



Governance

Artificial Intelligence Mission

Tags:

- GS Paper - 2
- GS Paper - 3
- Artificial Intelligence
- Groupings & Agreements Involving India and/or Affecting India's Interests
- E-Governance
- Government Policies & Interventions

Why in News?

India is gearing up for a significant Artificial Intelligence (AI) push with the recent announcement of the AI Mission by the Prime Minister at the Global Partnership for AI Summit.

The AI Mission is expected to boost India's innovation ecosystem and position it as a global leader in artificial intelligence by building computational capacity and providing compute-as-a-service to startups.

Note

- Computing capacity, or compute, is a general term that refers to the resources required for a program to be successful. This includes **processing power, memory, networking, and storage.**

What are the Key Highlights of the AI Mission?

- **Mission Objectives:**
 - The primary objectives of the AI Mission include establishing robust **computing powers for AI within India.**

- The mission seeks to **enhance services for startups and entrepreneurs** while fostering AI applications in critical sectors such as **agriculture, healthcare, and education.**
- **Compute Capacity Goals:**
 - The ambitious plan involves building a substantial compute capacity, ranging between **10,000 to 30,000 Graphic Processing Units (GPUs).**
 - A GPU is a chip or electronic circuit that can **render graphics** for display on an electronic device. GPUs are designed to accelerate **computer graphics and image processing.**
 - Additionally, an extra 1,000-2,000 GPUs are slated through the PSU Centre for Development of Advanced Computing (C-DAC).
 - The government emphasizes a collaborative approach with the **private sector for capacity building** within the **National Supercomputing Mission.**

Note

- **C-DAC's Rudra and Param systems** are slated for expansion with the addition of 1,000-2,000 GPUs.
 - Rudra is an **indigenous server platform** built by the C-DAC which has two expansion slots for graphic cards.
 - Param Utkarsh is a high-performance computing system setup at C-DAC that offers **AI over machine learning and deep learning and deep learning** frameworks, computing and storage as a cloud service.
- **Incentive Structures:**
 - The government is exploring varied incentive models, including capital expenditure

subsidies, operational expense-based incentives, and a "usage" fee.

- **Digital Public Infrastructure (DPI) for Startups:**
 - The government plans to create a Digital Public Infrastructure (DPI) using the GPU assembly, allowing startups to access computational capacity at a reduced cost.
- **Focus on Datasets:**
- The introduction of the India Datasets platform is highlighted, offering non-personal and **anonymized datasets** to startups and researchers.
 - The government contemplates issuing a directive to major tech companies, including Facebook, Google, and Amazon, to share anonymized personal data with the India Datasets platform.

What is Artificial Intelligence (AI)?

- AI is the ability of a computer, or a robot controlled by a computer to do tasks that are usually done by humans because they require **human intelligence and judgement**.
 - Although no AI can perform the wide variety of tasks an ordinary human can do, **some AI can match humans in specific tasks**.
- The ideal characteristic of AI is its ability to rationalize and take actions that have the best chance of achieving a specific goal. A subset of AI is **Machine Learning (ML)**.
 - **Deep Learning (DL)** techniques enable this automatic learning through the absorption of huge amounts of unstructured data such as text, images, or video.

What are India's Other Initiatives Related to Artificial Intelligence?

INDIA

Global Partnership on Artificial Intelligence (GPAI).

US India Artificial Intelligence Initiative.

Responsible Artificial Intelligence (AI) for Youth.

- Artificial Intelligence Research, Analytics and Knowledge Assimilation Platform.

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims

Q. With the present state of development, Artificial Intelligence can effectively do which of the following? (2020)

1. Bring down electricity consumption in industrial units
2. Create meaningful short stories and songs
3. Disease diagnosis
4. Text-to-Speech Conversion
5. Wireless transmission of electrical energy

Select the correct answer using the code given below:

- (a) 1, 2, 3 and 5 only
- (b) 1, 3 and 4 only
- (c) 2, 4 and 5 only
- (d) 1, 2, 3, 4 and 5

Ans: (b)

Mains

Q. What are the main socio-economic implications arising out of the development of IT industries in major cities of India? (2022)

Q. “The emergence of the Fourth Industrial Revolution (Digital Revolution) has initiated e-Governance as an integral part of government”. Discuss. (2020)