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India's AI ambition: Can it defy the odds and take on global giants?

India is accelerating its AI ambitions with massive investments and indigenous innovation to challenge global giants.

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With a comprehensive budget of over ₹10,000 crore, the mission aimed to develop India's AI ecosystem through public-private partnerships, focusing on democratising computing access and fostering indigenous AI capabilities.

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Article Content:

In June 2023, OpenAI CEO Sam Altman remarked during his visit to India that it was "totally hopeless to compete with us on training foundation models." His comment sparked significant reflection on the country's AI capabilities, with many interpreting it as a challenge to accelerate efforts toward building indigenous AI solutions. For a time, it seemed his words rang true, as India's AI ambitions lagged behind global leaders

However, the Indian government responded swiftly, launching the IndiaAI Mission in March 2024. With a comprehensive budget of over ₹10,000 crore, the mission aimed to develop India's AI ecosystem through public-private partnerships, focusing on democratising computing access and fostering indigenous AI capabilities. The first step in this ambitious endeavour was to establish a high-end, scalable AI computing infrastructure to support India's rapidly expanding AI startups and research initiatives.

After the launch, progress appeared slow—until China's DeepSeek AI emerged. Until then, the AI race had been dominated by models like OpenAI's ChatGPT and Meta AI's LLaMA, built on the back of billions of dollars and thousands of NVIDIA H100 GPUs. In contrast, China reportedly developed DeepSeek AI with just 2,000 low-power GPUs and an investment of under \$6 million, challenging the notion that only deep pockets and cutting-edge technology could compete in the AI space.

This breakthrough prompted a pressing question: If China can do it, why can't India? The sentiment quickly gained traction, putting pressure on the Indian government to take more aggressive action. While Altman's words may have stung, China's DeepSeek AI ultimately spurred India into action. In January 2025, the government announced the empanelment of GPUs, marking a significant step toward strengthening India's AI infrastructure. Union Minister for Electronics & IT Ashwini Vaishnaw stated, "India is all set to launch its own safe and secure indigenous AI model at an affordable cost. Backed by a high-end common computing facility, the IndiaAI Mission is now closer to customising indigenous AI solutions for the Indian context using Indian languages."

He further emphasised that scientists, researchers, developers, and coders were working on multiple foundational models and that, at the current pace, an Indian AI model could be ready within six months—a clear signal of renewed commitment to AI development. C.P. Gurnani, co-founder and CEO of AlonOS and the former CEO of Tech Mahindra—who famously accepted Sam Altman's challenge to prove that India could compete in the global AI arena—shared his thoughts on India's growing potential: "As India strengthens its AI capabilities, we see immense potential for homegrown AI models that are inclusive, scalable, and globally competitive. With the right resources, expertise, and a vast reservoir of data, talent, and infrastructure, India is uniquely positioned to build AI solutions on its own terms." The Common Computing Facility will empanel 18,693 GPUs, surpassing the initial goal of 10,000 GPUs. This includes 12,896 H100, 1,480 H200, and 7,200 MI 200-300 units, significantly boosting India's AI research, model training, and ethical AI development.

The minister added: "Approximately 10,000 GPUs are already available, and technical partners have expressed confidence in the mission's ability to deliver world-class AI solutions. Once approved, this facility will soon be operational for widespread use." Advanced GPUs are fundamental to AI development, enabling faster processing and higher computational power for complex AI tasks.

As AI models grow increasingly sophisticated, the demand for robust computing power has surged, necessitating cutting-edge technology to stay competitive. Sunil Gupta, co-founder, CEO, and MD of Yotta Data Services, stressed the importance of these developments: "The availability of high-end GPUs is crucial for scaling India's AI ecosystem. They drive faster model training, advanced inferencing, and large-scale AI applications. Leading AI hubs worldwide have already invested heavily in GPU-powered infrastructure, pushing the boundaries of AI research and commercialisation. To stay competitive, India must expand its domestic GPU availability, optimise power efficiency, and foster an AI-ready infrastructure that meets global benchmarks."

To further support AI start-ups and researchers, the government has introduced a proposal for monthly evaluation and funding mechanisms. Ganesh Gopalan, co-founder and CEO of Gnani.ai, welcomed the move but emphasised the need for flexibility: “The monthly proposal evaluation and funding mechanisms provide a structured approach to AI funding, ensuring continuous support for start-ups and researchers. However, AI development moves fast, and a more agile funding approach could further accelerate foundational and domain-specific AI research.”

Experts agree that India must significantly expand its AI infrastructure to remain competitive. To keep pace with advancements in foundational models, generative AI, and high-performance computing (HPC), the country must not only build state-of-the-art facilities but also create an ecosystem that supports indigenous AI model development. This requires sustained collaboration between the government and the private sector, ensuring a self-sustaining, long-term growth model that addresses national challenges.

Reliance reportedly building the world’s largest data centre in Jamnagar Amit Jaju, senior managing director at Ankura Consulting Group (India), highlighted the need for substantial investments: “Our data centre capacity needs to at least double in the next 5–7 years. Significant investment in computing infrastructure, particularly for developing indigenous foundational models, is required. Key areas needing investment include high-performance computing facilities, data storage infrastructure, and R&D capabilities. India will require multiple times the current allocation to remain globally competitive.”

As the U.S. and China ramp up AI investments, India faces the challenge of bridging the gap. Devroop Dhar, co-founder and managing director of Primus Partners, outlined the scale of investment needed: “India will need sustained multi-billion-dollar investments over the next decade to remain competitive globally. Countries like the U.S. and China have heavily invested in AI-specific HPC, cloud infrastructure, and AI research hubs. To match this, India will need an additional ₹20,000–30,000 crore over the next 10 years to expand computing capacity, train large-scale models, and enhance research talent.”

As India plans for expansive AI growth, both public and private sectors must work together to integrate AI into the country’s digital infrastructure. This partnership is crucial for ensuring AI adoption goes beyond the tech industry and reaches key sectors like healthcare, agriculture, manufacturing, and finance.

Prasad Balakrishnan, COO of MiPhi Semiconductors, reinforced this view: “To keep India AI competitive globally over the next decade, significant additional investment from both public and private sectors will be essential. India must invest in integrating AI across digital infrastructure to unlock its true potential, which is achievable with sustained investment over the next 10 years.”

Experts also stress that long-term commitment from both industry and government will be critical to driving India’s AI future. Sandeep Dutta, chief practice officer for Asia-Pacific & the Middle East at Fractal, explained: “Beyond initial funding, what matters is a clear problem statement and long-term commitment. The government must not only seed innovation but also create demand—funding services through contracts and enabling companies to become self-sustaining. A thriving industry, working alongside the government, is essential for sustainable impact.”

India's AI ambitions: Are we really falling behind the U.S. and China, or is the picture more complex? As the global economy shifts from resource-based to knowledge-driven, generative AI

has emerged as the new frontier of global power. Unlike traditional commodities, AI relies on data, computing power, and intellectual capital, allowing nations and corporations to transcend geographical limitations.

India's journey remains challenging, but the country is taking strategic steps to address gaps in its AI infrastructure. With high-performance computing and AI-specific research hubs now recognised as national priorities, the government is working to ensure India's competitive future in the global AI landscape.