

IMPACT OF AI ON INDIA

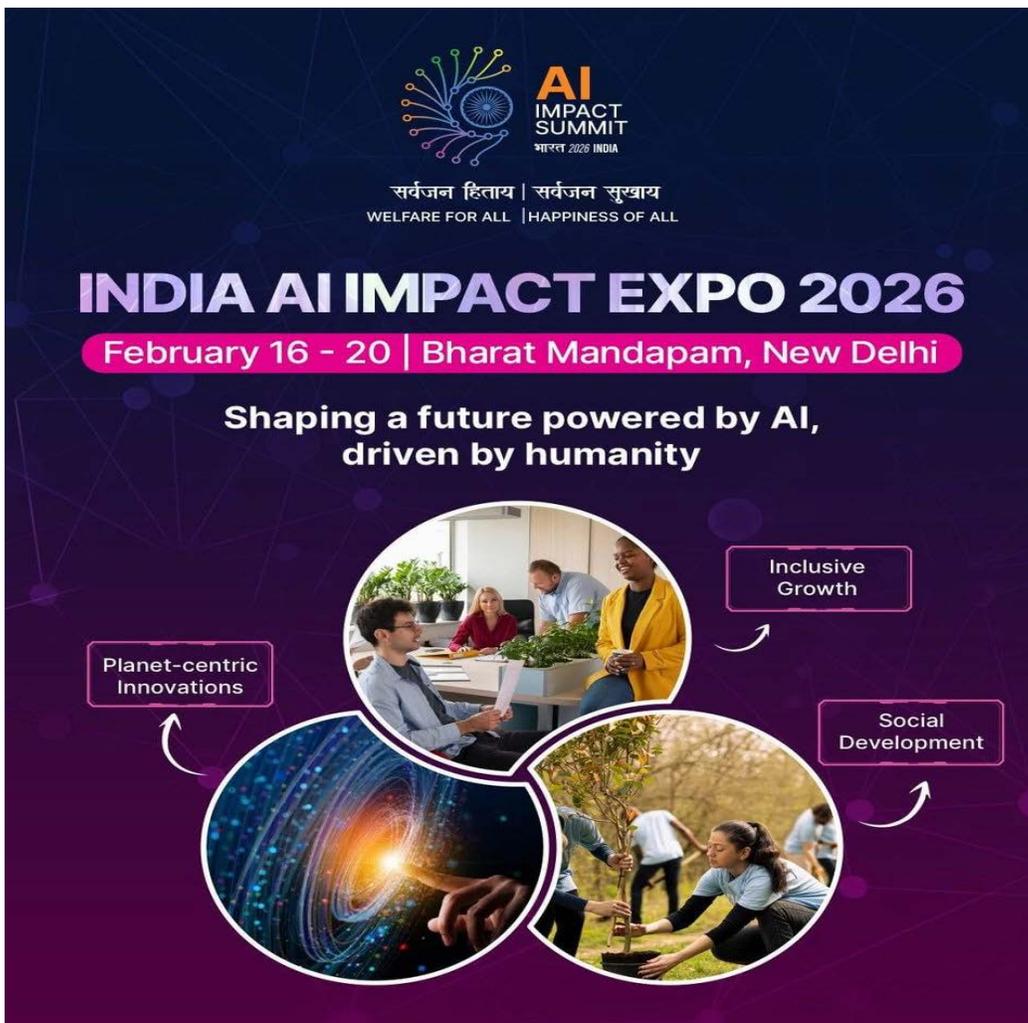
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Context:

- Prime Minister Narendra Modi inaugurated the five-day AI Impact Summit, which aims to declare a "shared roadmap for global AI governance and collaboration".
- The India AI Impact Summit 2026 is being held from 16 to 20 February at Bharat Mandapam in New Delhi.



1. What is India AI summit?

- Underscoring **India's commitment to responsible and inclusive AI**, Hon'ble Prime Minister **Narendra Modi** inaugurated the **India AI Impact Expo on 16 February 2026** in **New Delhi at Bharat Mandapam**, New Delhi.
- Along with the summit, '**India AI Impact Expo 2026**' is also being organized.
- The Summit, the **first global AI gathering to be hosted in the Global South**, has witnessed unprecedented participation, with over **20 Heads of State, 60 Ministers, and 500 global AI leaders**.
- On **19 February 2026**, the **Hon'ble Prime Minister** is scheduled to deliver the **inaugural address**, setting the tone for enhanced global cooperation and advancing **India's vision for inclusive, trusted, and development-oriented artificial intelligence**.



DAY 1 FEBRUARY 16, 2026 | Monday

Date	Event
16 February 2026	Keynotes / Panel Discussions / Roundtables Bharat Mandapam / Sushma Swaraj Bhawan / Ambedkar Bhawan, New Delhi

DAY 2 FEBRUARY 17, 2026 | Tuesday

Date	Event
17 February 2026	Release of Knowledge Compendiums (Casebook on AI Health, AI in Energy, AI & Gender Empowerment, AI in Education, AI & Agriculture, AI in Disabilities) Bharat Mandapam, New Delhi
	Seminar on Applied AI AI by HER: Global Impact Challenge Sushma Swaraj Bhawan, New Delhi
	Keynotes / Panel Discussions / Roundtables Bharat Mandapam / Sushma Swaraj Bhawan / Ambedkar Bhawan, New Delhi

DAY 3 FEBRUARY 18, 2026 | Wednesday

Date	Event & Venue
18 February 2026	Research Symposium Bharat Mandapam, New Delhi
	Industry Session AI by HER: Global Impact Challenge Sushma Swaraj Bhawan, New Delhi
	Keynotes / Panel Discussions / Roundtables Bharat Mandapam / Sushma Swaraj Bhawan / Ambedkar Bhawan, New Delhi
	Summit Dinner Convention Centre, New Delhi

DAY 4 FEBRUARY 19, 2026 | Thursday

Date	Event & Venue
19 February 2026	Opening Ceremony Bharat Mandapam, New Delhi
	Leaders' Plenary CEO Roundtable
	Keynotes / Panel Discussions / Roundtables Bharat Mandapam / Sushma Swaraj Bhawan / Ambedkar Bhawan, New Delhi

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AI Impact Expo

16–20 February 2026
Bharat Mandapam, New Delhi



Notable Attendees At the India AI Impact Summit 2026

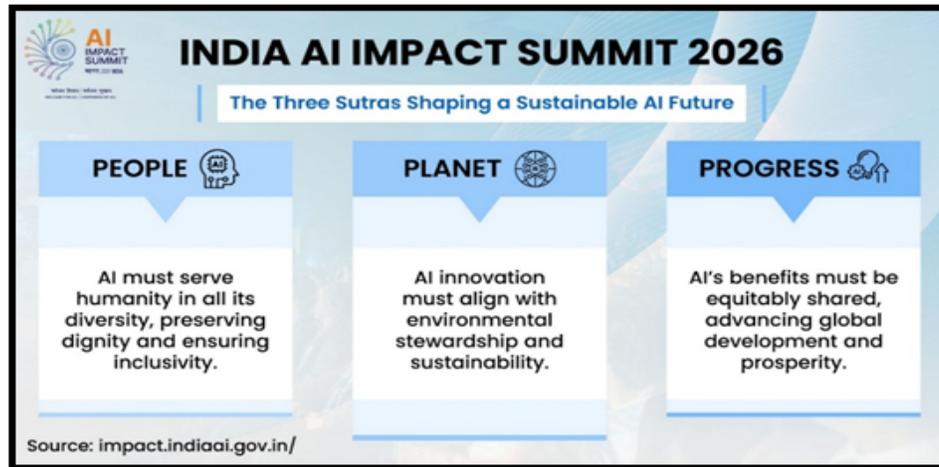
The summit features participation from leading voices shaping the global AI landscape

 Bill Gates Chair, Gates Foundation	 Sundar Pichai CEO, Google and Alphabet	 Demis Hassabis Co-founder & CEO, Google DeepMind	 Jensen Huang Founder, President & CEO, NVIDIA	 Mukesh Ambani Chairman & Managing Director, Reliance Industries Limited
 Berge Brende President and CEO, World Economic Forum	 Nandan Nilekani Co-Founder and Chairman, Infosys Technologies Limited	 Mr. krithivasan CEO and Managing Director, Tata Consultancy Services	 Dario Amodei CEO, Anthropic	 Anna Tumadóttir CEO, Creative Commons

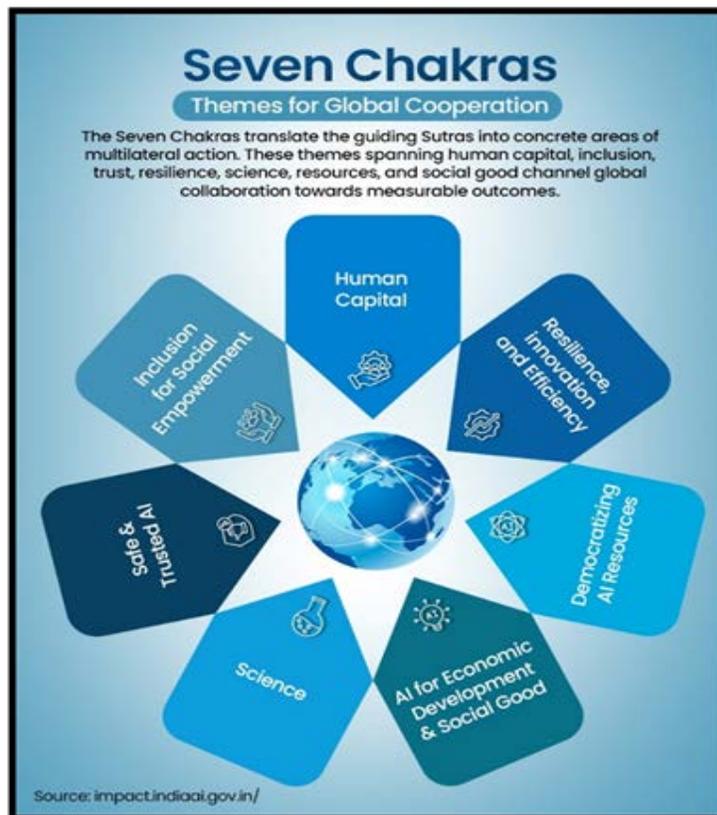
Source: [Impact.indiaai.gov.in](https://impact.indiaai.gov.in)

2. Mention about Foundational Pillars of India AI summit?

- The **India–AI Impact Summit 2026** aims to advance an impact-oriented and **people-centric approach to Artificial Intelligence**, with emphasis on delivering measurable social and economic outcomes.
- The Summit is anchored on three foundational pillars, known as 'Sutras'—a Sanskrit term meaning guiding principles or essential threads that weave together wisdom and action.
- These Sutras define how AI can be harnessed through **multilateral cooperation for collective benefit**.



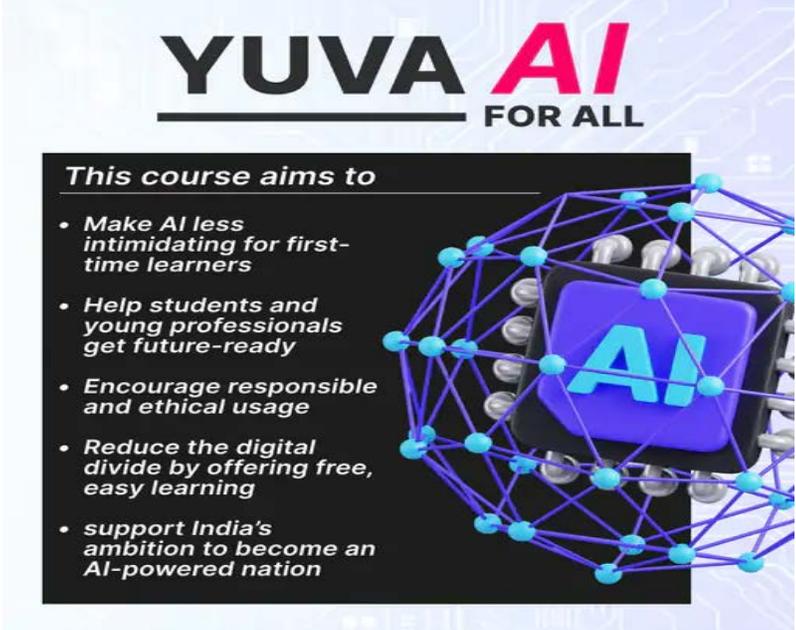
- Building on the **three foundational Sutras**, the deliberations at the **AI Impact Summit** is structured around **7 Chakras**.



3. Mention key flagship events of AI India summit?

- A major highlight of the Summit is the **three flagship Global Impact Challenges—AI for ALL, AI by HER, and YUVAi**—designed to identify scalable, **development-oriented AI solutions aligned with national priorities.**

Events	Description
AI for ALL	<ul style="list-style-type: none"> • Global Impact Challenge is aimed at identifying AI solutions with potential for large-scale impact. • Implemented in partnership with Startup India under the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, and the Digital India Bhashini Division, the Challenge invites participation from students, working professionals, researchers, and startups. • It focuses on widely deployable AI solutions across sectors such as urban infrastructure and mobility. • Selected solutions will be showcased at the Summit, with awards up to INR 2.50 crore.
AI by HER	<ul style="list-style-type: none"> • Global Impact Challenge is aimed at promoting women-led innovation in AI. • Implemented in partnership with NITI Aayog’s Women Entrepreneurship Platform, the Challenge invites women technologists to present AI solutions addressing large-scale and real-world public challenges. • Selected solutions will be showcased at the Summit, with awards up to INR 2.50 crore.
YUVAi	<ul style="list-style-type: none"> • Global Youth Challenge is aimed at encouraging young innovators to develop AI solutions for real-world challenges. • The Challenge invites participation from youth individuals and teams in the 13–21 age group. • It is being implemented in partnership with MyBharat and the National Institute of Electronics and Information Technology, to bring their most innovative AI solutions to solve real-world problems. • Selected participants will receive awards, with prizes worth up to INR 85 lakh.

	 <p>YUVA AI FOR ALL</p> <p><i>This course aims to</i></p> <ul style="list-style-type: none"> • <i>Make AI less intimidating for first-time learners</i> • <i>Help students and young professionals get future-ready</i> • <i>Encourage responsible and ethical usage</i> • <i>Reduce the digital divide by offering free, easy learning</i> • <i>support India's ambition to become an AI-powered nation</i>
<p>Research Symposium</p>	<ul style="list-style-type: none"> • The Research Symposium on AI and Its Impact, being held on 18 February 2026 at Bharat Mandapam, New Delhi, serves as the principal academic platform of the India–AI Impact Summit 2026, with IIIT Hyderabad as the knowledge partner. • The Symposium has received around 250 research submissions from Africa, Asia, and Latin America, reflecting strong Global South participation
<p>The India AI Impact Expo 2026</p>	<ul style="list-style-type: none"> • The India AI Impact Expo 2026 is being organised by the MeitY, with Software Technology Parks of India as the custodian. • The expo is spread across over 70,000 square metres. • The Expo is hosting visitors from across the globe across seven thematic pavilions. • Designed as a business-focused platform, it has demonstrated the transition of Artificial Intelligence from research and pilots to large-scale deployment, bringing together innovators and investors to engage on AI solutions addressing sectoral and global challenges.
<p>India AI Tinkerpreneur</p>	<ul style="list-style-type: none"> • India AI Tinkerpreneur is a national-level summer bootcamp aligned with the India–AI Impact Summit 2026, aimed at building AI and entrepreneurial capabilities among school students from Classes 6 to 12. • The programme equips young learners with hands-on exposure to AI tools and technologies and encourages them to develop AI-enabled products and solutions addressing social-impact challenges.

4. Mention about the expected outcome of the summit?

- The **India AI Impact Summit 2026** is expected to **deliver focused, outcome-driven** results aligned with **national priorities**.
- The Summit is emphasising **practical AI deployment, policy alignment, and institutional coordination** to support effective **implementation across government and industry**.
- It is **strengthening governance and regulatory frameworks**, assess regional preparedness for **AI-led industrial growth**, and promote skill development and workforce transition.
- The Summit is also **expand awareness and understanding of AI applications**, and foster sustained partnerships among **government, academia, startups**, and industry to enable responsible and **inclusive growth of the AI ecosystem**.



5. Why India AI summit matters for India?

- Hosting such a high-level **global AI gathering signals India's growing influence in technology and digital policy**.
- It also **strengthens India's position as a bridge between advanced economies and developing nations in shaping AI rules**.

AI Impact Expo	<ul style="list-style-type: none"> ● A mega-exhibition spanning over 70,000 square meters. ● Over 300 companies from over 30 countries will showcase their AI gadgets and technologies. ● The public will be able to see how AI works in real life.
Education and Skilling	<ul style="list-style-type: none"> ● Programs like 'YUVAI' and 'AI for ALL' will be launched for students and youth, allowing them to learn how to use AI tools to enhance their education and careers.
Focus on everyday problems	<ul style="list-style-type: none"> ● The expo will showcase AI models that help identify crop diseases in agriculture, improve treatment in hospitals, and simplify language translation.

Meeting Startup Leaders	<ul style="list-style-type: none"> ● Startups from India and abroad will showcase their unique products. ● Members of the public will be able to interact directly with these innovators and understand what the technology of the future will look like.
Experience Zone	<ul style="list-style-type: none"> ● The Summit features several thematic pavilions where visitors can experience AI-powered machines and software, such as smart health monitoring and AI tutors.

6. Mention about the India’s Guinness World Record in AI summit?

- On the **third day of the India AI Impact Summit 2026**, a quiet sense of achievement settles over Bharat Mandapam in New Delhi.
- **India has secured the Guinness World Records title for the most pledges received for an AI responsibility campaign in 24 hours.**
- A total of **250,946 valid pledges** are recorded between 16 and 17 February.
- The **figure comfortably surpasses the initial target of 5,000**. It is **not merely a record**.
- It is a statement of intent from a **young nation** that is choosing to **shape artificial intelligence with conscience**.

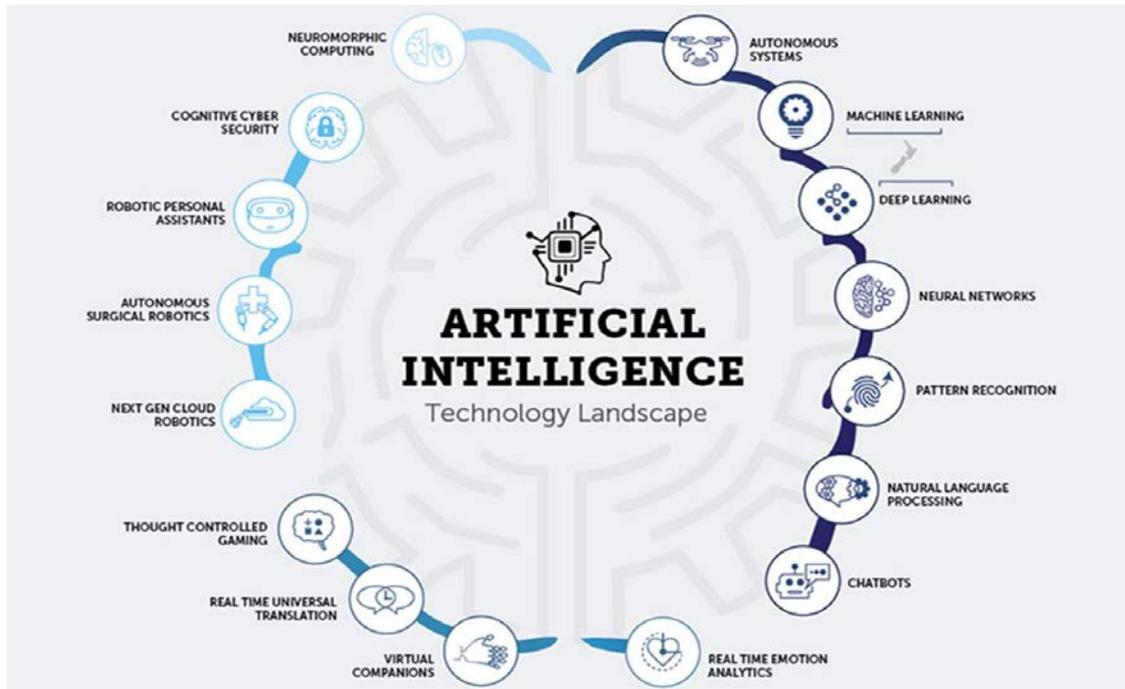


7. What is Artificial Intelligence(AI)?

WHAT IS ARTIFICIAL INTELLIGENCE?

<p style="text-align: center;">Machine Learning</p> <p>Using sample data to train computer programs to recognize patterns based on algorithms.</p> <div style="text-align: center;"> </div>	<p style="text-align: center;">Neural Networks</p> <p>Computer systems designed to imitate the neurons in a brain.</p> <div style="text-align: center;"> </div>	<p style="text-align: center;">Natural Language Processing</p> <p>The ability to understand speech, as well as understand and analyze documents.</p> <div style="text-align: center;"> </div>	<p style="text-align: center;">Robotics</p> <p>Machines that can assist people without actual human involvement.</p> <div style="text-align: center;"> </div>
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- **Artificial intelligence (AI)** is the **theory and development** of computer systems **capable of performing tasks** that historically required human intelligence, such as **recognizing speech, making decisions, and identifying patterns**.
- **AI is an umbrella term** that encompasses a wide variety of technologies, including **machine learning, deep learning, and natural language processing (NLP)**.



What Is AI or Artificial Intelligence?

Artificial intelligence or AI is the branch of computer science that studies machine intelligence.

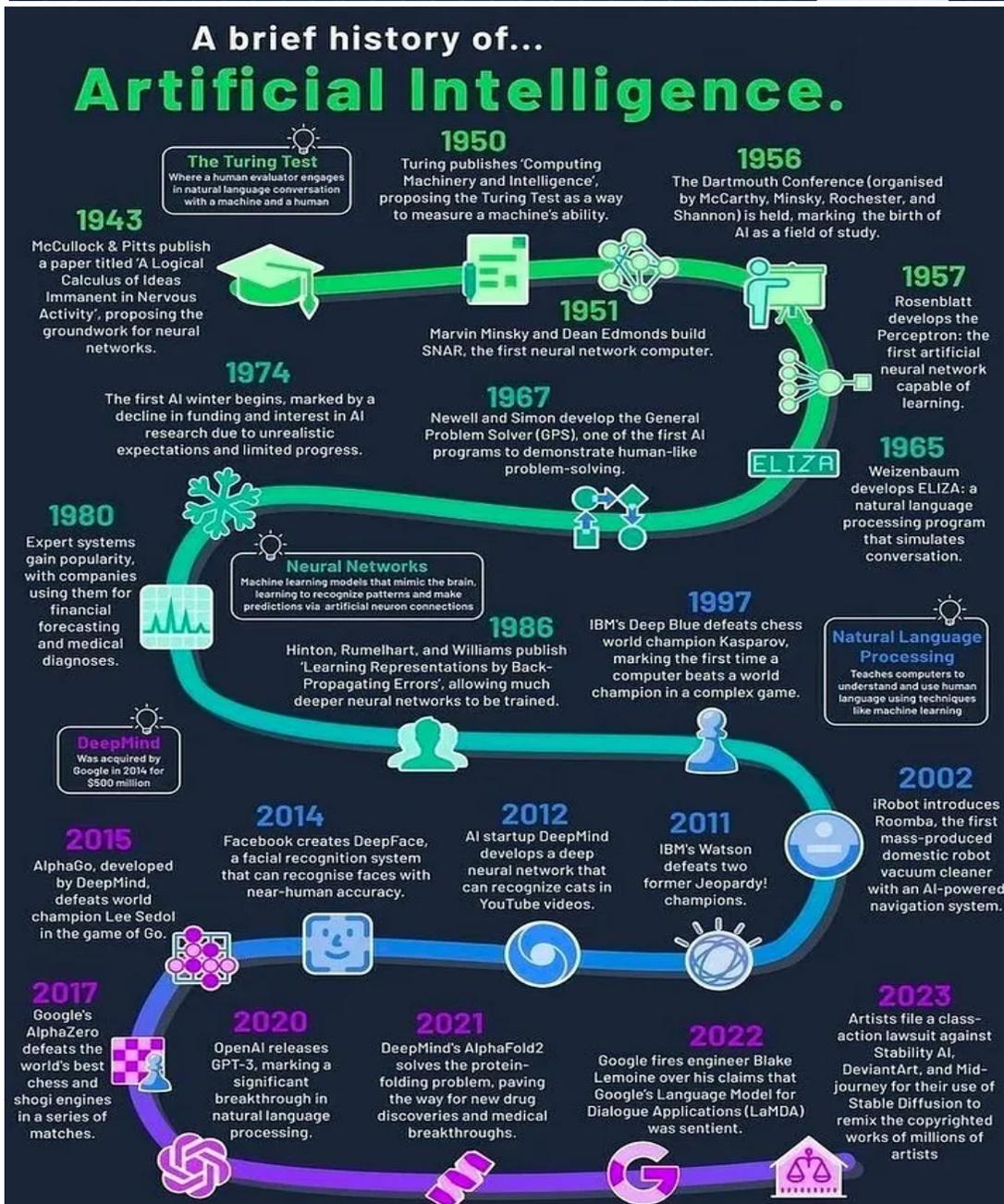
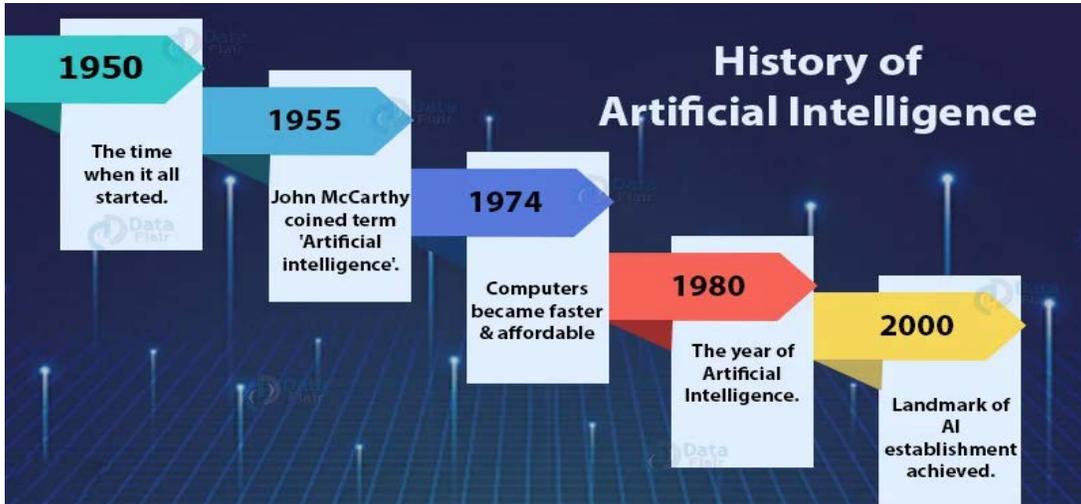
EXAMPLES OF APPLICATIONS

- Search engines (Google)
- Content recommendations (Netflix, YouTube)
- Self-driving vehicles
- Automatic language translation
- Facial recognition
- Computer games
- Spam filters

An AI is a computer system that performs tasks that usually require human intelligence.

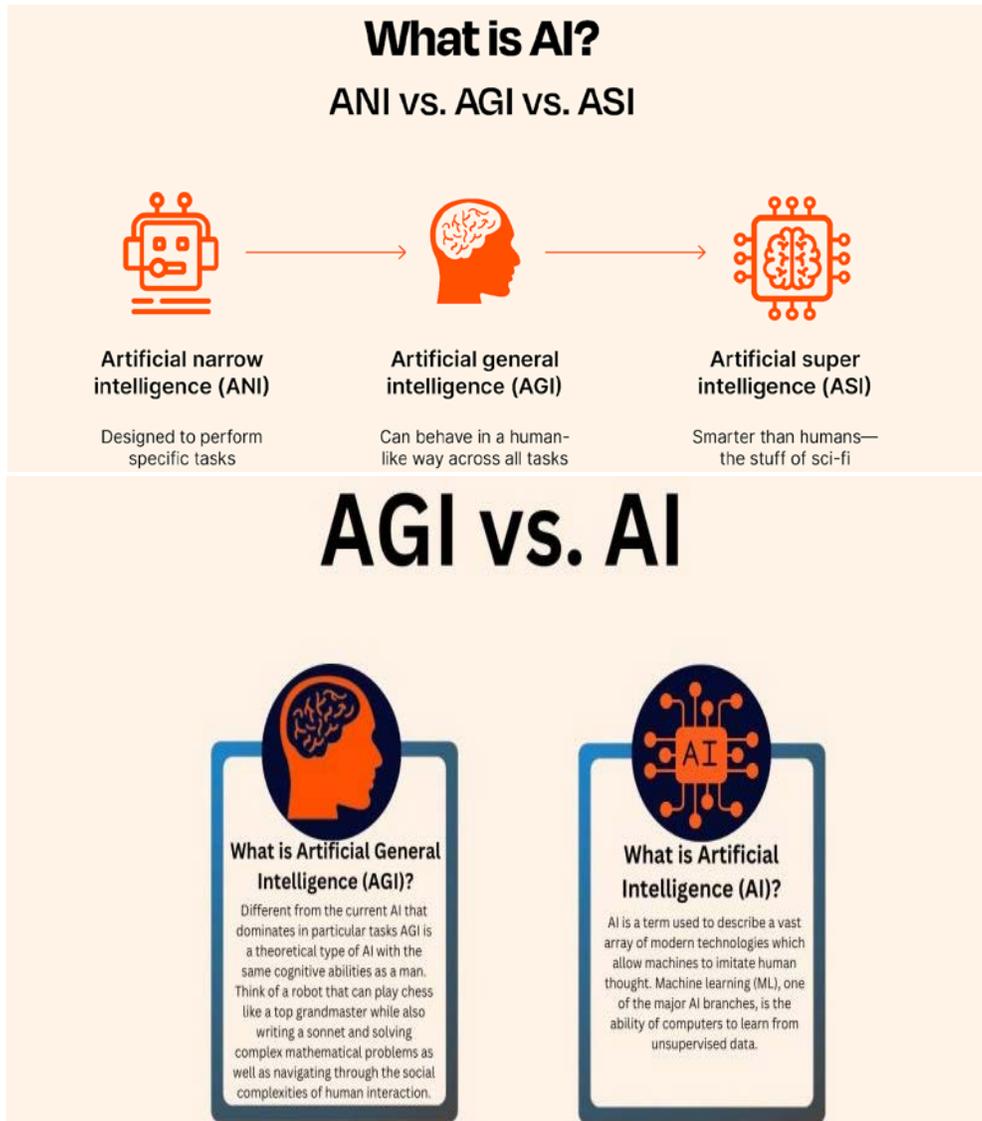


8. What is the history of AI?



9. Mention different types of AI?

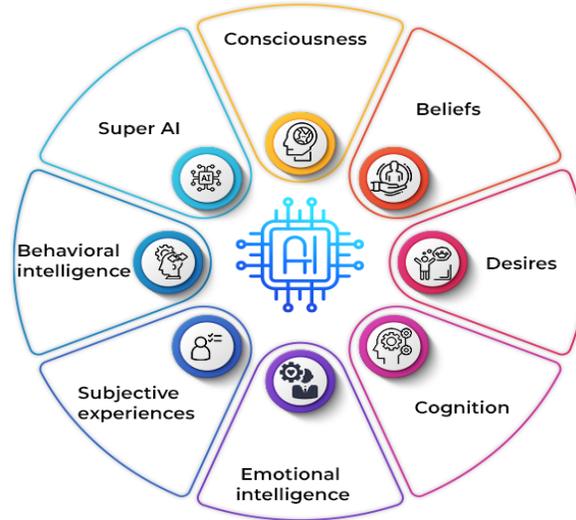
- There are **three kinds of AI based on capabilities:**



Types of AI	Analysis
Narrow AI	<ul style="list-style-type: none"> • Artificial Narrow Intelligence, also known as Weak AI (what we refer to as Narrow AI), is the only type of AI that exists today. • It can be trained to perform a single or narrow task, often far faster and better than a human mind can. • However, it can't perform outside of its defined task.

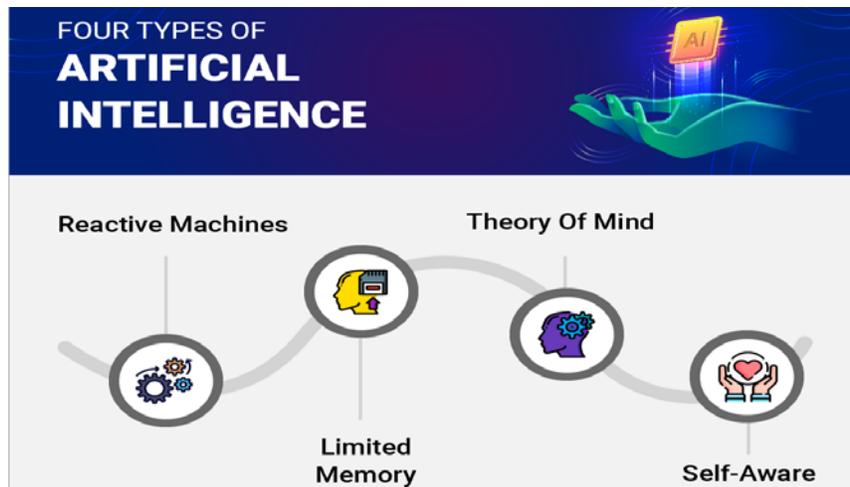
	<div data-bbox="646 142 1188 667" data-label="Diagram"> </div> <ul style="list-style-type: none"> ● Siri, Amazon’s Alexa and IBM Watson® are examples of Narrow AI. Even OpenAI’s ChatGPT is considered a form of Narrow AI because it’s limited to the single task of text-based chat.
<p>General AI</p>	<ul style="list-style-type: none"> ● Artificial General Intelligence (AGI), also known as Strong AI, is today nothing more than a theoretical concept. <div data-bbox="539 982 1295 1474" data-label="Diagram"> </div> <ul style="list-style-type: none"> ● With more resemblance to human capabilities, general artificial intelligence is a more advanced form that can involve visual and language processing, contextual understanding, and the ability to adapt to a range of tasks. ● AGI can use previous learnings and skills to accomplish new tasks in a different context without the need for human beings to train the underlying models. ● It’s considered to be far off in the future.
<p>Artificial super AI</p>	<ul style="list-style-type: none"> ● Artificial superintelligence is still only a theory, but advances in nascent AI are raising interesting and troubling questions for the future of humanity.

HUMAN-LIKE CAPABILITIES OF SUPER AI



- **Super AI** is commonly referred to as **artificial superintelligence** and, like **AGI**, is **strictly theoretical**.
- If ever realized, **Super AI would think, reason, learn, make judgements and possess cognitive abilities** that surpass those of human beings.

- There are **four types of AI** based on functionalities:



Type	Analysis
Reactive Machine AI	<ul style="list-style-type: none"> ● Reactive machines are AI systems with no memory and are designed to perform a very specific task. ● Since they can't recollect previous outcomes or decisions, they only work with presently available data. ● Reactive AI stems from statistical math and can analyze vast amounts of data to produce a seemingly intelligent output.

	<p>Examples of Reactive Machine AI:</p> <ul style="list-style-type: none"> ● IBM Deep Blue: IBM’s chess-playing supercomputer AI beat chess grandmaster Garry Kasparov in the late 1990s by analyzing the pieces on the board and predicting the probable outcomes of each move.
<p>Limited Memory AI</p>	<ul style="list-style-type: none"> ● Unlike Reactive Machine AI, this form of AI can recall past events and outcomes and monitor specific objects or situations over time. ● Limited Memory AI can use past- and present-moment data to decide on a course of action most likely to help achieve a desired outcome. <div data-bbox="727 569 1138 873" data-label="Image"> </div> <p style="text-align: center;">LIMITED MEMORY AI</p> <ul style="list-style-type: none"> ● However, while Limited Memory AI can use past data for a specific amount of time, it can’t retain that data in a library of past experiences to use over a long-term period. <p>Examples of Limited Memory AI:</p> <ul style="list-style-type: none"> ● Generative AI: Generative AI tools such as ChatGPT, Bard and DeepAI rely on limited memory AI capabilities to predict the next word, phrase or visual element within the content it’s generating. ● Virtual assistants and chatbots: Siri, Alexa, Google Assistant, Cortana and IBM Watson Assistant combine natural language processing (NLP) and Limited Memory AI to understand questions and requests, take appropriate actions and compose responses. <div data-bbox="505 1453 1344 1835" data-label="Image"> </div> <ul style="list-style-type: none"> ● Self-driving cars: Autonomous vehicles use Limited Memory AI to understand the world around them in real-time and make informed decisions on when to apply speed, brake, make a turn, etc

Theory of Mind AI

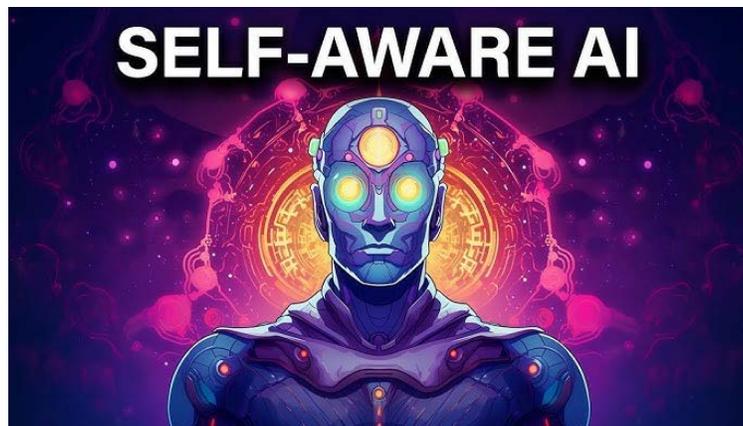
- **Theory of Mind AI** is a functional class of AI that falls underneath the **General AI**.
- Though an **unrealized form of AI today**, AI with **Theory of Mind functionality** would **understand the thoughts and emotions of other entities**.
- This understanding **can affect how the AI interacts with those around them**.



- In theory, this would **allow the AI to simulate human-like relationships**.
- Because **Theory of Mind AI could infer human motives and reasoning**, it would **personalize its interactions with individuals** based on their unique emotional needs and intentions.

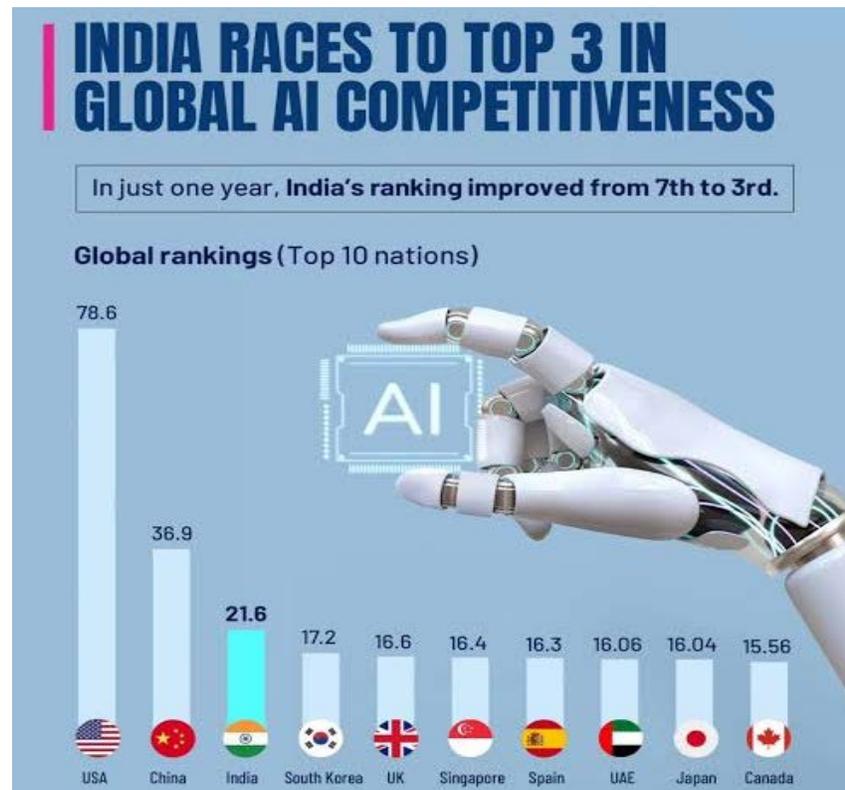
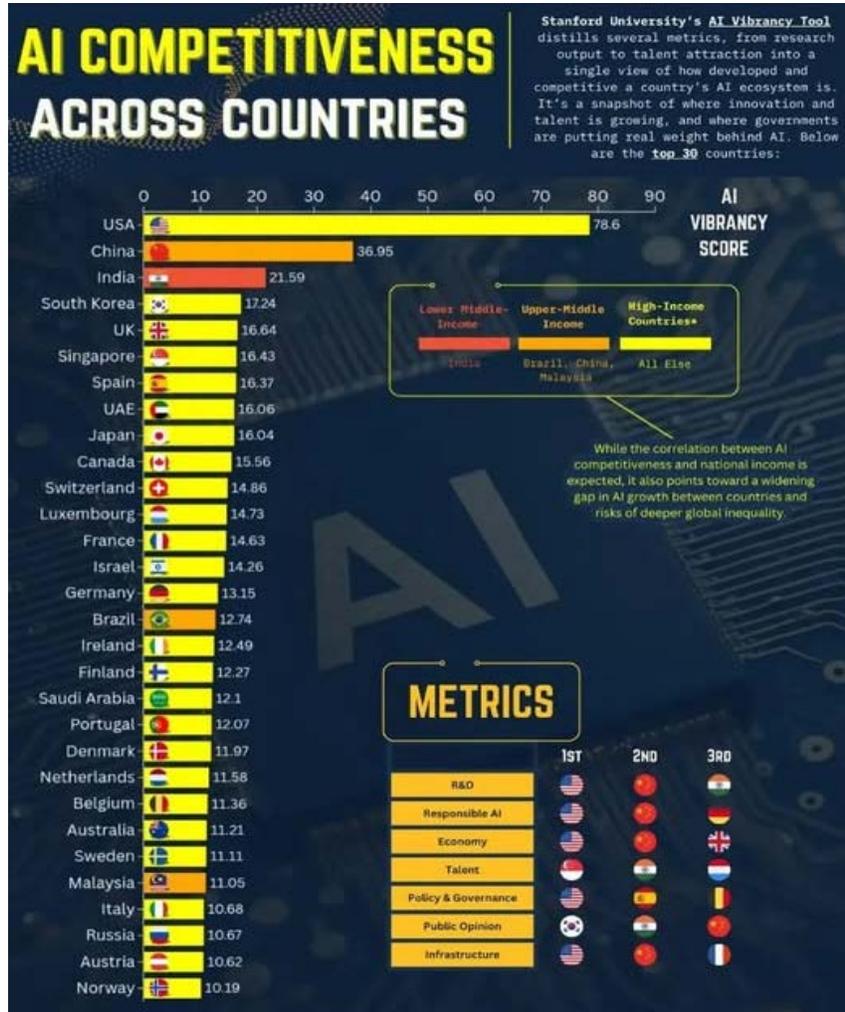
Self-Aware AI

- **Self-Aware AI** is a kind of **functional AI class** for applications that would **possess super AI capabilities**.



- Like theory of mind AI, **Self-Aware AI is strictly theoretical**.
- If ever achieved, it would **have the ability to understand its own internal conditions and traits along with human emotions and thoughts**.
- It would also have its own set of **emotions, needs and beliefs**.

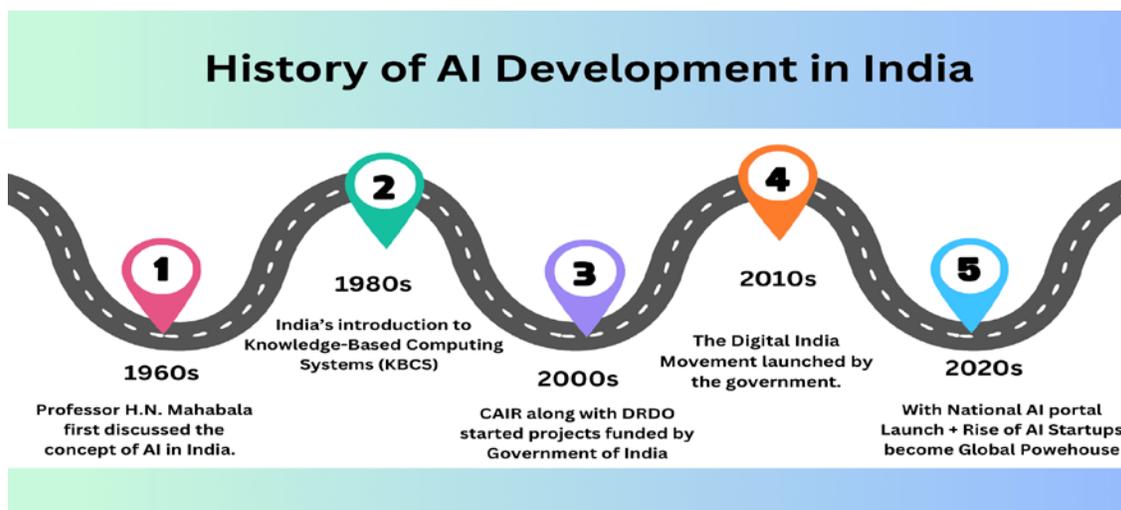
10. Where does India stand in the global AI race?



- **India** has emerged as the **world's third most competitive country** in artificial intelligence, according to **Stanford University's Global AI Vibrancy Tool**.
- The **latest ranking highlights** how India's fast-growing tech ecosystem and strong talent base are helping the **country play a key role in the global AI race**.
- The **Visual Capitalist chart**, based on **Stanford's data**, shows the **United States clearly leading the world in AI competitiveness** with a **vibrancy score of 78.6**.
- **China is placed second with a score of 36.95**, while **India ranks third with a score of 21.59**.
- This puts India ahead of several advanced economies, including **South Korea, the United Kingdom, Singapore, Japan, Canada, Germany and France**.



11. What is the history of AI development in India?



12. What is the impact of Artificial Intelligence on various sectors in India?

Sectors	Impact														
Healthcare	<ul style="list-style-type: none"> AI is revolutionizing the healthcare industry by enabling more accurate diagnoses, personalized treatments, and improved patient outcomes. Machine learning algorithms can analyze medical images, such as X-rays and MRIs, to detect anomalies and assist radiologists in their diagnoses. <p>State of Indian health care</p> <p>22.5%: CAGR of Indian health care between 2016 and 2022</p> <p>\$650 bn: Expected size of Indian health care market by 2025</p> <p>54.8%: Share of out-of-pocket medical expenditure in total health spends</p> <p>\$1.6 bn: Size of AI in health care by 2025 in India</p> <p>40.6%: CAGR of AI in health care from 2020-25</p> <p>Bringing AI in health care (In %)</p> <ul style="list-style-type: none"> Pharma, life sciences organisations adopting AI at a small scale: 82 (12% of these organisations integrated AI in functional processes) Medtech firms that adopted AI: 36 (50% of these firms are in proof of concept phase) Firms with dedicated AI budgets: 50 Health care companies piloting Generative AI projects in 2023: 36 <p>Rapid growth (In \$ bn)</p> <p>Market size of AI in Indian health care</p> <table border="1"> <tr> <th>Year</th> <td>2020</td> <td>2021</td> <td>2022</td> <td>2023</td> <td>2024</td> <td>2025</td> </tr> <tr> <th>Market Size (\$ bn)</th> <td>0.12</td> <td>0.20</td> <td>0.34</td> <td>0.57</td> <td>0.95</td> <td>1.60</td> </tr> </table> <p>Source: 'Advancing Healthcare in India; Navigating the transformative impact of AI' by Nasscom, Kantar</p> <ul style="list-style-type: none"> AI-powered chatbots and virtual assistants are enhancing patient interactions and providing 24/7 support. Additionally, AI-driven predictive analytics can help healthcare providers identify high-risk patients and intervene early to prevent diseases. 	Year	2020	2021	2022	2023	2024	2025	Market Size (\$ bn)	0.12	0.20	0.34	0.57	0.95	1.60
Year	2020	2021	2022	2023	2024	2025									
Market Size (\$ bn)	0.12	0.20	0.34	0.57	0.95	1.60									
Finance	<ul style="list-style-type: none"> AI is transforming the finance industry by automating repetitive tasks, improving fraud detection, and enhancing customer experiences. AI algorithms can analyze vast amounts of financial data, identify patterns, and make real-time predictions for investment decisions. Robo-advisors are using AI to provide personalized financial advice to investors. AI-powered chatbots and virtual assistants are streamlining customer service, addressing inquiries, and simplifying banking processes. 														

- Moreover, AI-based algorithms can detect fraudulent transactions and prevent financial crimes more effectively.



Manufacturing

- AI is driving the concept of **smart manufacturing by optimizing production processes, reducing downtime, and improving product quality.**

Potential Benefits of AI in Manufacturing



- **AI-powered robots** and automation systems are taking over **repetitive tasks, leading to increased efficiency** and productivity.
- **Machine learning algorithms** are used to predict maintenance needs and schedule proactive repairs, minimizing unplanned downtime.
- **AI-enabled quality control systems** can **detect defects in real-time,** ensuring products meet the highest standards.

Retail sector

- **AI is revolutionizing the retail industry** by enhancing **customer experiences, improving inventory management,** and enabling personalized marketing.

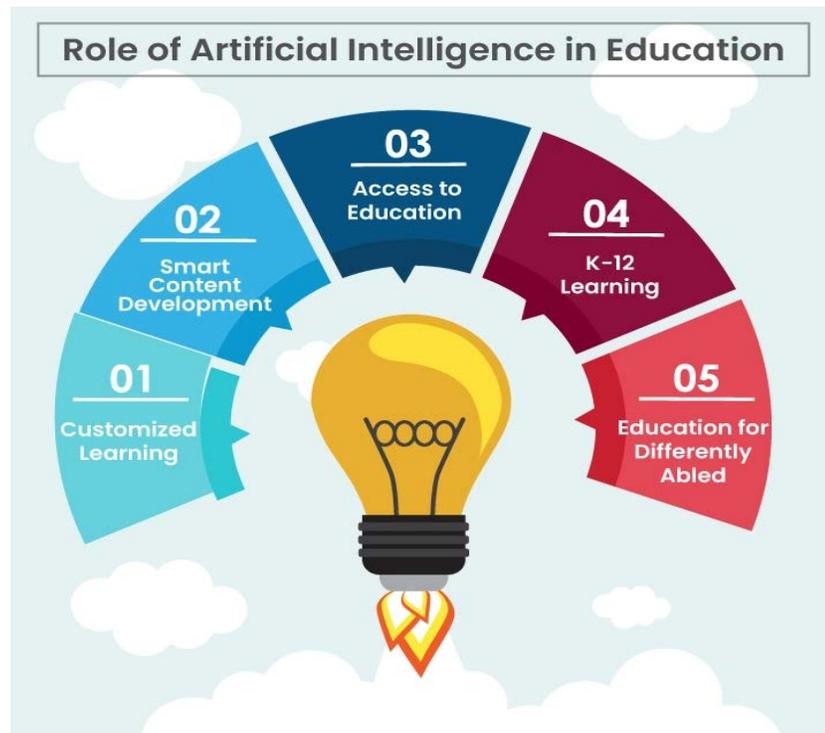
BENEFITS OF AI IN RETAIL



- **Recommendation systems** powered by AI algorithms **provide personalized product suggestions** based on customer preferences and browsing history.

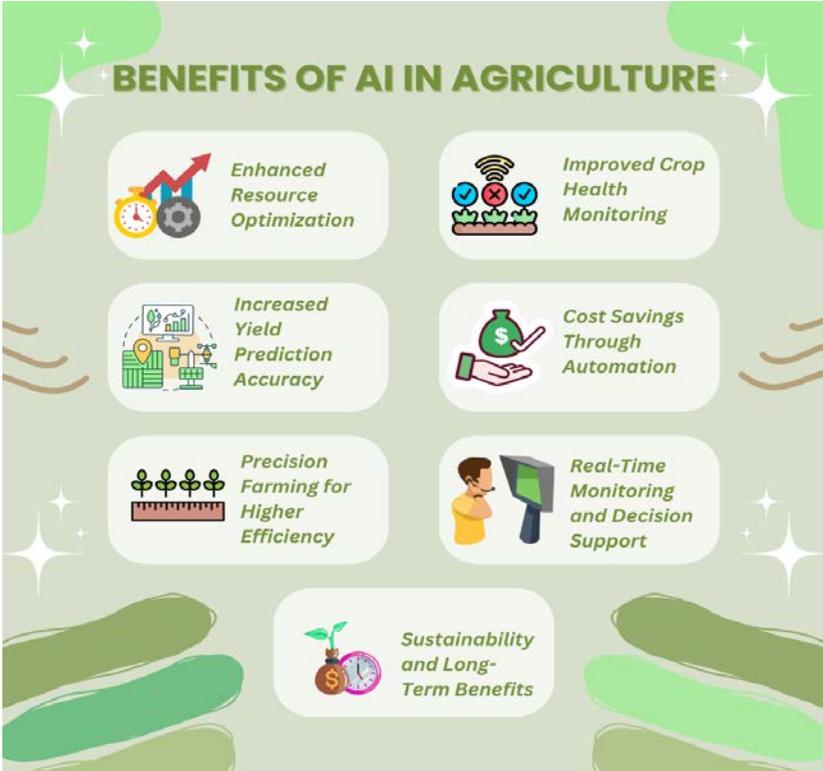
Education

- **AI is transforming the education industry** by personalizing learning experiences, automating administrative tasks, and **facilitating adaptive assessments**.



- **AI-powered learning platforms** can adapt **content based on individual student needs**, providing personalized education pathways.

	<p style="text-align: center;">12 Transformative Applications of AI in Education</p> <div style="display: flex; flex-wrap: wrap; justify-content: space-around;"> <div style="border: 1px solid #ccc; border-radius: 10px; padding: 5px; width: 45%; margin-bottom: 10px;"> <p style="text-align: center;">01 Personalized Learning</p> </div> <div style="border: 1px solid #ccc; border-radius: 10px; padding: 5px; width: 45%; margin-bottom: 10px;"> <p style="text-align: center;">02 Automated Administrative Operations</p> </div> <div style="border: 1px solid #ccc; border-radius: 10px; padding: 5px; width: 45%; margin-bottom: 10px;"> <p style="text-align: center;">03 Smart Content Creation</p> </div> <div style="border: 1px solid #ccc; border-radius: 10px; padding: 5px; width: 45%; margin-bottom: 10px;"> <p style="text-align: center;">04 AI-Driven Classrooms for Adaptable Access</p> </div> <div style="border: 1px solid #ccc; border-radius: 10px; padding: 5px; width: 45%; margin-bottom: 10px;"> <p style="text-align: center;">05 Self-Directed Learning via Conversational AI</p> </div> <div style="border: 1px solid #ccc; border-radius: 10px; padding: 5px; width: 45%; margin-bottom: 10px;"> <p style="text-align: center;">06 Closing the Skill Gap</p> </div> <div style="border: 1px solid #ccc; border-radius: 10px; padding: 5px; width: 45%; margin-bottom: 10px;"> <p style="text-align: center;">07 Customized Data-Based Feedback</p> </div> <div style="border: 1px solid #ccc; border-radius: 10px; padding: 5px; width: 45%; margin-bottom: 10px;"> <p style="text-align: center;">08 Curriculum Planning and Development</p> </div> <div style="border: 1px solid #ccc; border-radius: 10px; padding: 5px; width: 45%; margin-bottom: 10px;"> <p style="text-align: center;">09 Secure and Decentralized Learning Systems</p> </div> <div style="border: 1px solid #ccc; border-radius: 10px; padding: 5px; width: 45%; margin-bottom: 10px;"> <p style="text-align: center;">10 AI in Examinations</p> </div> <div style="border: 1px solid #ccc; border-radius: 10px; padding: 5px; width: 45%; margin-bottom: 10px;"> <p style="text-align: center;">11 Language Learning</p> </div> <div style="border: 1px solid #ccc; border-radius: 10px; padding: 5px; width: 45%;"> <p style="text-align: center;">12 Special Education Support</p> </div> </div>
<p>Governance and Justice Delivery</p>	<ul style="list-style-type: none"> ● AI is reshaping governance and public service delivery. ● As per the Supreme Court of India, under e-Courts Project Phase III, modern technologies are being integrated to make the justice system more efficient and accessible. ● Artificial Intelligence and its subsets such as Machine Learning, Optical Character Recognition, and Natural Language Processing are being used in translation, prediction, administrative efficiency, automated filing, intelligent scheduling, and communication through chatbots. ● AI Translation Committees in High Courts are overseeing the translation of Supreme Court and High Court judgments into vernacular languages. ● Digital legal platforms such as e-HCR and e-ILR now provide citizens online access to judgments in multiple regional languages, making justice delivery more transparent and inclusive.
<p>Agriculture</p>	<ul style="list-style-type: none"> ● AI is revolutionizing the agricultural sector by optimizing crop yields, reducing resource consumption, and improving farming practices. ● AI algorithms analyze environmental data, soil conditions, and weather patterns to provide farmers with insights on optimal planting times, irrigation schedules, and pest control measures. ● AI-powered drones and robots can monitor crops, identify disease outbreaks, and automate labor-intensive tasks.

	
<p>Weather Forecasting and Climate Services</p>	<ul style="list-style-type: none"> ● AI is strengthening India’s ability to predict and respond to natural events. ● The India Meteorological Department uses AI-based models to forecast rainfall, fog, lightning, and fire. ● The Advanced Dvorak Technique helps estimate cyclone intensity, while MausamGPT, an upcoming AI chatbot, will offer real-time weather and climate advice to farmers and disaster management agencies.

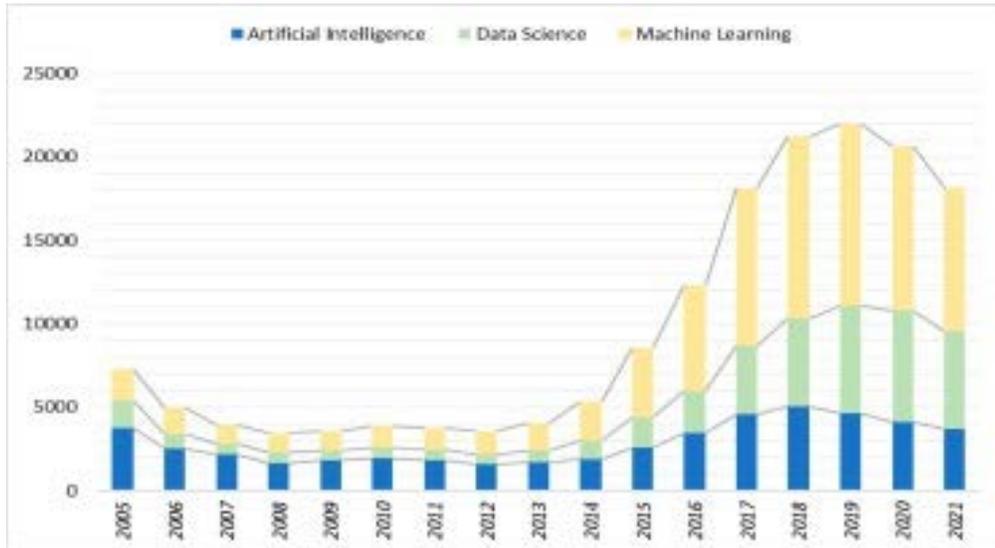
13. Highlight the role of AI in Inclusive Societal Development?

- **NITI Aayog’s report, AI for Inclusive Societal Development** (October 2025), sets a **roadmap for using technology to empower India’s informal workforce**.
- The report draws on **real-life experiences of informal workers**.
- The roadmap discusses **how Artificial Intelligence, Internet of Things, blockchain, robotics, and immersive learning can remove systemic barriers faced by India’s 490 million informal workers**.
- At the heart of this vision is the **Digital ShramSetu Mission**, a national initiative to deploy **frontier technologies at scale for India’s informal sector**.
- The mission focuses on **persona- or sector-led prioritisation, state-driven implementation, regulatory enablement**, and strategic partnerships to ensure affordability and wide adoption.
- It will mobilise **government, industry, and civil society**, guided by a robust multi-level impact evaluation framework.

14. Will AI Lead to Unemployment?

YES

- One of the primary concerns about **AI** is its **potential to automate jobs**, leading to **widespread unemployment**. Industries such as **manufacturing, transportation, and retail** are particularly **vulnerable to automation**.
- AI-powered **customer service bots and checkout systems** could reduce the need for human employees in retail.



- A report by the **McKinsey Global Institute** estimates that by **2030, up to 375 million workers worldwide** may need to switch **occupations due to automation**.

NO

- **Artificial Intelligence** is often seen as a **threat to jobs**, but in reality, it is **creating new kinds of opportunities**.
- According to **NASSCOM's report "Advancing India's AI Skills" (August 2024)**, **India's AI talent base** is expected to grow from **about 6 to 6.5 lakh professionals to more than 12.5 lakh by 2027**, at a compound annual **growth rate of 15 percent**.
- AI is driving demand in areas such as **data science, data curation, AI engineering, and analytics**.
- **As of August 2025, around 8.65 lakh candidates** have enrolled or trained in various emerging technology courses, **including 3.20 lakh in AI and Big Data Analytics**.
- To prepare the workforce for the future, the **Ministry of Electronics and Information Technology, MeitY**, has launched **FutureSkills PRIME**, a national programme focused on **reskilling and upskilling IT professionals** in 10 new and emerging technologies, including AI.
- **As of August 2025, more than 18.56 lakh candidates** had signed up on the **FutureSkills PRIME portal**, and over **3.37 lakh** had **successfully completed their courses**.

15. What are the major ethical concerns associated with the rapid growth of Artificial Intelligence?

- **Artificial intelligence** often finds itself on the **receiving end of controversy**.
- **Numerous conversations** are being had all over the world about the **ethical use of technology**.

Ethical issues	Description
<p>Job Displacement</p>	<ul style="list-style-type: none"> ● Job displacement is a concern that is frequently cited in discussions surrounding AI. ● There is fear that automation will replace certain aspects or entire job roles, causing unemployment rates to spike industries. ● According to the GTIA Business Technology Adoption and Skills Trends report, 81% of U.S. workers have recently seen articles which focus on the replacement of workers with AI. ● The same report found that 3 out of 4 workers are very or somewhat concerned about how automated technologies will impact the workforce.
<p>Privacy</p>	<ul style="list-style-type: none"> ● Training of AI models requires massive amounts of data, some of which includes PII. ● There is currently little insight into how the data is being collected, processed and stored which raises concerns about who can access your data and how they can use it. ● There are other privacy concerns surrounding the use of AI in surveillance. ● Law enforcement agencies use AI to monitor and track the movements of suspects.
<p>Bias</p>	<ul style="list-style-type: none"> ● There is another ethical concern surrounding AI bias. ● Although AI does not inherently come with bias, systems are trained using data from human sources and deep learning which can lead to the propagation of biases through technology. ● For example- <ul style="list-style-type: none"> ▪ An image search for “school girl” will most probably reveal a page filled with women and girls in all sorts of sexualised costumes. ▪ Surprisingly, if you type “school boy”, results will mostly show ordinary young school boys. No men in sexualised costumes or very few.
<p>Deepfakes</p>	<ul style="list-style-type: none"> ● The usage of deepfakes creates ethical concerns. Deepfakes are now able to circumvent voice and facial recognition which can be used to override security measures.

- One study even showed that a **Microsoft API was tricked more than 75%** of the time using **easily generated deepfakes**.
- Other ethical challenges arise when it comes to **impersonation**.
- The **usage of deepfakes** to sway public opinion in political races can have **far-reaching implications**.

WHAT ARE DEEPFAKES

Deepfakes, as the name suggests, are deceptive images or audiovisuals created using AI and 'deep learning', where an algorithm is trained on original material and it then learns to produce something that closely resembles that original content. A picture or video of a person, for example, can be seamlessly doctored to look like a different person. Even audio can be manipulated to mimic a person's voice



HOW TO DETECT A DEEPFAKE

With rapidly evolving tools, it's getting harder to detect deepfakes. However, there are some imperfections that act as obvious giveaways

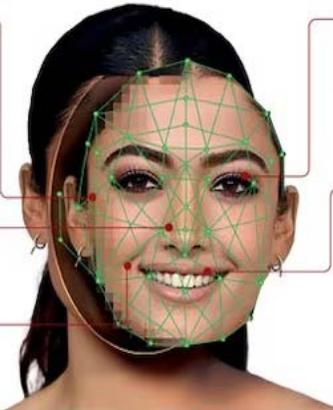
SKIN
Look for cheeks and forehead with unnatural smoothness or wrinkles

SHADOWS AND REFLECTIONS
Unnatural lighting is another clue. Do the shadows cast by facial features appear natural? Does the angle of glare from glasses change with movements?

FACIAL EXPRESSIONS
Do they appear natural? Are they detailed or blurred?

BLINKING OF THE EYES
Eyes that don't blink were one of the early clues. But deepfake generators have got wiser since then. Look for unnatural blinking

LIP MOVEMENTS
If the video is fake, there could be unnatural lip movements and mismatch in voice syncing

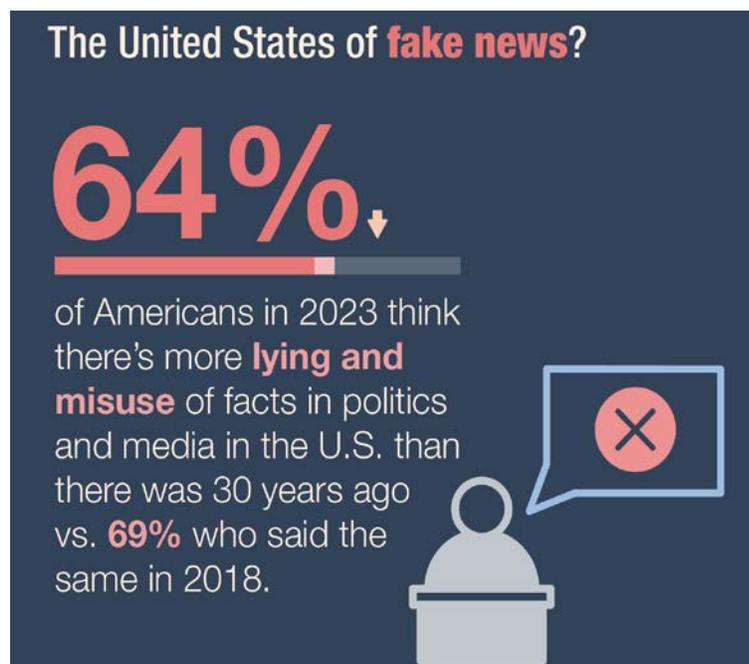


Sources: US Homeland Security, MIT DetectFakes project, interviews

Illustrations by NILANJAN DAS

Misinformation

- **Misinformation** has a way of creating social divides and **perpetuating untrue opinions** to the detriment of organizations and others.
- **Once misinformation** becomes **widely shared on social media**, it can be **difficult to determine where it originated** and **challenging to combat**.
- AI tools have been used to **spread misinformation, making it appear as though the information is legitimate**, when it is in fact not.



16. What are the challenges in India’s AI development?

- Despite the well-acknowledged potential of AI to drive national growth and prosperity, there are **significant hiccups along the way that are hampering a wide scale adoption of AI solutions in India.**
- The **Data Security Council of India (DSCI)** has highlighted some of these key challenges in a recently released whitepaper.

Challenges	Analysis
<p>Data security and privacy issues</p>	<ul style="list-style-type: none"> • AI solutions built on ML and DL are based on a huge volume of confidential data, which are often sensitive and personal in nature. • Along with automation, AI also brings a range of security and privacy vulnerabilities, which can subsequently exacerbate any organisation's exposure to cyber risk and geopolitical risk. • However, India is moving in the right direction with the Personal Data Protection Bill, 2019, and the National Cyber Security Strategy, 2020.
<p>Limited AI expertise and lack of investment to implement AI solutions</p>	<ul style="list-style-type: none"> • AI requires highly trained and skilled professionals, but being an emerging technology, the talent pool is limited. • As per McKinsey, “Talent is one of the biggest challenges to AI, no matter how advanced a company’s digital program, it’s perhaps not surprising that companies are leaving no stone unturned when sourcing people and skills.” • There are concerted efforts to be seen, in the form of NASSCOM’s FutureSkills Prime initiative, for instance, which aims to bridge the skilling gaps. • Furthermore, high implementation cost resists numerous organizations to implement AI solutions. • For instance, transforming a manufacturing plant from manual operation to automated operation would require high capital investment to integrate IIoT and other components of industry 4.0.
<p>Lack of AI and cloud computing infrastructure</p>	<ul style="list-style-type: none"> • AI and cloud are inseparable because AI is data hungry and cloud is the only viable solution. • There are endless possibilities to scale up AI with its convergence with cloud computing. • However, despite the potential, India lacks access to specialised compute and storage facilities which forms the backbone of AI.

	<ul style="list-style-type: none"> • A beginning has been made with India's own AI-first compute infrastructure, AIRAWAT, which is a cloud platform for Big Data analytics with advanced AI processing capabilities.
<p>Lack of data and poor data quality</p>	<ul style="list-style-type: none"> • Data is the backbone of AI, hence easy availability of open-source data is crucial for any country to accelerate AI innovation and adoption. • Apart from regulatory restrictions on data, data annotation and labelling are tedious but essential processes to provide useful datasets. • The government has very recently opened access to geospatial data and services, a step that is sure to encourage innovation in this area.
<p>Lack of integrity and ethics with AI and ML solutions</p>	<ul style="list-style-type: none"> • With the advent of AI products and algorithms and their increasing role in decision making, ethics and morality have emerged as a major challenge for the AI solution providers. • An AI algorithms work based on training given to it, meaning the AI solution predicts instances based on the data being fed into it and based on the self-learning capability. However, in a few instances, the AI algorithm overlooks the correctness of the data and gives an ambiguous result. • It is also possible for the results to be skewed due to tampering of the dataset itself.



17. Mention initiatives taken by India for AI development?

Initiatives	Analyses
<p>The Union Cabinet approved the Rs 10,372 crore IndiaAI Mission</p>	<ul style="list-style-type: none"> • The mission aims to establish a robust AI computing infrastructure in India to support the development and testing of AI systems. • The Mission aims to enhance data quality, and develop indigenous AI technologies. • The Union Cabinet approved the Rs 10,372 crore for IndiaAI Mission. <div data-bbox="570 499 1312 1205"> <p>IndiaAI Mission Cabinet approves comprehensive national-level IndiaAI mission</p> <p>CABINET DECISION 07th March, 2024</p> <ul style="list-style-type: none"> ❖ Budget outlay of Rs.10,371.92 crore. ❖ Mission aims to establish a comprehensive ecosystem catalyzing AI innovation through strategic programs and partnerships across public and private sectors ❖ To be implemented by 'IndiaAI' Independent Business Division (IBD) under Digital India Corporation <p>Mission components</p> <ol style="list-style-type: none"> 01. IndiaAI Compute Capacity - to build a high-end scalable AI computing ecosystem 02. IndiaAI Innovation Centre - to undertake development and deployment of indigenous Large Multimodal Models </div> <div data-bbox="570 1205 1312 1982"> <p>IndiaAI Mission Cabinet approves comprehensive national-level IndiaAI mission</p> <p>CABINET DECISION 07th March, 2024</p> <ol style="list-style-type: none"> 03. IndiaAI Datasets Platform - to streamline access to quality non-personal datasets for AI Innovation 04. IndiaAI Application Development Initiative - to promote AI applications in critical sectors for problem statements sourced from Central Ministries, State Departments, and other institutions 05. IndiaAI FutureSkills - to mitigate barriers to entry into AI programs and will increase AI courses in undergraduate, masters-level, and Ph.D. programs 06. IndiaAI Startup Financing - to support and accelerate deep-tech AI startups 07. Safe & Trusted AI - to enable implementation of Responsible AI projects including development of indigenous tools and frameworks, self-assessment checklists for innovators, and other guidelines and governance frameworks </div>

<p>National Strategy for Artificial Intelligence</p>	<ul style="list-style-type: none"> ● The National Strategy for Artificial Intelligence was launched by NITI Aayog, to position India as a leader in AI for economic growth, social development, and inclusive growth.  <ul style="list-style-type: none"> ● It emphasizes leveraging AI for societal needs, such as healthcare, education, agriculture, and smart cities.
<p>AI for All</p>	<ul style="list-style-type: none"> ● The strategy focuses on ensuring the benefits of AI are accessible to the entire Indian population. ● It includes developing AI technologies that address language diversity, enhance skill development, and promote ethical AI use.
<p>Union Budget 2026–27</p>	<ul style="list-style-type: none"> ● Tax holiday till 2047 proposed for eligible foreign cloud providers using India-based data centres for global operations ● Structured eligibility framework, including notified entities, use of Indian data centres, and Indian reseller requirement for domestic services ● Domestic transactions continue under existing tax provisions, with a proposed 15% safe harbour margin for related data centre entities ● Part of a broader digital and semiconductor ecosystem push under Budget 2026–27 to position India as a global cloud and AI infrastructure hub

BUDGET 2026-27: Promoting India as a Trusted Global Digital Hub

A tax holiday up to 2047 is proposed for foreign companies delivering global cloud services through India-based data centre infrastructure.

Objective:

- ✓ Encouraging global investment in digital infrastructure.
- ✓ Accelerating India's digital and AI growth.
- ✓ Providing long-term policy certainty till 2047.



BUDGET 2026 Tax Holiday For Foreign Cloud Service Providers

Exemption Period: Tax Year 2026-27 To 2046-47

ESSENTIAL CONDITIONS FOR FOREIGN COMPANIES



Notified Foreign Company

Data Centre Services From Indian Company



Data Centre Notified By MeITy

Services To Indian Users Via Indian Reseller Entity



No Risk Of Global Income Being Taxed In India On This Account

Source: Tax Department, Government of India

TAXABLE DOMESTIC ECONOMIC ACTIVITIES



Data centre services to global entity by resident data centre



Resale of cloud services to Indian customers by resident reseller entity



RELATED ENTITY



**INDIAN RELATED ENTITY OF FOREIGN COMPANY
(COST PLUS DATA CENTRES)
SAFE HARBOUR MARGIN: 15% PROVIDED**

Source - Tax Department, Government of India

<p>Expanding AI and Cloud Data Centre Infrastructure</p>	<ul style="list-style-type: none"> ● Data centres, especially AI-focused facilities, form the backbone of modern digital infrastructure. ● Investments of nearly USD 70 billion are already underway in India’s data centre sector, with an additional USD 90 billion in announced projects, highlighting the scale of expansion. ● The proposed tax framework extending to 2047 provides long-term policy visibility for such capital-intensive investments. ● The tax holiday for foreign cloud providers complements broader technology initiatives announced in Budget 2026–27, including India Semiconductor Mission 2.0 and enhanced allocation for the Electronics Components Manufacturing Scheme, complementing digital infrastructure expansion. 
<p>Bhashini: Voice for Digital Inclusion</p>	<ul style="list-style-type: none"> ● Bhashini is an AI-powered platform that breaks language barriers by offering translation and speech tools in multiple Indian languages. ● It helps citizens access digital services easily, even if they are not comfortable reading or writing. In June 2025, the Digital India Bhashini Division and the Centre for Railway Information Systems (CRIS) signed an MoU to deploy multilingual AI solutions across public-facing railway platforms. ● Since its launch in July 2022, Bhashini has crossed one million downloads, supports 20 Indian languages, and integrates more than 350 AI models.



Bhashini Tackled India's Toughest Language Tech Challenges

- Automatic Speech Recognition
- Text to Text Translation
- Text to Speech Conversion
- Optical Character Recognition
- Digital Dictionary of Indian Dialects

“Empowering every voice. Digitizing every word.”

(Data as on 14-10-2025)

Bhashini's Milestones at a Glance

1 Million+	Mobile App Downloads
350+	Total AI Models
3 Billion+	Total Inferencing*
295 Million	Translation
20+	Languages Supported



*Inferencing: Process where an AI model makes real-time predictions based on new input.
Source: bhashini.gov.in

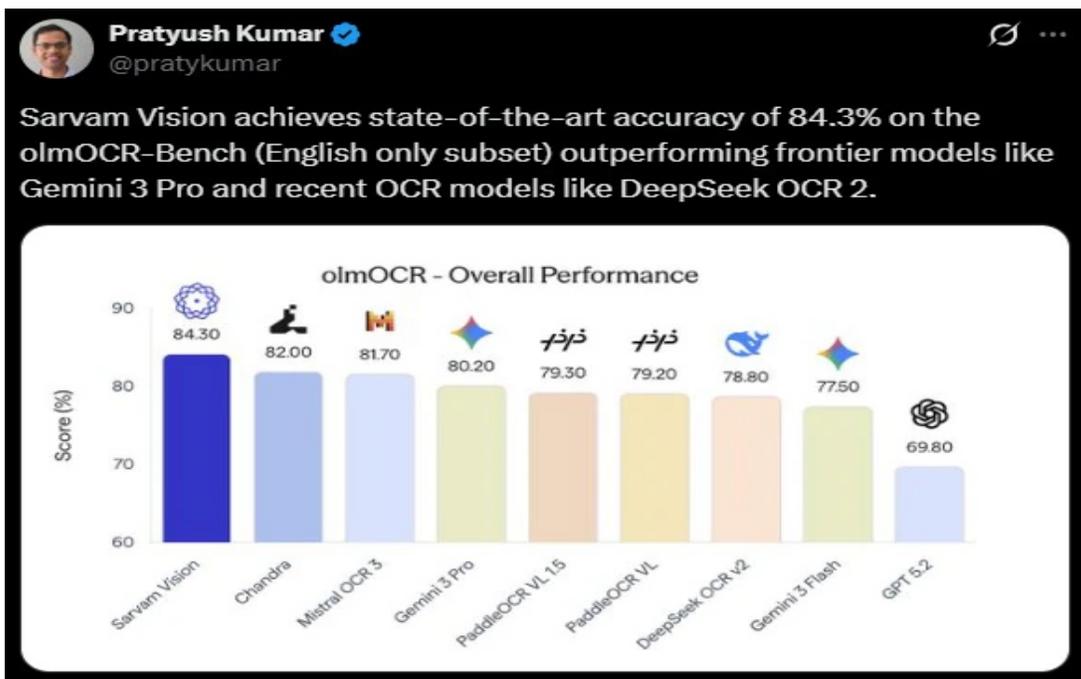
BharatGen AI: India's Multilingual AI Model

- **Launched on 2 June 2025** at the **BharatGen Summit**, BharatGen AI is the **first government-funded, homegrown multimodal large language model.**
- It supports **22 Indian languages** and integrates **text, speech, and image understanding.**
- Built using domestic datasets, **BharatGen captures India's cultural diversity** and provides a common platform for startups and researchers **to create AI solutions tailored to Indian needs.**



18. What is SARVAM AI and its key features?

- In tune with **Prime Minister Narendra Modi's push for homegrown innovation**, Sarvam AI has caught the **limelight at the India AI Impact Summit 2026** with its indigenous appeal.
- **Sarvam AI also caught Google CEO Sundar Pichai's attention** who cited the AI model to highlight how Indian companies have started developing local AI models.
- **Sarvam** was founded by **Vivek Raghavan and Pratyush Kumar in August 2023**.
- **Sarvam AI unveiled a model** that it said is made to **cater to India's diverse languages and cultural contexts**, giving it an edge against big guns such as **ChatGPT and Claude** in the AI industry.
- Apart from English, **Sarvam AI chatbot is available in 22 Indian languages** and claims to have better accuracy for Indian languages than top industry models such as **Gemini 3 Pro, Opus 4.5, and GPT-5.2**, according to a blog on Sarvam's website.

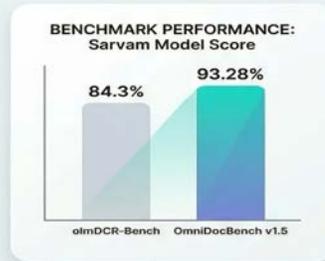


Sarvam AI: Bridging the Gap in Indian Language Technology

**THE CHALLENGE:
THE "REAL-WORLD"
INDIAN DOCUMENT**



**THE SOLUTION:
LOCALIZED DOCUMENT
& VOICE AI**



Complex Mixed-Script Layouts

Documents often blend English with regional scripts and handwritten notes in margins.



Low-Quality Physical Inputs

Technology must process faded scans, skewed forms, and low-resolution photocopies common in India.



Multilingual Voice Integration

Supports speech-to-text for 22 Indian languages, including automatic language detection.



Beyond Simple OCR

Effective understanding requires recognizing stamps, signatures, and multi-column tables within documents.



Sovereign AI Approach

Focused on "code-mixed" speech where users switch languages mid-sentence during conversation.

19. What is the relevance of the topic for UPSC CSE?

- **For Prelims:** Key Recent Breakthroughs in Artificial Intelligence, Applications of AI in Different Sector, Precision farming, Digital banking, Aging Development of Innovative Technologies with iDEX (ADITI) scheme, India Skills Report, Quick commerce, Personal Data Protection Act 2023, FutureSkills Prime initiative.
- **For Mains:** Key Opportunities AI Revolution Brings for India's Economic Growth, Key Challenges AI Poses to India's Traditional Economy

Some previous years prelims questions.

Q1). Consider the following statements:

1. It is expected that Majorana 1 chip will enable quantum computing.
2. Majorana 1 chip has been introduced by Amazon Web Services (AWS).
3. Deep learning is a subset of machine learning.

Which of the statements given above are correct?

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

Ans: (c)

Q2). Which one of the following words/phrases is most appropriately used to denote “an interoperable network of 3D virtual worlds that can be accessed simultaneously by millions of users, who can exert property rights over virtual items”? **(2024)**

- (a) Big data analytics
- (b) Cryptography
- (c) Metaverse
- (d) Virtual matrix

Ans: (c)

Q3). 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)

Some previous years mains questions.

Q1. The application of Artificial Intelligence as a dependable source of input for administrative rational decision-making is a debatable issue. (10Marks-2024)

Q2. Introduce the concept of Artificial Intelligence (AI). How does AI help clinical diagnosis? Do you perceive any threat to privacy of the individual in the use of AI in healthcare? (10Marks-2023)

Some questions from this year and previous years interview transcripts.

Board Suman Sharma mam:

- What should be Delhi Declaration for AI impact summit?

Board Sheel Vardhan sir:

- What is the Difference between Artificial Intelligence (AI) and Machine Learning?
- What is artificial about AI?
- What is singularity in AI?
- I am anxious about AI as a technology.
- Are you anxious about AI?

Board Sanjay Verma sir:

- What do you mean by intelligence
- Now what is artificial intelligence?
- Who is intelligent - human intellectual or artificial intelligence?
- Where is maths used in AI?

Board B.B. Swain Sir:

- Suggest me some AI to use
- How should the prompts be given

Board B.B. Swain Sir:

- Have you heard about Artificial intelligence?

Board BB Swain Sir:

- You have worked on AI.
- We have seen the proliferation of AI like ChatGPT.
- What is GPT in ChatGPT?
- Give me examples of AI tools other than ChatGPT.

Board Dinesh Dasa sir:

- Tell me will there be job loss by AI?

Some questions for QUIZ.

- Q1. With reference to the Global Partnership on Artificial Intelligence (GPAI) consider the following statements.
1. GPAI is an international initiative to support responsible and human-centric development and use of Artificial Intelligence (AI).
 2. India is one of its founding members.
 3. GPAI was launched in the year 2023 during the G20 summit.

4. UNESCO has an observer status to GPAI.
5. GPAI is supported by a Secretariat hosted by the OECD.

How many of the above statements are correct?

- (a) Only two
- (b) Only three
- (c) Only four
- (d) All five

Ans: (c)

Some questions for POLL.

- Q1. Do you think the recent AI Impact Summit in New Delhi will boost India's position as a global AI leader?
- (a) YES
 - (b) NO
 - (c) Can't say.
- Q2. Do you believe AI will create more jobs than it eliminates in India?
- (a) YES
 - (b) No
 - (c) Can't say.
- Q3. Should the government invest more in AI education and skill development after the Delhi summit?
- (a) YES
 - (b) No
 - (c) Can't say.
- Q4. Do you think AI will significantly improve public services like healthcare, education, and governance in Delhi?
- (a) YES
 - (b) No
 - (c) Can't say.
- Q5. Are you concerned that AI may increase unemployment in traditional sectors?
- (a) YES
 - (b) No
 - (c) Can't say.
- Q6. Should there be strict regulations to ensure ethical and safe use of AI in India?
- (a) YES
 - (b) No
 - (c) Can't say.

Q7. Do you think AI-enabled smart classrooms and digital learning in Delhi schools will improve education quality?

- (a) YES
- (b) No
- (c) Can't say.

Q8. Will AI-driven automation make daily life easier for citizens in cities like Delhi?

- (a) YES
- (b) No
- (c) Can't say.

