



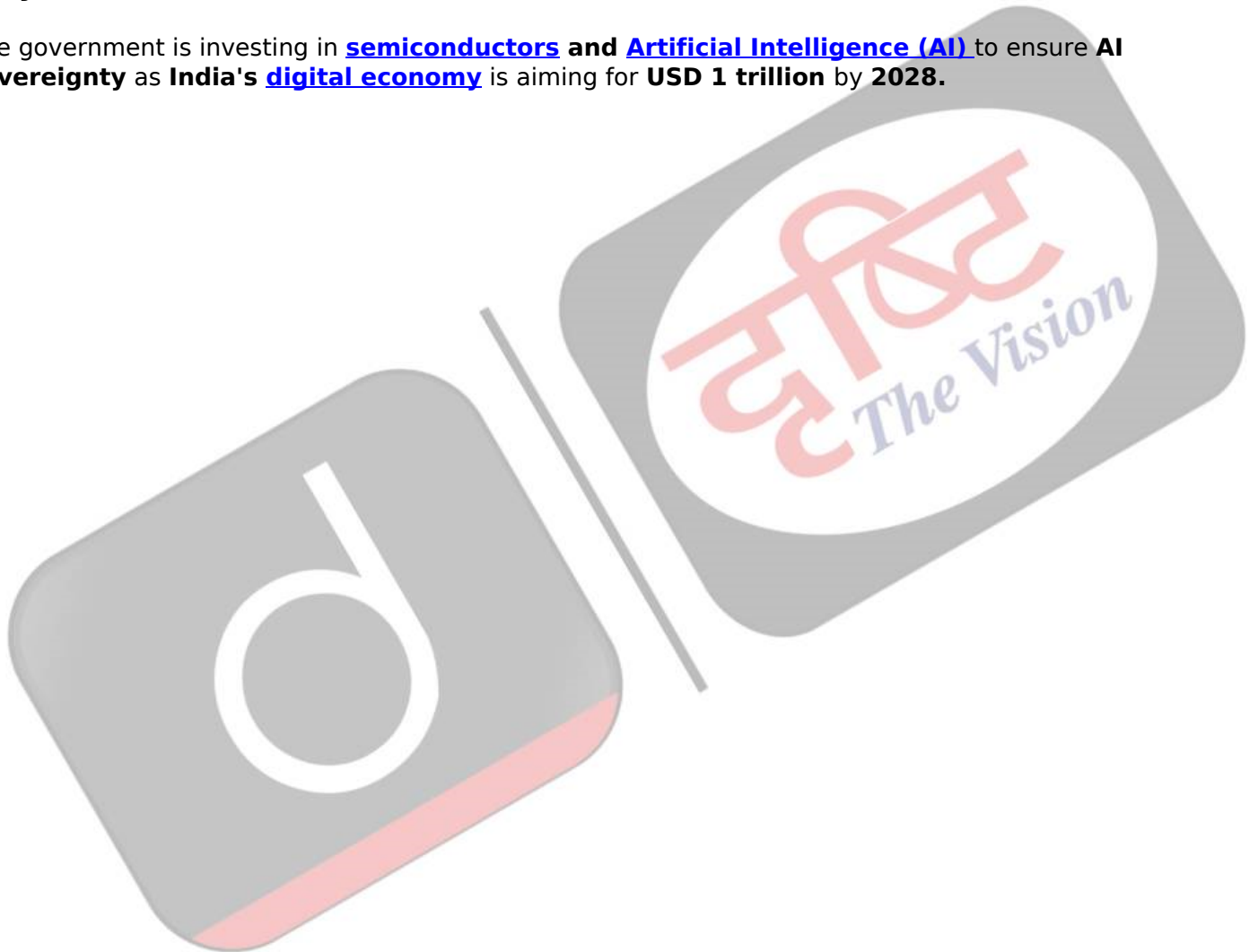
Sovereign AI

[Source: BS](#)

Why in News?

The government is investing in [semiconductors](#) and [Artificial Intelligence \(AI\)](#) to ensure **AI sovereignty** as **India's digital economy** is aiming for **USD 1 trillion** by **2028**.

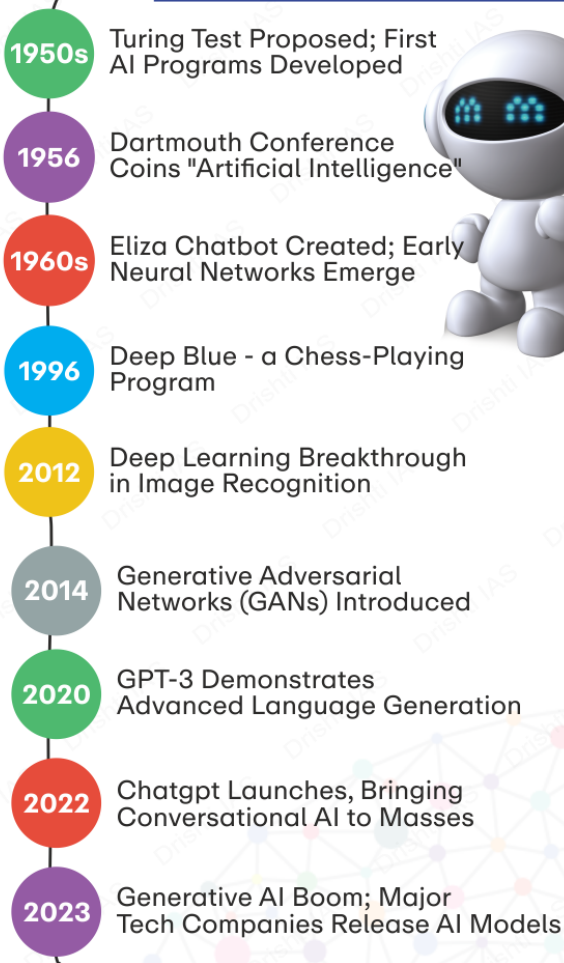
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Artificial Intelligence (AI)

AI is the simulation of human intelligence in machines programmed to think and learn like humans, capable of problem-solving, reasoning, and adapting to new information.

AI Timeline - Major Milestones



Applications of AI

- ↳ **Healthcare:** Personalised medicine
- ↳ **Finance:** Algorithmic trading
- ↳ **Transportation:** Autonomous vehicles
- ↳ **Marketing & Customer Service:** Targeted advertising, chatbots
- ↳ **Education:** Adaptive learning systems, personalised tutoring
- ↳ **Agriculture:** Crop monitoring
- ↳ **Cybersecurity:** Threat detection
- ↳ **Energy:** Smart grid management, consumption forecasting

Concerns

- ↳ Deepfakes & misinformation
- ↳ Algorithmic bias
- ↳ Automation & job displacement
- ↳ Privacy issues
- ↳ Data ownership & liability issue
- ↳ Ethical decision-making complexes

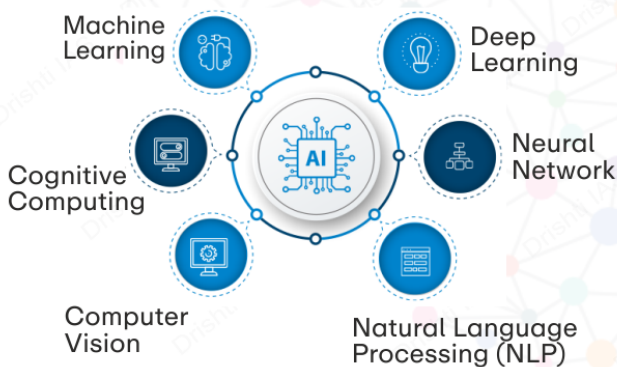
Regulating AI

- ↳ **Global Partnership on AI (GPAI)** launched in 2020
- ↳ **Bletchley Declaration (2023):** Enhance Global Collaboration on AI
- ↳ **G20 New Delhi Leaders' Declaration (2023):** Harnessing AI responsibly for good and for all
- ↳ **Hiroshima AI Process (2023)** by G7

India and AI

- ↳ **National Strategy For AI 2018**
- ↳ **AI For All:** Self-learning online program
- ↳ **GPAI Summit 2023** hosted by India
- ↳ **IndiaAI Mission 2024**
- ↳ **US India Artificial Intelligence (USIAI) Initiative:** AI cooperation in critical areas
- ↳ **AIRAWAT** (AI Research, Analytics and Knowledge Assimilation Platform): Supercomputer

KEY COMPONENTS OF AI



What is Sovereign AI?

- **About:** Sovereign AI refers to a nation's ability to develop, control, and deploy artificial

intelligence using its own infrastructure, data, workforce, and business networks.

- This includes developing **AI models, infrastructure, and fostering talent** within the country.
- **Growth of AI:** In 2018, a 340-million-parameter model was considered **large (LLMs)**, while today, **ChatGPT has 1.8 trillion parameters**, Gemini has 1.5 trillion, and China's DeepSeek has 240 billion.
 - Parameters are **internal variables** that are **adjusted** during **training** to improve a **model's performance**.

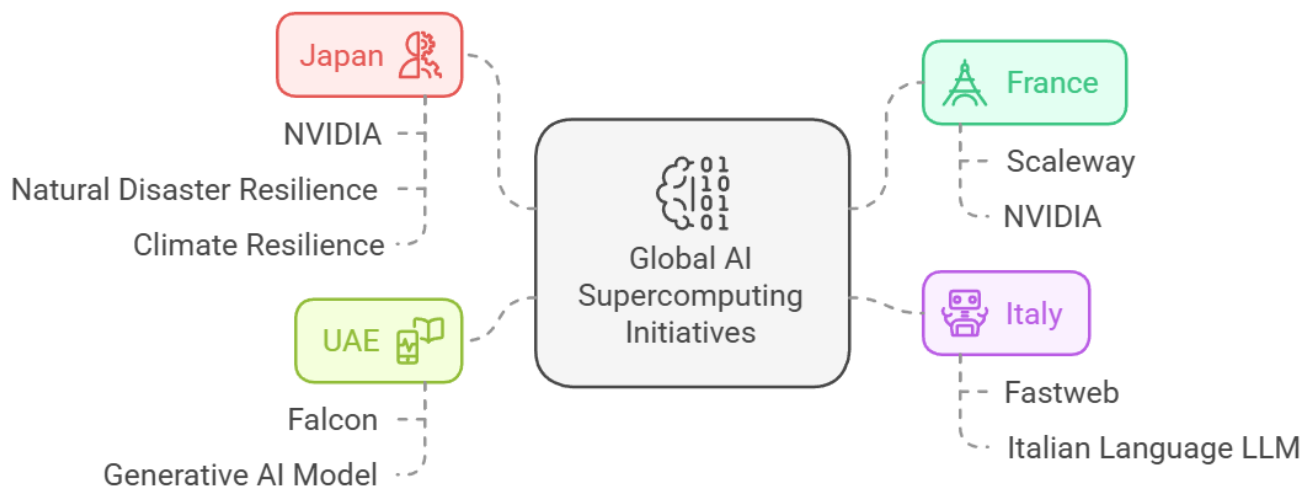
▪ **Key Aspects:**

- **National Control:** Sovereign AI ensures alignment with **national laws, regulations, and ethics**.
- **Data Sovereignty:** It emphasizes data control within borders, **safeguarding privacy and national security**.
- **AI in Governance:** **Generative AI** is reshaping markets, governance, industries, and work dynamics, with **AI-powered copilots** assisting professionals.
- **Ethical Considerations:** Nations set **security protocols and ethical standards** for AI use.
- **Strategic Autonomy:** Sovereign AI reduces reliance on **foreign technologies**, promoting domestic AI development.
- **Economic Competitiveness:** AI is key to industrial innovation; without it, India risks falling behind globally.
- **Various Applications:** Sovereign AI is used in critical sectors like **defense, healthcare, and transportation**.

▪ **India's Position:** **Tata Group and Reliance** are developing **AI infrastructure and Large Language Models (LLMs)** for India.

- India allocated **USD 1.2 billion** for a sovereign AI project, including an **AI supercomputer** with thousands of chips under **IndiaAI Mission**.

▪ **Global AI Cooperation:** A proposed **Global AI Compact** suggests that **AI resources** should be shared across nations, ensuring **equitable access to critical technologies**.



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)

PDF Reference URL: <https://www.drishtiias.com/printpdf/sovereign-ai>

