

NEXT IAS

**DAILY EDITORIAL
ANALYSIS**

TOPIC

Artificial Intelligence and the
Future

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ARTIFICIAL INTELLIGENCE AND THE FUTURE

In Context

- Artificial Intelligence (AI) has been dominating the headlines for its triumphs, and also fears being expressed by many.

What is Artificial Intelligence?

- It leverages computers and machines to mimic the problem-solving and decision-making capabilities of the human mind.
- It is related to the similar task of using computers to understand human intelligence
- The main advantage of AI is that it leverages data and incrementally improves efficiency, accuracy, and decision-making across a range of industries.

Applications

- Artificial intelligence (AI) is undergoing exponential growth and finding new applications in an ever-increasing number of sectors, including security, the environment, research and education, health, culture and trade.
- **In the retail industry:** AI-based technologies are being leveraged to transform stock keeping, providing personalized recommendations to enhance the customer experience, and improving supply chain management.
 - ♦ AI-powered robots are also being used in warehouses to optimize inventory management and improve order fulfillment
- **Healthcare:** AI algorithms can analyze large amounts of patient data and medical research to identify patterns and potential risk factors.
 - ♦ AI is helping develop new drugs and therapies, diagnose diseases more accurately, and personalise treatments for patients based on their individual genetic and clinical data
- **Education:** AI is enabling personalized learning experiences and improving student outcomes. AI-powered chatbots can answer students' questions and provide feedback in real-time
- **Environment Friendly operations:** We can say that AI assisted operations optimize utilization of resources and generate less waste which makes it more environment friendly and sustainable.
- **Finance:** AI detects fraud, assesses creditworthiness, and automates investment decisions. It continuously helps to analyse market trends, predict financial outcomes, and improve customer service through chatbots and virtual assistants.
 - ♦ AI is already **helping business leaders** in automating business processes, gaining insights through advanced data analytics — predictive and post-event — and engaging with customers and employees with natural language-processing chatbots
- **Smart Cities:** Smart cities are slowly becoming the norm in many places worldwide. In a smart city, everything is connected—traffic signals, street lights, security cameras—allowing data to move quickly and efficiently between people and devices
- **New Developments:** AI applications are rapidly evolving. For instance, **ChatGPT** is a large language model (LLM) that utilizes deep learning techniques that are trained on text data.
 - ♦ This model has been used in a variety of applications, including language translation, text summarisation, conversation generation, text-to-text generation and others.
- Transborder, multilevel governance of AI is at the very heart of corporate governance, and sovereignty over peoples and nations is being transformed into masses of **accumulated classified data**.

Do you know?

- India has the necessary building blocks to develop a thriving AI research and development ecosystem, viz. availability of a highly educated talent pool, world class educational institutes and an illustrious list of top notch IT companies dominating the global IT landscape.

Issues and Challenges

- **Privacy, anonymity and autonomy** remain the “main casualties of AI’s ability to manipulate choices in economic and political decisions”
- The **present digital wars** between the **US and China** represent three different “digital empires” in complicity as well as collision.
- The use of AI in medical and research fields has raised concerns about the **potentially harmful effects** it could have on the accuracy and integrity of the information it produces.
- AI tools’ ability to generate human-like text can also raise **ethical concerns** in various sectors such as in the research field, education, journalism, law, etc.
- Absence of **collaborative effort** between various stakeholder
- **Concerns on privacy and security of data**, including lack of formal regulation around anonymisation of data.
- **Inadequate availability** of AI expertise, manpower and skilling opportunities
- **Deep-fake** is another manifestation of the possible misuse of AI.
- the uses of **AI technologies for war or terror purposes** or perspectives.
 - ◆ AI has now “revolutionised” warfare.

Do you know ?

- **Free digital model of the US** amounts to complete freedom to the AI industry (the techno-optimistic model) revives the models of free speech and open markets, leaving the form and content entirely open to free market forces.
- The **Chinese state-driven regulatory model** is on “the ascent worldwide, leading to growing concern in the US, the EU, and the rest of the democratic world.
 - ◆ The Chinese state-driven model “appeals to many developing authoritarian countries” because it “**combines political control with tremendous technological success**”.
- **EU Declaration on Development:** The very few actually existing “democratic” societies seem to prefer the EU model, seen as providing the “necessary building blocks of a more equitable and human-centric digital economy.”
 - The EU Declaration on Development on November 22, 2021, privileges a human rights-based approach to development, postulating respect for human rights as “a precondition for the achievement of inclusive and sustainable development”.

Conclusion and Way Ahead

- It is important to note that AI tools, like any other tools, should be used with caution .
- There is a need to have a **governance framework** in place which can help **manage potential risks and harms** by setting standards, monitoring and enforcing policies and regulations, providing feedback and reports on their performance, and ensuring development and deployment with respect to ethical principles, human rights, and safety considerations.
- The **world must ensure** that new technologies, especially those based on AI, are used for the good of our societies and their sustainable development.
- There is a need for global cooperation to “ensure AI reaches its full potential, while preventing and mitigating harm.

DAILY MAINS QUESTION

Discuss the potential of Artificial Intelligence to accelerate human development while also cautioning against the malicious use of AI.