

Gulf Research Center
Knowledge for All

AI, Work and the Future of Employment

Dr. John Sfakianakis Originally Published on Arab News <u>here</u> August 2025



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For two centuries, technological revolutions have promised both upheaval and renewal. The spinning jenny broke the guild system, tractors displaced farm laborers but fed millions more, and computers hollowed out clerical work while spawning entire industries. Each wave of innovation stirred anxiety about mass unemployment yet, each time, new sectors absorbed the displaced.

Artificial intelligence, however, is different. Unlike the loom or the tractor, AI threatens not just manual labor but cognitive work: drafting contracts, diagnosing illnesses, even writing software. The question confronting policymakers in 2025 is no longer whether AI will reshape labor markets, but where humans will still find employment once machines do the thinking.

The pace of change is extraordinary. ChatGPT's debut in 2022 was followed by Google's Genie 3 in 2024, a system that allowed robots to navigate real-world environments. GPT-5, released in 2025, pushed the frontier of reasoning further. These are not niche tools. They are general-purpose technologies diffusing at a speed no earlier industrial revolution ever witnessed. Projections vary, but they all point in the same direction: tens of millions of jobs lost, hundreds of millions potentially automated worldwide and layoffs in the US already at their highest since the pandemic years.

Surveys suggest nearly half of US companies expect to cut headcount because of AI. The International Labour Organization estimates that 14 percent of jobs globally are at high risk of automation, with another 32 percent likely to undergo major transformations. Goldman Sachs has put the potential displacement figure at 300 million jobs worldwide. This upheaval is no longer hypothetical — it is underway.

History offers precedents, but not necessarily comfort. The Luddites who smashed textile machinery were proven wrong and the computer revolution eliminated typing pools but created whole new industries. Yet today's analogy falters. Those earlier innovations displaced manual or clerical work while opening new industrial frontiers — steel, automobiles, IT, etc. By contrast, AI automates cognition itself. If tractors

freed farmhands to move into factories, where will lawyers go when contracts write themselves or coders when software repairs its own code? This time, even the professional classes, long considered automation-proof, are at risk.

Governments are scrambling. Singapore is pouring money into AI-related retraining. The EU is piloting "skills passports" to help workers shift across sectors. In the US, universal basic income — once a fringe idea — has entered mainstream debate. Yet these efforts feel like patches on a rupture. McKinsey estimates AI could add \$4.4 trillion in annual productivity to the global economy by 2040, but those gains will not arrive evenly and will not compensate those left behind. If AI continues advancing, it will not only displace clerks and paralegals but also radiologists, analysts and even teachers, shaking the foundations of the middle class.

The geopolitical context adds urgency. Training state-of-the-art AI systems is so resource-intensive that only a few countries and firms can compete. The race has narrowed to American and Chinese giants. Global private investment in AI hit \$67 billion in 2024, with the US capturing roughly half, while China has pledged more than \$150 billion in AI spending by 2030.

Seventy percent of graduate students in AI-related fields in the US are foreign-born and China provides the deepest bench. Chinese nationals account for about 30 percent of AI doctorates in America. Chinese immigrants founded eight of the 48 most important US AI firms and half of Meta's "superintelligence" team is Chinese. Yet Washington is tightening the H-1B lottery and chastising elite universities for relying on foreign talent — the "birth of the ICE age." At the very moment America most needs global minds, it is shutting them out. The irony is glaring: a country terrified of losing the AI race to China is sidelining the very Chinese engineers and entrepreneurs who fuel its edge.

Frontier AI research today is not an open field but a tightly gated domain, constrained less by money than by the scarcity of people capable of pushing the edge forward. The comparison is less to consumer technology than to the early days of nuclear physics, when breakthroughs hinged on a handful of minds clustered in a few labs.

For the largest technology firms, even with billions to spend, the pool of researchers who truly matter numbers only in the low hundreds — and, within that, there are perhaps a few dozen whose insights disproportionately shape the direction of the field.

But the central uncertainty is not only who leads the race — it is where the race is headed. The literature on AI and productivity remains unsettled not only because evidence is thin but because we do not yet know what direction AI itself will take. Will it prove the new electricity, saturating the economy, or an overhyped tool — brilliant in flashes but limited? Until the trajectory clarifies, every confident claim about AI's long-term impact is more speculative than scientific.

Some argue humans will shift into areas where trust, empathy and physical presence are indispensable — elder care, hospitality, community services and crafts, for example. Others pin their hopes on entirely new industries like synthetic biology or space exploration. But such alternatives are speculative and unlikely to absorb tens of millions of displaced professionals at comparable wages. The Organisation for Economic Co-operation and Development warns that AI-driven automation is likely to hollow out the middle class, disproportionately affecting mid-skill jobs that sustain social stability.

The more unsettling possibility is that societies will accept permanent structural unemployment, relying on redistribution rather than work. That raises questions of identity and dignity: can societies hold together when the social role of work diminishes? And more profoundly: what happens to humanity when the very act of thinking — a task that once defined our species — is outsourced? This is not merely an economic problem but a civilizational riddle. What will people do when someone else — or something else — does their thinking for them?

Public unease reflects this uncertainty. A recent Pew survey found that 62 percent of Americans expect AI to have a major impact on jobs within 20 years, but only 28 percent believe it will improve job opportunities. In other words, most people see disruption coming but few expect to benefit from it. This anxiety is not misplaced — it mirrors the scale of the changes already underway.

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Policymakers are only just beginning to grapple with this. Redistribution through basic income or negative income taxes could cushion the blow, but whether taxpayers will sustain such programs is uncertain. Human-AI collaboration, in which machines augment rather than replace workers, may slow the erosion but not stop it. More radical still is redefining "work" itself — expanding recognition to caregiving, volunteerism and creative pursuits that AI cannot fully replicate. But this demands a reimagining of economic value and social status that few governments are prepared to undertake.

The stakes could not be higher. AI is already eliminating jobs at a pace unseen since the Great Depression. Historical analogies are comforting but misleading: the steam engine, electricity and computers reshaped economies but preserved human primacy in cognitive domains. This time, machines are coming for the desk, not just the factory floor.

The reckoning is unavoidable. Societies that adapt may navigate the transition by building safety nets, investing in human-AI complementarity and nurturing new industries. Those that fail risk mass unemployment and political unrest of a scale unseen in living memory. The AI revolution leaves us with a sharper question: not only what jobs will remain but whether the dignity of work itself can survive when machines outthink us.

The challenge is no longer to keep pace with the machines but to decide what kind of society we want when they inevitably pull ahead.

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