

# Making AI Applications for India

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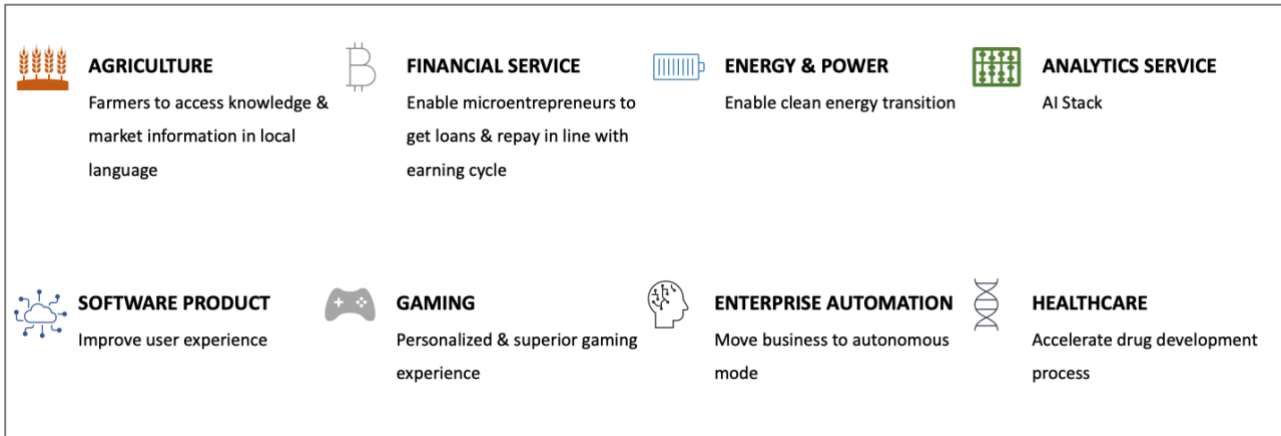
## Participants

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# Executive Summary

The AI4India forum organized its second event in the series focused on advancing the development and impact of AI for all Indians. The event on "Making AI Applications for India" had a panel of speakers representing startups and industries across sectors. They discussed the use of AI within organizations, challenges faced, and opportunities for maximizing its impact. The key points made by the speakers encompassed diverse domains such as agriculture, financial services, energy, software products, gaming, enterprise business automation, healthcare and jobs.

## The transformative potential of AI



### Agriculture

In agriculture, AI can be used to monitor crop health, optimize resources and boost yield. More recently, AI is being used to bridge the knowledge gap by disseminating information to farmers in their local language, thereby enabling them to make data-driven decisions on irrigation, fertilizers and pest control. The adoption of AI in agriculture is still in its early stages. However, the benefits are significant and transformative including enhancing food security, promoting sustainability and improving the livelihoods of farmers across India.

### Financial Services

The financial services sector has leveraged information technology to improve efficiencies and service delivery. AI-powered applications such as personalized customer support, creditworthiness assessment, loan approvals, fraud detection, compliance, risk management are enhancing efficiency and growth significantly for

the financial services sector. More recent advances in large language models are enabling organizations to tackle the language problem and expand their reach across the country. Integration of AI into financial services is expected to elevate the overall efficiency, drive innovation and make financial solutions more accessible to all consumers & businesses and more importantly foster an inclusive economic growth in the country.

## **Energy**

In the energy sector, AI can boost operational efficiencies and accelerate the transition towards clean energy. AI-driven predictive analytics is helping optimize energy production and distribution. By analysing weather patterns and demand forecasts, deployment of renewable energy sources like wind and solar into the grid can be optimized. AI can also be used to detect degradation of solar panels and analyse flooding patterns in solar farms. Adoption of AI in the clean energy transition will reduce greenhouse gas emissions and pave the way for a greener and more sustainable future.

## **Healthcare and Life Sciences**

In healthcare & life sciences, AI is being used to improve diagnosis, drug discovery, treatment and patient care. Medical imaging powered by AI algorithms is helping diagnose and abnormalities enabling early intervention. AI is accelerating drug discovery by analysing vast datasets for potential drug candidates and predicting their efficacy. Genomics research powered by AI will help in the development of personalized treatments and therapies. AI powered telemedicine platforms can connect remote villages with healthcare professionals in urban areas. AI is also helping deliver personalized health content and educational resources and enabling people to make informed decisions about their well-being. Overall, AI in the Indian healthcare sector has enormous potential to improve patient outcomes, increase accessibility, affordability and improve the health and well-being of people in the country.

## **Gaming**

In gaming AI can deliver superior gaming experience by using recommendation systems for personalisation. Experiences can be built across user journey including contest personalisation, match personalisation, payments etc. With LLMs there will be a proliferation of assets generated. However authenticity of these assets needs to be verified at each stage.

## Enterprise Automation

The Information Technology sector is empowering enterprises with AI-driven automation helping businesses reduce costs and achieve greater autonomy in their operations. AI powered chatbots have made 24/7 customer service possible and cost effective. AI is helping transform user experience in digital products with recommendations and personalization driving productivity and faster outcomes.

## Human Resources

AI has the potential to revolutionize skilling and education in India. The new capabilities emerging with generative AI are making personalized learning, skill assessment and intelligent tutoring possible at scale. By harnessing the power of AI, India can equip its youth with the skills and knowledge needed to thrive in the digital age.

While the aforementioned examples serve to illustrate the potential of AI, it is evident that this technology presents numerous transformational opportunities across sectors.

## Key Enablers for AI Success

The speakers highlighted several key enablers for success with AI applications in India. The sections below provide more details.

DATA	INVESTMENT IN R&D	NEED FOR LOCAL TALENT	AI STACK for INDIA
<ul style="list-style-type: none"><li>❑ Data fuels AI</li><li>❑ Challenges related to data collection while ensuring privacy &amp; ethics, data sharing, data security and accessibility needs to be addressed both in the government and private sectors.</li></ul>	<ul style="list-style-type: none"><li>❑ Foundational models represent groundbreaking advancements in the field of AI, providing a basis for creating more specialized and sophisticated models for specific use cases and domains</li></ul>	<ul style="list-style-type: none"><li>❑ Need to foster the development of specialized AI skills that encompass a deep understanding of the underlying technology</li></ul>	<ul style="list-style-type: none"><li>❑ Enabler for the development &amp; deployment of AI applications tailored to India's specific needs</li></ul>

### Importance of Data

Data serves as the fuel that drives AI, making access to high-quality data crucial. Given India's vast and diverse population, the country possesses a wealth of data. However, challenges related to data collection while ensuring privacy & ethics, data sharing, data security and accessibility needs to be addressed both in the government and private sectors. Startups need good quality data to innovate and build AI

applications. Enterprises are concerned about data security, ownership, confidentiality and compliance when it comes to sharing data with startups. Can digital technology help in building a Data Exchange that facilitates consent based, secure exchange of data between the organizations similar to how the Account Aggregator operates in the Financial Services sector?

### ***Investments in Research and Development of Foundational Models***

Foundational models represent groundbreaking advancements in the field of AI, providing a basis for creating more specialized and sophisticated models for specific use cases and domains. Investing in the development of foundational models tailored to an Indian context is vital. These investments are necessary to build models from scratch or fine-tuning existing open-source models to cater to specific domains. By leveraging such models, the AI application development lifecycle can be accelerated, leading to a reduction in the time to achieve value.

### ***Need for local talent with specialized AI skills***

India boasts a vast pool of talented engineers and researchers. However, it is crucial to foster the development of specialized AI skills that encompass a deep understanding of the underlying technology. These skills should be applied to address India's unique problems and opportunities in the realm of AI.

### ***AI Stack for India***

Exploring the idea of an “AI stack for India” holds promise as an enabler for the development and deployment of AI applications tailored to India's specific needs. It can be a valuable resource for developers, startups and businesses. Key stakeholders within India's AI ecosystem must engage in discussions and further develop this idea.

## **Conclusion**

The use of AI in India has the potential to transform the country in a number of ways. However, in order to realize this potential, India needs to address the challenges with data, invest in research, and develop local talent and infrastructure.