

Engineers, AI won't replace you. Curiosity, resilience and adaptability will define your future

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Those of you who stay curious, resilient and grounded will do exceptionally well in the AI era — just as previous generations eventually thrived after the dot-com collapse of 2000–02. | Photo: iStock/ Getty Images

Artificial Intelligence (AI) tools and Machine Learning (ML) technologies have unleashed an era that promises to ease the work of professionals, companies as well as governments. AI platforms let a lay person get a curated answer to tough questions, create a complex travel itinerary or even help read and summarise a 200-page document in a jiffy.

Programmers no longer have to write multiple lines of code to create a software program, one that has passed the stress test before going live.

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The AI gurus and creators of this technology predict that AI will take away a set of entry-level jobs, transform many others, and create many new categories. The fear is real because this AI wave is unusually fast. Faster than any of the revolutions we have seen in the last three-four decades.

This naturally is turning out to be a source of anxiety for Class XII pass-outs in their late teens waiting to enrol in engineering programs to be minted into software programmers and project engineers, irrespective of the area of specialisation — from computer software engineering and electronics and communications engineering to core engineering disciplines like civil, mechanical or electrical engineering. Remember, the list of programmes runs in scores.

The anxiety gets accentuated when you hear or read about the imminent layoffs even at the most successful IT giants like Microsoft, Meta, Google, NVIDIA and Oracle.

Should career aspirants looking for a career in IT when they graduate by 2030 really be worried? My experience tells me that there is little reason for young graduates to worry if they follow the three mantras below. The future will not belong merely to coders. It will belong to adaptable problem-solvers. So choose engineering or AI not because it is fashionable, but because you are willing to learn — not for the next four years, but for decades.

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I speak from something more than three decades of running a software company. As a young student, I spent a year each across different engineering disciplines — electronics, mechanical, civil. That foundation is what allows me today to correlate and stitch together technologies and engineering concepts that others treat as silos.

I was also able to pivot from the world of textiles to technology in 1997 precisely because I had that grounding. The engineering principles did not change — only the medium did.

This cross-disciplinary thinking is what the world needs most right now. Consider this: chocolate as we know it may soon be replaced not by a better cocoa bean, but by an entirely new molecule — developed at the intersection of AI, biotechnology and food science. Technology is enabling this kind of convergence across every industry. But technology alone cannot navigate itself. It needs people with the foundational understanding to direct it, question it and steer it toward human ends.

Today's engineering students will graduate into a world that looks nothing like the one they enrolled in. That has always been true. What changes is the speed — and the premium it places on breadth over narrow specialisation.

Stay curious

Curiosity will become more valuable than memorisation. The students who keep asking “why”, “how” and “what next” will stay ahead of machines. AI can provide answers quickly, but humans still need to frame the right questions, connect unrelated ideas and imagine new possibilities. Read beyond textbooks. Explore psychology, economics, design, philosophy and human behaviour alongside technology. Innovation often happens at the intersection of disciplines.

Innovation will get rewarded more than software skills. Problem-solvers who can connect ideas and think creatively under pressure get an edge at the workplace. These traits are developed by curious, proactive individuals who never stop learning.

Stay resilient

Every generation in technology faces disruption. I have seen mainframe computers disappear, saw the emergence of outsourcing, automation, cloud computing — and my junior colleagues have seen coding platforms change careers overnight. Your generation will see AI reshape work repeatedly. Do not measure your worth by one exam, one programming language or one temporary slowdown in hiring. Careers today are marathons, not straight ladders. The ability to relearn, adapt and recover from setbacks will matter more than having a perfect biodata when you graduate.

Stay grounded

Technology is ultimately about solving human problems. The best engineers are not always those who know the most code, but those who understand people, communication, ethics and societal impact. Stay connected to real-world needs — healthcare, education, agriculture, climate, governance, accessibility, and inclusion.

But before any of this, society itself needs to change. In India, parents too often do not shepherd their children toward their own interests — they chain them to their own vision and path. Engineering because the neighbour's son is an engineer. Medicine because it carries prestige at the next family wedding.

As the world changes, we must be genuinely open to children choosing new professions — professions that may not even have names yet.

Importance of research

The new National Education Policy clearly suggests that the last year of engineering should be spent on research. This is exactly what is needed for the future. Problem-solving skills and research is the best way to try, fail and succeed.

Use your years at engineering college to build solid foundations, but your real education will continue online for life. Online platforms and AI tools themselves will help you in upgrading your skills. Learn by building projects, participating in hackathons, contributing to communities and experimenting constantly. In the AI era, the winners may not always be those from the most elite colleges, but those who become lifelong learners with the discipline to evolve continuously

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