



Mains Practice Question

Q. India has the potential to leverage artificial intelligence technology to build frameworks to empower people, create equity and achieve economic development. Discuss.

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Approach

- Start with explaining artificial intelligence (AI) technology in brief.
- Discuss the potential of AI in empowering people, create equity and achieve economic development.
- Enumerate challenges associated with the use of AI technology.
- Give a way forward.

Introduction

It describes the action of machines accomplishing tasks that have historically required human intelligence. It includes technologies like machine learning, pattern recognition, big data, neural networks, self algorithms etc.

As artificial intelligence (AI) becomes ubiquitous, India has the potential to leverage these massive datasets to build frameworks to empower people, create equity and race towards its goal of USD 1 trillion of economic value using digital technologies by 2025.

Body

Potential of AI in India

- **National Strategy For AI:** A recent PwC report indicated that AI can provide a global economic value addition of up to USD 15.7 trillion by 2030.
 - Recognising this potential, the government released the **National Strategy for Artificial Intelligence (NSAI)** in June 2018.
- **Deregulation of Geospatial Sector:** Recently, the government has deregulated the geospatial sector. It can lead to transformation of various sectors such as **infrastructure, health, and help in designing climate change resilient cities.**
- **Reducing Energy Losses:** By using AI in the energy sector, renewable energy generators and Discoms can cut losses and increase efficiencies by better predicting grid load management, and ultimately making the adoption of renewables cost-effective.
- **AI solutions to Emerging Trends:** Within the government machinery, policymakers are moving forward with incorporating AI solutions for effective tax monitoring, data compliance etc.
- **AI-based solutions on water management, crop insurance** and pest control are also being developed.
 - ICRIASAT has developed an **AI-power sowing app**, which utilises weather models and data on local crop yield and rainfall to more accurately predict and advise local farmers on when they should plant their seeds.

- **An AI-based flood forecasting model** that has been implemented in Bihar is now being expanded to cover the whole of India to ensure that around 200 million people get alerts and warnings 48 hours earlier about impending floods.

Challenges With Wide Use of AI

- **Comprising Privacy:** AI systems learn by analyzing huge volumes of data and they keep adapting through continuous modelling of interaction data and user-feedback.
 - Thus, with the increasing use of AI, the right to privacy can be under threat due to unauthorized access to one's activity data.
- **Disproportionate Power and Control:** Technology giants are investing heavily in regard to artificial intelligence, both at the scientific/engineering and also at the commercial and product development level.
 - These big players have an unmatched advantage when compared to any ambitious competitor out there which is a symptom of data-oligarchic society.
- **Exacerbating Inequalities:** Using artificial intelligence, a company can drastically cut down on relying on the human workforce, and this means that revenues will go to fewer people. AI could compound digital exclusion.

Way Forward

- **Create Enabling Ecosystem:** We must create enabling environments in schools through multidisciplinary approaches with AI at their core to empower the next generation to play an essential role in designing practical AI solutions for India and in India.
- **Public-Private Partnership (PPPs):** Recently, an initiative, Future Skills Prime, has exhibited the strength of public-private partnership by aggregating digital-ready courses for consumers across citizens, government employees and businesses.
 - Thus, such initiatives hold immense promise for the role of civil society and private sector in pursuing responsible AI through collaboration.
- **Uniform Standard Rules:** Standardising the rules of the game will help expand markets for positive AI-driven goods and services.
- **Collaborate Every Stakeholder:** As AI continues to impact every facet of our daily lives, it is essential for all the stakeholders — innovators, policymakers, academicians, industry experts, philanthropic foundations, multilaterals and civil society — to collaborate to help steer AI's future towards benevolent purposes.