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What India's AI Moment Must Learn from Its Own Past

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Generative AI is more than just another tool—it represents a new way of interacting with knowledge. Like past technologies, it brings both disruption and opportunity. India's AI moment is now. Its success hinges not on model sophistication, but on how inclusive it is.

Introduction

In the early 1990s, my father ran a photography studio in Seoni, a small town in Madhya Pradesh. During festival season, he would hang a giant flashbulb outside the shop. Every few minutes, it would go off, lighting up the street and catching the eye of every passerby. That single flash, both functional and symbolic, reflected a deeper truth—technology, when harnessed with ingenuity, can be a tool not just for business but for identity and upward mobility.

Today, India stands at the cusp of another shift, one that could redefine the livelihoods of millions. Artificial Intelligence (AI), particularly generative models, is not just a new tool in the stack. It is a new layer of abstraction over knowledge itself. This piece explores what lessons we might draw from our past transitions, and how we can avoid repeating their pitfalls in the age of AI.

Learning from Livelihoods

Technology has never been neutral. In Seoni, my father was not just offering photographs, he was offering access. Access to modern memory-making, access to social capital, and access to a more formal identity (photographs were often needed for applications, records, and bank forms).

But, over time, the very tools that had made his business innovative also made it obsolete. As cameras became cheap and editing software easier to use, differentiation vanished. Lacking formal training or exposure to the artistic side of photography, my father could not adapt when the tools no longer provided an edge.

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This is not a singular anecdote. It is an illustration of what happens when skilling remains reactive, rather than foundational.

There is a widely held belief that every technological shift, while displacing some roles, also creates new ones. While often true, history tells us this outcome is not guaranteed. Those who lose jobs are not always absorbed into new ones. Re-skilling programmes, even when well-intentioned, tend to fall short, either in reach, quality, or timing. A useful parallel is the way trade liberalisation affected US manufacturing jobs—theoretical gains were real, but unevenly distributed, and many displaced workers never recovered economically.

India's challenge is even more acute. As of 2023, more than 90% of the workforce remains informal. Without deep, systemic support, technological transitions risk leaving the most vulnerable even further behind.

Automation and its Echoes

In my current role leading data science in manufacturing, I have witnessed the gradual shift from human-led stations to robotic arms and AI-augmented dashboards. These changes eliminate some jobs, but also give rise to entirely new categories—automation engineers, data scientists, and simulation analysts.

The personal computer (PC) revolution followed a similar arc. Word processors and typists, once critical in all offices, have become nearly extinct. But those same technologies enabled the rise of software development, digital marketing, and remote collaboration. The occupation did not evolve; it vanished. And in its place, new fields emerged.

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Yet such transitions require both imagination and infrastructure. India has no shortage of the former, but still lags in the latter. The country’s vast informal workforce, combined with skilling models that prioritise tools over thinking, limits our ability to absorb the benefits of technological shifts.

We do not lack adaptability. What we lack is the scaffolding that allows adaptation to translate into sustained progress.

Democratisation of Capability

My own encounter with generative AI felt deeply personal. I had long wanted to build a website but never made time for it. Then, guided step by step by ChatGPT, I built and deployed a professional portfolio in a day. The financial cost was negligible. The psychological cost, which was once high, was erased.

This is not a story about replacing developers. It is about enabling dormant creativity. AI did not replace someone; it removed hesitation.

At work, we have gone further. Natural language querying now allows non-technical staff to access insights once locked behind SQL, Python, or back-and-forth emails with data teams. This kind of informal capability building is quietly transformational.

However, this democratisation is not automatic or evenly distributed. It demands intention. A more granular view of AI’s impact reveals a dual opportunity—not just to unlock new roles but also to augment existing ones. Imagine a procurement officer who uses AI to summarise supplier risk, or a schoolteacher who generates differentiated lesson plans on demand. These are not “new” jobs but they are newly empowered.

According to a 2024 McKinsey report, 78% of global businesses have now integrated AI into at least one function. While large firms lead this trend, the next wave is likely to arrive in India’s small and medium enterprises, which account for 30% of our gross domestic product (GDP).

If AI tools had been available when my father was running his studio, he might have used them to auto-edit photos, manage inventory through voice commands, or track expenses via mobile dashboards. These were once premium capabilities. Today, they are accessible.

Risks, Readiness, and Opportunity

AI can empower. But as history shows, it can also widen gaps if access and education are uneven.

India is, in many ways, better prepared than many other countries. Over the past decade, the country has built a strong digital infrastructure. The Unified Payments Interface (UPI) has made digital payments seamless. Aadhaar has established a reliable identity verification system. The Open Network for Digital Commerce (ONDC) aims to create interoperability across e-commerce platforms. Now, the IndiaAI Mission is investing in computing power and foundational AI models designed for local languages. However, to fully realise the potential of this infrastructure, it must be complemented by a new mindset focused on continuous learning and adaptation.

Just as “guidebooks” once short-circuited genuine comprehension, generative AI could do the same today, unless we rethink not just what we teach, but how and why we teach it.

I recently revisited the website of my engineering college, 14 years after graduating. My own career has evolved through four major technology shifts, but the curriculum appears to have changed very little. Rote learning still dominates. To be clear, foundational knowledge is important. It is essential to understand how computers function, how systems are organised, and how algorithms operate.

However, foundational does not mean unchanging. A strong curriculum must evolve to reflect the realities of the world it serves. Just as “guidebooks” once short-circuited genuine comprehension, generative AI could do the same today, unless we rethink not just what we teach, but how and why we teach it.

An AI-ready citizen needs more than just familiarity with digital tools—he or she requires fluency in abstract thinking. A new essential skill set is emerging, which includes the ability to critically evaluate AI-generated outputs, design effective prompts and frame precise questions, pursue self-directed learning, and apply insights across different domains.

Other countries are moving quickly. The United Arab Emirates (UAE), for example, has partnered with OpenAI to offer free ChatGPT Plus access to all residents as part of its national AI strategy. Could India do the same? Could we integrate local AI models with our skilling ecosystem, much like how UPI scaled digitally?

The concern is real—AI could accelerate inequality. But this time, we also have a unique opportunity. Unlike factory equipment or enterprise software, AI tools are cheap to replicate and personal in nature. With the right policy focus, they can empower not just output, but also participation.

Conclusions

The lesson from my father's flashbulb is not just about obsolescence. It is about reinvention. Every technological leap brings both dislocation and possibility. India's AI moment is here. What we make of it will depend not on the sophistication of our models, but on the breadth of our inclusion.

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