



A Global Standard of AI Ethics

This editorial is based on [“A new global standard for AI ethics”](#) which was published in The Hindu on 22/06/2022. It talks about the significance of Artificial Intelligence (AI) in human life and the need to have regulations for AI System.

For Prelims: Fundamentals of AI, Application of AI, Machine Learning, Related Government Schemes, International Agreements

For Mains: Rules and Regulations for AI, Effect of AI on other Sectors and Society, Challenges and Initiatives for AI

In simple words, [Artificial intelligence](#) leverages computers and machines to mimic the problem-solving and decision-making capabilities of the human mind. From predicting what we want to see as we scroll through social media to helping us understand weather patterns to manage agriculture, AI is ubiquitous.

The global AI market size was valued at USD 93.5 billion in 2021 and is projected to expand at a compound annual growth rate (CAGR) of 38.1% from 2022 to 2030. The share of AI in the Indian market is valued at USD 7.8 billion in 2021.

With the rise in the market for AI, there arises a need to have global regulations and agreements on Ethics of Artificial Intelligence to ensure that AI is developed with common, humanistic values at its core.

In November 2021, 193 countries reached a groundbreaking agreement at [UNESCO](#) on **“Ethics of Artificial Intelligence”**. It sets the first global normative framework while giving States the responsibility to apply it at their level.

The agreement aims at how AI should be designed and used by the governments and the tech companies.

What are the Objectives of the Agreement?

- **To Maintain Balance of Power:**

- It aims to fundamentally shift the balance of power between people, and the businesses and governments developing AI.
 - If human interest are not given priority in how these technologies are developed, inequalities will grow to a magnitude never before experienced in history

- **Regulate Life Cycle:**

- UNESCO's member countries have agreed to implement this recommendation by enacting actions to regulate the entire AI system life cycle: **‘Research-Design-Development-Deployment and Use’**
 - It means they must use affirmative action to make sure that women and minority

groups are fairly represented on AI design teams.

- **Management of Data, Privacy and Access to Information:**
 - It establishes the need to keep control over data in the hands of users, allowing them to access and delete information as needed.
 - It calls on member states to ensure that appropriate safeguards schemes are devised for the processing of sensitive data and effective accountability, and redress mechanisms are provided in the event of harm.
- **Banning Social Scoring and Mass Surveillance:**
 - It explicitly bans the use of AI systems for social scoring and mass surveillance.
 - It stresses that when developing regulatory frameworks, Member States should consider that ultimate responsibility and accountability must always lie with humans and that AI technologies should not be given legal personality themselves.
- **Protecting the Environment**
 - It emphasises that AI actors should favour data, energy and resource-efficient AI methods which are more prominent in the fight against climate change and on tackling environmental issues.
 - It asks governments to assess the impacts such as carbon footprint, energy consumption and the environmental impact of raw material extraction for supporting the manufacturing of AI technologies.

What are the Benefits of Artificial Intelligence?

- **Policing:**
 - With the help of AI, one can match facial recognition with the central database, predict the pattern of crime, analyse CCTV footage which are available across the country to identify suspects.
 - Government is digitising all the records, especially the crime records, putting it into one single place called [CCTNS](#) where all the data including the image, biometrics, or the criminal history of a convict or suspect is available.
- **Agriculture:**
 - **AI Helping Analyse Farm Data:**
 - Farmers can analyse factors like weather conditions, temperature, water usage or soil conditions collected from their farm to better inform their decisions.
 - **Precision in Agriculture:**
 - Precision agriculture uses AI technology to aid in detecting diseases in plants, pests, and poor plant nutrition on farms.
 - AI sensors can detect and target weeds and then decide which herbicides to apply within the right buffer zone.
 - **Water Management, Crop Insurance and Pest Control:**
 - [International Crops Research Institute for Semi-Arid Tropics ICRISAT](#) has developed an AI-powered 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.
- **To Tackle the Pandemic:**
 - **At National Level:**
 - For the Covid-19 response, an [AI-enabled Chatbot](#) was used by MyGov for ensuring communications.
 - The Indian Council of Medical Research (ICMR) deployed the Watson Assistant on its portal to respond to specific queries of frontline staff and data entry operators from various testing and diagnostic facilities across the country on Covid-19.
- **Education:**
 - The Ministry of Electronics and Information Technology (MeitY) had launched a [“Responsible AI for Youth”](#) programme this year in April, wherein more than 11,000 students from government schools completed the basic course in AI.
 - The Central Board of Secondary Education has integrated AI in the school curriculum to ensure that students passing out have the basic knowledge and skills of data science, machine learning and artificial intelligence.
- **Healthcare:**
 - **Machine Learning:**

- Application of AI can be beneficial in precision medicine – predicting what treatment protocols are likely to succeed on a patient based on various patient attributes and the treatment context.
- **Natural Language Processing:**
 - NLP involves the creation, understanding and classification of clinical documentation and published research.
 - NLP systems can analyse unstructured clinical notes on patients, prepare reports, transcribe patient interactions and conduct conversational AI.

What are the Issues identified in Artificial Intelligence?

- **Incomplete Presentation of Data:**
 - The data used to feed into AI often aren't representative of the diversity of our societies, producing outcomes that can be said to be biased or discriminatory.
 - For instance, while India and China together constitute approximately a third of the world's population, Google Brain estimated that they form just 3% of images used in ImageNet, a widely used dataset.
- **Technological Challenges:**
 - facial recognition technologies, which are used to access our phones, bank accounts and apartments, and are increasingly employed by law enforcement authorities, in identifying women and darker skinned people
 - For three such programs released by major technology companies, the error rate was 1% for light skinned men, but 19% for dark skinned men, and up to 35% for dark skinned women. Biases in facial recognition technologies have led to wrongful arrests.
- **Promoting Prejudices and Inequalities:**
 - It shouldn't be forgotten that AI systems are created by humans, who can be biased and judgemental. Thus, AI can promote prejudices and inequalities, if initial training of the AI algorithms are biased.
 - For example, it can lead to AI facial recognition and surveillance technology to discriminate against people of color and minorities.
- **Compromising 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.

What Initiatives have been Taken to Promote Ethical AI?

- **National Initiatives:**
 - [Global Partnership on Artificial Intelligence \(GPAI\):](#)
 - In 2020, India joined the GPAI as a founding member to support the responsible and human-centric development and use of AI.
 - [RAISE 2020:](#)
 - RAISE (Responsible AI for Social Empowerment) 2020 is a first of its kind, global meeting of minds on Artificial Intelligence to drive India's vision and roadmap for social transformation, inclusion and empowerment through responsible AI.
 - **NITI Aayog's AI For All Campaign:**
 - In 2018, NITI published a discussion paper titled 'National Strategy for Artificial Intelligence #AI4ALL', which demonstrates how AI can be successfully applied to five principal sectors in India:
 - healthcare, agriculture, education, smart cities and infrastructure, smart mobility and transportation, to benefit the country's general population.

What Should be the Way Forward?

▪ **International Cooperation:**

- Given that various governments have only recently established AI policies, and in some cases are still formulating them, international cooperation is still very much a work in progress. in the setting of standards at the multilateral level.

▪ **Right Steps Taken:**

- AI technological revolution brings great opportunities for prosperity and growth — but it has to be ensured that the technology will be applied and used in the right direction.
 - In this regard, some steps are already being taken in different parts of the world, like Explainable AI (XAI) and the [European Union's GDPR — General Data Protection Regulation](#).

▪ **Common Rule Book:**

- It is a recognition that AI related technologies cannot continue to operate without a common rulebook.
 - Over the coming months and years, the UNESCO Agreement's recommendation will serve as a compass to guide governments and companies, to voluntarily develop and deploy AI technologies that conform with the commonly agreed principles.

▪ **Inclusion of All:**

- Affirmative actions should be taken to make sure that women and minority groups are fairly represented on AI Design Teams to eliminate the risk of gender/class/caste biasedness.

Drishti Mains Question

With the rise in the market for Artificial Intelligence (AI), there arises a need to have global regulations and agreements. Discuss