ISSN : 3048-6203 Volume -2| Issue -1| Jan - Jun 2025

शोध भूमि

शिक्षा एवं शिक्षण शास्त्र विषय की पूर्व समीक्षित शोध पत्रिका

Page No. : 541-543

Artificial Intelligence and India

Dr. Devendra Mishra
Assistant Professor
Department of Education
R R P G College Amethi, Uttar Pradesh, India
E-mail: mishradevendra092@gmail.com
Mr. Anadi Kumar Mishra
Assistant Professor
Department of BCA
R R P G College Amethi, Uttar Pradesh, India
E-mail: anadikumarmishra@gmail.com

Abstract

India is the fastest growing economy in the world with the second largest population and has a significant stake in the artificial intelligence (AI) revolution. NITI Aayog has prepared a national strategy to promote artificial intelligence. The policy focuses on how India can leverage transformative technologies to ensure social and inclusive growth?

Keywords: AI, India, leverage, National, challenge, technology etc.

Objective of the National Strategy for Artificial Intelligence

Enhancing and empowering human capabilities to address the challenges of access, affordability, lack of skilled expertise and inconsistency. To develop solutions for emerging economies through effective implementation of AI initiatives to address global challenges related to research, development, technology and responsible AI. Leveraging collaboration and partnerships and ensuring prosperity for all. Thus, AI for All means taking technology leadership in the field of AI and achieving the 'Greater Good'.

National AI Strategy

The National AI Strategy is based on a framework that is tailored to India's specific needs and aspirations. The aim is to realize the full potential of leveraging AI developments. It is a framework that is an aggregation of the following three distinct, inter-related components:

1- Opportunity, Economic impact of artificial intelligence for India:

AI has the potential to open up new sources of value addition by removing the physical limitations of capital and labour. From an economic impact perspective, AI has the

potential to drive growth, enabling Intelligent automation, i.e. the ability to automate complex physical tasks that require adaptability and agility.

Labor and capital enhancement: Enabling humans to focus on the parts of their role that are most valuable, complementing human capabilities and improving capital efficiency. AI innovations in one sector will have positive consequences in another, as industry sectors are interdependent along the value chain. Economic value is expected to be created from new goods, services and innovations through AI. According to a report by Accenture, it is estimated that AI can boost India's annual growth rate by 1-3 percent by 2035.

2- AI for 'Greater Good': Social development and inclusive growth:

It is expected that the transformative impact of AI will lead to the 'Greater Good', i.e. its impact on the greater good such as improving the quality of life and giving a large section of the country access to what they want. AI technology can be used to solve various issues_ such as: To ensure inclusive financial development by providing access to quality financial facilities to large sections of the population who remain outside the reach of formal financial products.

3- 'AI garage' for 40 percent of the world's people:

India provides an ideal 'Play Ground' for global enterprises and institutions to develop scalable solutions that can be easily implemented in the rest of the developing and emerging economies.

The similarity of issues in developing countries across sectors like agriculture, health, education etc. provides ideal conditions to develop and use AI solutions, which can be adapted to multiple markets. Another aspect of India's potential as a leader in AI is that it has proven itself as a provider of technology solutions. Indian IT companies provide services across the world and have been leaders in the development of technology products.

Important areas for India

NITI Aayog has decided to focus on five areas that AI is envisioned to be most helpful in solving:

1. Health Sector: Using AI in healthcare can solve the issues of high barriers to access healthcare, especially in rural areas that suffer from poor connectivity and limited supply of high-quality professionals. AI can be used in tailored diagnostic services, personalized treatments, early detection of potential pandemics, among others.
2. Agriculture sector: Efforts are being made to bring food revolution through AI and meet the increasing demand for food (to meet the food requirement of additional 2 billion people globally by 2050, 50% more food grains will need to be produced than today). With its help, the ability to face challenges like meeting needs, lack of assured irrigation and overuse/misuse of pesticides and fertilizers can be developed.
3. Education and skills sector: AI can potentially solve issues of quality and access in the Indian education sector. Potential use cases include enhancing the learning experience through personalized tasks, automating and speeding up

administrative tasks and predicting the need for interventions to reduce dropouts or recommending vocational training to students.

4. Smart Mobility and Transportation: Its potential uses include fleet management of autonomous vehicles for ride sharing, semi-autonomous functions such as driver assistance and predictive engine monitoring and maintenance, etc. AI can be used in other areas such as autonomous truck driving and delivery and better traffic management.
5. Smart Cities and Infrastructure: The integration of AI into newly developed smart cities and infrastructure can also help them meet the demands of rapid urbanization and enhance the quality of life. Use cases include reducing congestion and traffic control through better crowd management.

Challenge for AI deployment in India

To harness the full potential of disruptive technologies like AI, India will have to overcome the problems it faces.

Technical Challenges: The policy powering the data ecosystem is absent, i.e. lack of access to intelligent data, high resource cost of adopting AI, low awareness, there is absence of collaborative approach related to the use of AI, availability of inadequate expertise in AI, lack of skilled manpower.

Regulatory Challenges: AI data is the primary object for development of solutions and ensuring proper handling, privacy and security of data are the main issues. These include data use without consent, risk of identification of individuals through data, data selection bias and discrimination resulting from AI models, and disparity in data collection.

Socio-economic challenges: There is a need to find a solution to bridge the digital divide in society and the challenge is to find innovation that is worthy of public financing and partnerships.

Ethical Challenges: As Artificial intelligence - based solutions are becoming a part of our lives, questions related to ethics, privacy and security are also emerging.

Conclusion

Artificial intelligence is the game-changer of the 21st century. Artificial intelligence can contribute to inclusive and sustainable socio-economic development. To harness the potential available from the development of AI, emphasis will be laid on research and development. As AI advances, no industry will be free from its impact. Disruption must be addressed before it occurs, which is also true for AI disruption.

References:

https://indiaai.gov.in/
https://www.niti.gov.in/sites/default/files/2023-03/National-Strategy-for-Artificial-Intelligence.pdf
https://www.psa.gov.in/mission/artificial-intelligence/34
https://www.indiascienceandtechnology.gov.in/sites/default/files/AI%20Trend%20story.pdf