate AI education at all levels of learning.
6. **AI skill centres-** There are five **National AI skilling centres** which are training youth in AI and AI related industries.
7. **Indigenous AI models** – **Bharath Gen** world's first government funded multi model large language model (LLM) initiative for AI driven public services. **Sarvam-1** is a 2 billion parameter model supporting 10 Indian languages for translation and content preparation. **AI kosha** is government backed platform designed to provide non personal data sets to help businesses, researchers and start ups to develop AI solutions locally. Digital India **Bhashini** is an AI powered language translation plat form for digital accessibility. **Chitralekha** is a source video trans-creation tool particularly for Indic languages.
8. **Development of AI powered public Infrastructure-** AL is integrated with **Aadhaar** , **UPI** payments and **Digi locker**. AI driven crowd monitoring optimized railway passenger movement and AI developed by RBI to detect mule bank accounts used for fraud and money laundering. With nearly 60-70 percent of the Business leaders using AI agents to automate work streams and by business processes the shift from traditional hierarchies to fluid adaptive structures is trending rising. This transformation is enabling organizations to scale with agility speed and purpose.
9. **AI driven economic growth-** It is observed that nearly 70% of the Indian companies are prioritising AI as a core strategic goal and are increasing their investments in AI. According a report of NASSCOM **Indian Generative AI** start up funding surged 6 times reaching USD 51 million in 2025. **Microsoft 2025 Work Trend Index** pointing to the integration of AI across all organizations has become phenomenally successful with 93% of the organizations intending to use AI agents to extend work force capabilities in next two years.

Measures

1. Bring in private sector partners and civil society organizations to show case their skills initiatives and join a global community building youth skills for improved employability.
2. IIT Jodhpur , IIT Roorkee, National Institute of technology ,Raipur , are working on projects related to AI .

3. Infosys with its **Responsible AI Toolbox** was released on February 2025 is assisting in identifying and preventing security breaches, privacy violations and biased contents. This tool kit is a multipurpose tool in improving the transparency of AI outcomes.
4. **National Cyber Reporting Platform, 2023** has reported that there were reported incidents of 1,596,493 cyber breaches cases which led to a financial loss of 7,496 crores. Report by **Computer Emergency Response System Team CERT** reflects Data breaches cases have increased from 53,117 incidents in 2017 to an overwhelming 1.32 million cases in 2023. The financial repercussions, impact on brand status and Cyber policy reputation are beyond economic losses. **Digital Personal Data Protection Act, (DPDP) 2023** establishes clear guidelines for the collection, processing and storage of personal data. **IT Intermediary guidelines and digital media ethics code rules of 2021** sets out duties for social media platforms, content providers and other social media intermediaries regarding content moderation and user safety through AI tools. .

CHALLENGES –

AI presents significant opportunities for economic growth and social advancement but there are several challenges as well. The challenges of data Privacy management, filling skill gaps, meeting inadequacy of strong regulations and moral usage of AI are looming larger than economic benefits. There is a need to address these challenges and make regulation to for responsible AI policy. The Government of India is keenly observing the factors which are influencing the rise in cyber attacks and finance scams and cognisant about strengthening Cyber Laws. Government of India announced the creation of India AI safety institute in 2025 January to ensure the ethical and safe applications of AI models The institute is aimed to promote domestic research and development.

CONCLUSION-

The AI is supporting the growth of Indian economy but the lacuna in fragile enforcement of Cyber Regulations needs to be addressed. The authority of Cyber security monitoring bodies is deficient and defective making them weak and feeble. There is a need for a separate policy to monitor organizations using AI because responsible and ethical AI is the order of the day. There is a need to develop an AI policy tailored to Indian situations and assess the country's AI eco systems strengths and future prospective growth.

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