AI applications stack — what India can bring to the table

EXPERTS EXPLAIN

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THE ULTIMATE success of artificial intelligence (AI) in India will not depend on the size of its Graphics Processing Unit clusters, but on how our AI applications can help improve the quality of life. Among other things, AI can help ASHA professionals detect the number of high-risk pregnancies, small farmers save significantly on pesticide consumption, or significantly improve a child's reading and math scores in a remote government school.

The Economic Survey 2026 is pragmatic about how India can leverage AI. A primary objective of the proposed AI Economic Council for India is Human Primacy and Economic Purpose. Clearly, a national AI adoption policy must be explicitly subordinate to human welfare and economic inclusion. AI needs to be sensitive to domestic economic realities, and the benefits of AI adoption should accrue to all sectors of the economy and all citizens.

Fortunately for us, Indian innovators are deploying AI applications to solve social and economic problems that are immediate and contextual to India. Applications in health, agriculture, education and disaster preparedness have shown promise. With the right support, many of these can scale to a pan-India market and can potentially be bundled into an India AI Applications Stack and even be taken to global markets. Let us look at some interesting initiatives.

HEALTHCARE

Niramai has developed a non-invasive, privacy-conscious breast cancer screening tool that uses AI-driven thermal imaging instead of traditional mammography. The tool is portable and low-cost, and enables the early detection of abnormalities in women of all ages, including those with dense breast tissue where mammography often fails.

Qure.ai is an AI tool that analyses X-rays and CT scans in seconds, detecting more than 35 conditions like TB, lung cancer, and heart failure. This solution is very effective in resource-constrained settings where radiologists are unavailable.

AISteth, an AI-powered stethoscope, converts heart and lung sounds into visual waveforms for accurate, remote diagnosis. This low-cost device has a 93% accuracy and empowers frontline health workers in rural India to detect cardiac and respiratory issues early.

AGRICULTURE

Neoperk is a portable device which uses near-infrared spectroscopy and machine learning to analyse soil health instantly without conventional lab chemicals. It provides lab-accurate results for 12 key soil parameters in under five minutes, empowering farmers to make data-backed decisions on fertiliser use and reducing input expenses.

CottonAce by Wadhwani Institute for Artificial Intelligence is an AI-based mobile app that allows farmers to upload photos of trapped pests to receive instant, localised advice on pesticide application. This app helps thousands of smallholder cotton farmers protect their crops from pests like pink bollworm, leading to higher-quality harvests and increased profit margins.

Niqo Robotics uses AI-powered robots equipped with computer vision (day-and-night cameras) to identify pests and weeds in real time. This allows for targeted spraying of pesticides. It has led to a significant reduction in pesticide use (up to 60-90% in some cases), lowering costs for farmers and reducing environmental toxicity.

Cropin is an AI-enabled digital ecosystem that spans farm monitoring, credit risk analytics, and last-mile farmer engagement. It drives sustainable productivity and climate-smart decisions, turning fragmented practices into predictive farming systems ready for global scale.

EDUCATION

PadhaiWithAI uses an AI-powered personalised learning platform designed to tackle poor mathematics learning outcomes in government schools. Within just six weeks, the initiative significantly improved pass rates and the performance of high-achievers. It serves as a scalable model for bridging learning gaps in rural Indian education.

Rocket Learning has an AI-powered learning companion, Appu (a generative AI elephant), that interacts with parents and children via WhatsApp. It delivers bite-sized, play-based activities to help children under six years achieve foundational literacy and numeracy.

Belagavi Smart City is integrating deep learning-enabled eBooks into its public library ecosystem. Designed to analyse user behaviour and adapt storylines, vocabulary, and difficulty levels in real time, these books have enabled a 12% improvement in reading speed in just two weeks.

Government as facilitator

The government can become a powerful ecosystem orchestrator for these grassroots AI innovations, helping them scale to pan-India high-impact applications. A strong national governance framework for the Indian AI Application Stack that dovetails with international frameworks like the European GDPR can make the stack a plug-and-play in many countries.

Govt's role

- The government can assist in making markets for AI applications.
- It can also set benchmarks for AI in different sectors to encourage their adoption.
- Proven AI applications could be integrated into an an India AI Applications Stack.