HOW CAN ENTERPRISES UNLOCK VALUE FROM INDIAN AI START-UP ECOSYSTEM?

Artificial Intelligence Adoption: A Paramount Imperative for Enterprises

From the dangerous '*Terminator*' to the helpful '*Wall-E*', Artificial Intelligence (AI) has long captivated Hollywood, and it has been a concept that has fascinated humans for many decades. This fascination stems from the potential of machines to mimic human intelligence and propel societal progress. However, it is not an object of fiction any longer. With the advancements in Generative AI, this technology has made significant strides in emulating and augmenting human intelligence, albeit to a limited extent.

With the evolution of AI over the past decade, its utility has increased exponentially to the point where it is considered a necessity. A testament to its significance was its prominence at the 2024 World Economic Forum in Davos, where the major topic of conversation was, "***Artificial Intelligence and Generative AI acting as key growth drivers for Industry.***" These conversations have led Enterprises to a crucial realization: the importance of integrating Artificial Intelligence into their service operations and product offerings.

According to the Stanford AI Index, **94% of Enterprises believe AI solutions are crucial for their organization's success**. This

sentiment is echoed in the significant increase of AI mentions during Fortune 500 earnings calls over the past year, highlighting the growing Enterprise interest in harnessing Artificial Intelligence. Consequently, Enterprises are looking to increase their investment in Artificial Intelligence and Generative AI in the coming years, especially in India.

However, despite India having the highest AI skill penetration and the 3rd largest AI talent pool, according to a Salesforce study, only 1 in 4 employees currently employ AI skills in their day-to-day roles. This discrepancy highlights a disconnect between the AI capabilities required by the Enterprises and the skills that are currently available within the workforce. It underscores the need for Enterprises to invest in training, ensuring their employees acquire the required AI capabilities.

Alternatively, Indian Enterprises could capitalize on the innovative solutions offered by the increasingly AI-driven ecosystem of Indian start-ups. This approach would augment the internal capabilities of the organization and facilitate the achievement of their desired outcomes.

The Indian Tech Start-up Ecosystem is increasingly leveraging AI to develop innovative solutions

Proliferation of AI Adoption in the Start-up Ecosystem

The integration of Artificial Intelligence in solutions has significantly boosted the growth of start-ups leveraging AI over the last decade. The *nasscom-Zinnov Indian Tech Start-up Landscape Report 2023*

reveals a striking expansion of the Indian DeepTech start-up ecosystem by more than 7X in the past five years. DeepTech start-ups raised a cumulative sum of USD 9.6 Bn in 2023 as compared to USD 1.3 Bn in 2019. Artificial Intelligence played a pivotal role in this growth with AI start-ups contributing to more than 50% of these funding deals. This statistic not only underscores the vitality of AI in driving technological innovation but also signals a robust investor confidence in AI's potential to revolutionize various sectors.

Cumulative funding in DeepTech start-ups (2019-2023)[1]

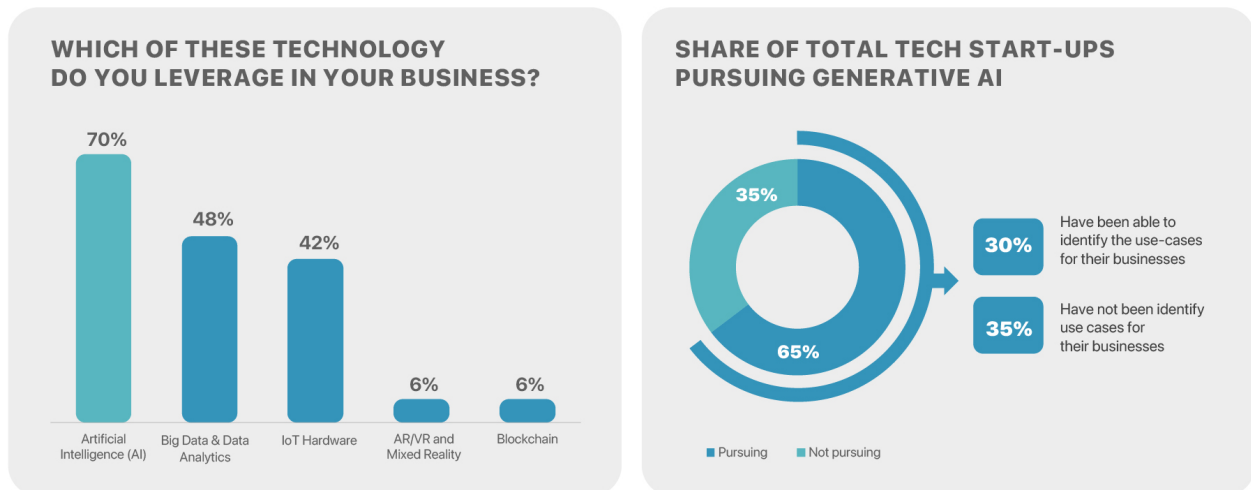% share of dominant technologies in cumulative funding deals[2]
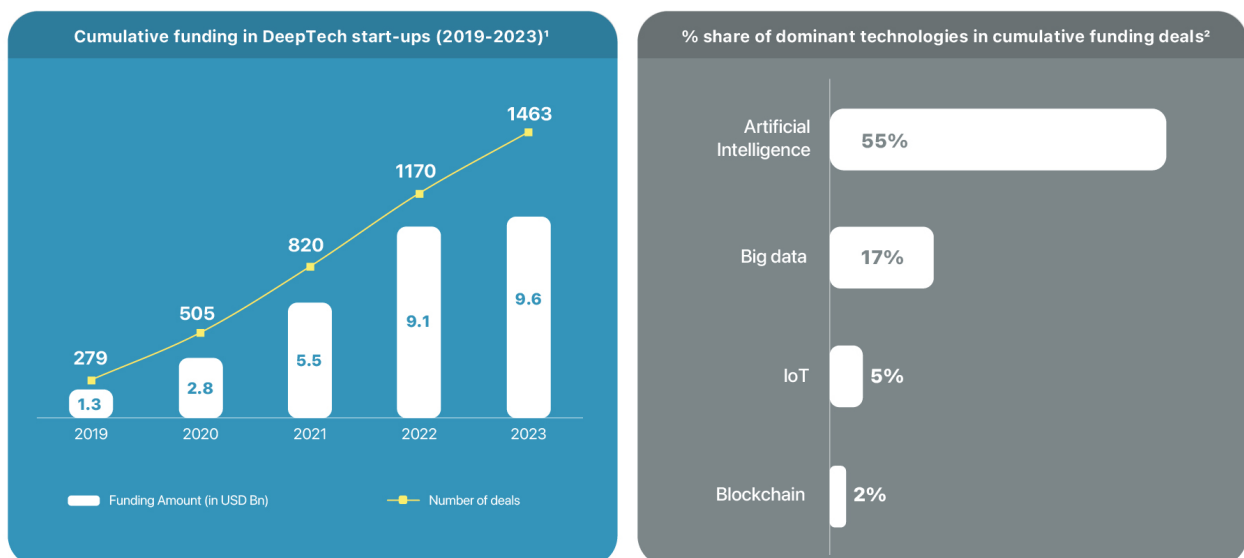
Source: Zinnov Research & Analysis
Note: (1) All data points up to December 20, 2023, are incorporated for the year 2023. (2) Percentages add up to more than 100 as some DeepTech start-ups are leveraging multiple technologies.

Additionally, insights from the ***Zinnov-nasscom Tech Start-up Founder Survey*** encapsulated in the report add another layer to this narrative. An overwhelming 70% of Tech start-ups have embraced Artificial Intelligence in their operations or solutions, illustrating AI's permeation across the tech start-up landscape.

Not just that, nearly 65% of Tech start-ups are also exploring Generative AI to enhance their existing solutions. These statistics reflect

a forward-thinking approach among start-up founders, who are not merely adopting AI but are actively seeking out Generative AI to maintain a competitive edge and meet the ever-evolving demands of the market.

WHICH OF THESE TECHNOLOGY DO YOU LEVERAGE IN YOUR BUSINESS?

- Artificial Intelligence (AI): 70%
- Big Data & Data Analytics: 48%
- IoT Hardware: 42%
- AR/VR and Mixed Reality: 6%
- Blockchain: 6%

SHARE OF TOTAL TECH START-UPS PURSUING GENERATIVE AI

- Pursuing: 65%
- Not pursuing: 35%

30% Have been able to identify the use-cases for their businesses

35% Have not been identify use cases for their businesses

Source: nasscom-Zinnov Tech Start-up Survey 2023

The impact of Artificial Intelligence adoption by Indian start-ups has been particularly significant in certain key sectors such as EnterpriseTech, HealthTech, Agritech, BFSI, and Industrial & Manufacturing. AI has enabled innovative solutions in use cases such as code productivity and cognitive search in EnterpriseTech, drug discovery and diagnosis assistance in HealthTech, weather pattern modeling and crop yield maximization in Agritech, fraud Analytics and financial modeling in BFSI, and demand forecasting and production scheduling in Industrial & Manufacturing.

There is a widespread adoption and application of AI across diverse fields as we saw earlier. But what about the next frontier in technology – Generative AI?

Although Generative AI is currently the pinnacle of Artificial Intelligence, its utilization and adoption at the start-up level has been limited, with only over 100 Generative AI start-ups in India. However, considering the generative capabilities of this technology, Generative AI holds the promise of exponential growth, far surpassing the current proliferation of Analytical Artificial Intelligence. In attestation, start-ups utilizing Generative AI have already begun creating impact-producing innovative solutions across many key areas.

Indian AI Start-ups like Newron AI offer customized solutions for Enterprises leveraging custom Large Language Models (LLMs), while start-ups like Fluid AI provide Enterprise-specific Generative AI solutions leveraging open LLMs. Indian start-ups are also developing proprietary LLMs, such as Krutrim, trained on more than 20 Indian languages and generating content in over 10 languages, and Sarvam AI's OpenHathi Model, an open Hindi language model. Start-ups have, also, begun producing solutions enabling LLMOps, like Portkey, which provides a secure gateway to open LLMs to develop customized Generative AI applications enabling observability, testing, prompt management, and load balancing.

While the adoption of Artificial Intelligence and Generative AI by Indian Tech start-ups has been on the rise, to create innovative solutions, the AI start-up ecosystem is still at a nascent stage. Yet, it is expected to grow exponentially in the coming years, fueled by investor interest and government initiatives.

Investor Interest and Government Initiatives Driving AI Start-up Growth

Institutional investors with a focus on India are looking forward to investing in start-ups that develop innovative and disruptive solutions leveraging AI and Generative AI. With over 500+ institutional investors zeroing in on DeepTech start-ups, and many raising funds focused on AI, investor interest in this technology is at an all-time high. This has led to an increased focus on AI and Generative AI among start-ups.

> *"India has USD 20 Bn of dry powder, waiting to be invested. And the number one thing that we're all going after, is AI".*
>
> *Rajan Anandan, MD, Peak XV Ventures*

The Government of India has also played a crucial role in facilitating the growth of Artificial Intelligence start-ups in the country. These initiatives have primarily been aimed at increasing the availability of mentorship, access to funds, and access to computing infrastructure. Some examples of such initiatives include centers such as the Center for Cellular and Molecular Platforms, common computational cloud platforms such as AIRAWAT-PSAI, and affordable cloud infrastructure services such as the National Informatics Center Cloud Service. The deployment of working groups to tackle data accessibility, AI chip-set availability, and AI-skill development under the National Program on AI further showcases the comprehensive approach taken by the

government to promote the growth of Artificial Intelligence in the country.

With the government's supportive measures, investor interest in cutting-edge AI technologies, and the increasing utility of AI-enabled solutions, Indian AI start-ups continue to innovate and disrupt industries and their solutions become increasingly appealing for Enterprises seeking to enhance their capabilities. Given the need for substantial investment in training Enterprise workforces to achieve the required AI proficiencies, leveraging solutions from Indian AI start-ups presents a cost-effective and efficient alternative.

How do Indian Enterprises currently leverage the innovative solutioning capabilities of the Indian AI start-up ecosystem?

Enterprises are currently leveraging the start-up ecosystem in India through:

- **Co-creation of products/Joint GTM**: Enterprises partner with start-ups to pool their strengths, resources, and ideas to create a differentiated solution in a cost-effective and accelerated timeframe. Enterprises leverage their market access and exposure to complete customer cycles to enable accelerated scaling of the solution.

  Case-in-point: The Accenture Ventures Open Innovation partner program provides an opportunity for innovative start-ups to provide

solutions for key sectors and use cases to co-create solutions for Accenture clients.

- **Strategic partnerships**: Enterprises partner with start-ups to leverage advanced technology, production capabilities, or market access to improve their capabilities and/or expand their market.

  Case-in-point: General Atomics partnered with 3rdiTech, which develops next generation computer chips, integrated circuits, and other semiconductor technologies, to improve their combined capabilities and co-develop products for both Indian and US markets.

- **Licensing and vendor agreements for innovative solutions**: Enterprises contract innovative start-up solutions that solve a unique problem statement within the organization.

  Case-in-point: Mercedes Benz group's innovation platform STARTUP AUTOBAHN discovers, evaluates, and implements innovative start-up solutions relating to the future of automobiles, automobile-related services, and sustainable production.

- **Acquisitions/Investments**: Enterprises acquire start-ups to leverage advanced technology, production capabilities, or market access and invest in start-ups offering innovative solutions that complement the Enterprise's offerings.

Case-in-point: Adobe acquired rephrase.ai, a generative AI-enabled video generation start-up, to extend its generative video capabilities and Airtel has invested in more than 10 start-ups, using its start-up accelerator program, which leverage innovative Artificial Intelligence and Machine Learning capabilities in the communication sector.

The rapidly evolving landscape of Artificial Intelligence in India, marked by the dynamic interplay between Enterprises and the start-up ecosystem, heralds a new era of innovation and growth. As Enterprises continue to embrace AI and Generative AI, partnering with nimble, innovative start-ups, they not only harness cutting-edge technologies but also fuel a symbiotic growth that promises to redefine industries. This partnership is a strategic imperative, ensuring that Enterprises and the Indian start-up ecosystem are well-positioned at the forefront of global technological advancement. The story of AI in India is only beginning, and it's set to be an exciting one.

Discover how Zinnov's open innovation programs can transform your Enterprise AI strategy. We help identify key use cases, forge collaboration strategies, and connect you with innovative start-ups. Boost your AI potential—contact our consultants at info@zinnov.com for game-changing insights.

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