SOVEREIGN AI - GOVERNANCE - GS III MAINS

Q. What is sovereign AI? Discuss the India's plan to bring out the sovereign AI in the present global AI framework. (10 marks, 150 words)

News: *In big AI push, Centre to step up compute capacity*

What's in the news?

- As part of its Artificial Intelligence Mission, India aims to develop its own "sovereign AI" by building computational capacity in the country and offering compute-as-a-service to startups.

Sovereign AI:

- The plan involves a **public-private partnership model** and government initiatives, with a goal of creating a **digital public infrastructure (DPI)** for startups to utilize computational capacity at a lower cost.

Aim:

- The initiative aims to support AI applications in sectors like **agriculture, healthcare, and education.**
- The government is also working on building datasets and considering directing big tech companies to share anonymized personal data with the India Datasets platform.

Centre's Plan to Step up Compute Capacity under the AI Mission:

- Establishing a compute capacity ranging from **10,000 to 30,000 GPUs (Graphic Processing Units) under the PPP model.**
- Adding an extra 1,000-2,000 GPUs through the PSU Centre for Development of Advanced Computing (C-DAC).
- The government is also considering diverse incentive structures for private firms to establish computing centers, such as a capital expenditure subsidy model used in the semiconductor scheme, incentives based on operational expenses, and offering a "usage" fee.

Public Model for Building Computing Capacity:

- In the public model, computational capacity will be established within the C-DAC as a component of the **National Supercomputing Mission.**
- C-DAC currently possesses the Rudra and Param systems, with plans to integrate 1,000-2,000 GPUs to them.
- **Rudra**, an indigenous server platform developed by C-DAC, features two expansion slots for graphic cards.
- **Param Utkarsh,** a high-performance computing system at C-DAC, provides AI capabilities across machine learning and deep learning frameworks, along with compute and storage services as a cloud offering.

Legal Framework Related to AI in India:

- In India, there are currently **no specific legal regulations** governing the use of deepfake technology.
- **However, existing laws can be applied to address the misuse of this technology, covering aspects such as Copyright Violation, Defamation and cybercrimes.**
- For instance, the **Indian Penal Code,** which addresses defamation, and the **Information Technology Act of 2000**, which pertains to sexually explicit material, could potentially be used to combat malicious deepfake usage.
- The **Representation of the People Act of 1951** contains provisions that prohibit the creation or dissemination of false or deceptive information about candidates or political parties during election periods.
- Additionally, the Election Commission of India has established regulations requiring registered political parties and candidates to obtain prior approval for all political advertisements on electronic media.
- Despite these measures, they may still be inadequate in fully addressing the multifaceted challenges arising from AI algorithms, including the potential risks associated with deepfake content.

Recent Global Efforts to Regulate AI:

- **The world's inaugural AI Safety Summit, hosted at Bletchley Park in the UK**, saw 28 major nations, including the US, China, Japan, the UK, France, India, and the European Union, unite in signing a declaration emphasizing the necessity for global action to address the potential perils of AI.
- The declaration underscores the recognition of significant risks stemming from potential deliberate misuse and unintended control challenges in advanced AI, particularly in domains such as cybersecurity, biotechnology, and the spread of disinformation.

- In response to these concerns, the US President issued an executive order aiming to fortify defences against AI-related threats and exercise regulatory oversight over safety standards applied by companies in the assessment of generative AI systems like ChatGPT and Google Bard.
- During the G20 Leaders Summit held in New Delhi, the Indian Prime Minister advocated for the creation of a global framework governing the development of "ethical" AI tools.
- This shift in New Delhi's stance signifies a transition from a position of non-interference in AI regulation to a proactive approach, involving the formulation of regulations grounded in a "risk-based, user-harm" perspective.