

Protecting the endangered species known as entry-level workers



Organisations and society as a whole will need to relook how to nurture and integrate young talent across industries in a way that allows them to contribute meaningfully as part of real work processes, while they develop into mature professionals, says the writer. ST PHOTO: GAVIN FOO

How will fresh grads gain the experience and skills to take on senior roles when AI breaks the lower rungs of the career ladder?

Laurel Teo

One of the biggest fears about artificial intelligence (AI) has been the extent to which it can reduce or even remove the roles of large swathes of employees. The debate is now zeroing in on the disproportionate threat it poses to young people entering, or about to enter, the job market. It's no longer about AI stealing jobs. It's about AI smothering careers in their cradle. Experts from research firms and big tech companies have flagged that AI capabilities have advanced to the point that they can deftly handle entry-level work across multiple fields – from marketing to management consulting, law, finance, and even creative fields such as the entertainment industry. This enables companies to – if they so wish – automate an entire bottom layer of junior jobs, thereby slashing considerable costs. To be clear, no organisation has publicly declared that it will stop

hiring entry-level workers altogether.

The latest (2025) edition of the World Economic Forum (WEF) Future of Jobs Report notes that 40 per cent of the 1,000-plus global employers surveyed expect to cut jobs in which tasks can be AI-automated.

While the WEF report did not pinpoint those jobs to be entry-level ones, others have gone further to call out what some have described as breaking the lower rungs of the career ladder.

Oxford Economics said in its May 27 US research briefing that “there are signs that entry-level positions are being displaced by artificial intelligence at higher rates”.

In the same month, leading AI researcher and entrepreneur Dario Amodei made the dramatic prediction that AI could erase half of all entry-level white-collar jobs in the next one to five years. Dr Amodei led the development of OpenAI's ChatGPT before leaving the firm with his sister to start competing business Anthropic in 2021.

DISENFRANCHISING FRESH GRADS

The implications are immense. Denying cohorts of young people a decent start in the workforce because they can no longer contribute sufficient monetary value amounts to breaking an implicit social contract.

People build careers by entering at the bottom rungs to take on the grunt work of foundational tasks. They learn by assisting and observing seniors, grow by collaborating with co-workers and improve by acting on feedback and advice from supervisors and mentors. Over time, they develop not just skills but, importantly, judgment, acumen and confidence, to take on more strategic and leadership roles within organisations. As they mature in their careers, they then impart the same training to juniors joining the field.

Breaking this cycle by automating foundational roles risks disenfranchising an entire generation of fresh graduates. There could even be a backlash on businesses in the longer term as this disrupts or even destroys pipelines of future senior talent needed to supervise and review work done by AI.

“I think we do need to be concerned about it. I think

policymakers do need to worry about it,” Dr Amodei warned in an interview with CNN on the looming job crisis sparked by the technology he and others have built.

Thankfully, the Singapore Government is acting quickly. Prime Minister Lawrence Wong announced in his National Day Rally speech on Aug 17 a new government-funded traineeship programme for Institute of Technical Education, polytechnic and university graduates.

Likening it to the SGUnited Traineeships Programme launched in 2020 to support recent and new graduates in a job market severely hit by the Covid-19 pandemic, PM Wong said the new traineeship programme would provide more opportunities to young Singaporeans amid the current economic uncertainty.

While he did not explicitly link the new initiative to AI, recent reports have been reflecting a broad unease among young people about the impact of AI on their job prospects. A survey by recruitment firm Randstad showed that almost half of Singapore's Gen Z respondents agreed AI will significantly affect their jobs in the next five years.

Nevertheless, Singapore's youth

may be better off than their counterparts elsewhere, according to a survey by CFA Institute, the global association of investment professionals. Conducted between March and April 2025, the CFA Institute survey sampled more than 9,000 undergraduates and recent university graduates aged 18 to 25 from 10 countries – Singapore, China, India, Canada, the US, Mexico, Brazil, Britain, Spain and Saudi Arabia.

Singapore respondents of the survey were far less likely than their global counterparts to believe that AI and automation will make it more difficult to secure the job they want (47 per cent versus 67 per cent globally). Singapore respondents were also significantly more confident than their global peers in their ability to use AI tools at work after graduation (96 per cent versus 88 per cent globally). Finally, almost all Singapore respondents believed in the importance of continuous skilling, with 99 per cent indicating that upskilling and professional or postgraduate qualifications are important in the current job market (versus 96 per cent of global peers).

Timely efforts by Singapore's policymakers, coupled with broad communication efforts of reassurance, have likely played a role in shoring up the confidence and relative optimism of Singapore youth.

A LONG-TERM CHALLENGE

But this is a war, not a battle, and it's far from over.

PM Wong has said that the Government would scale up the traineeship programme “if the economy worsens”, signalling that Singapore policymakers are prepared to deal with the issue even in the longer term.

Unlike the cyclical pattern of economic downturns and upswings, the career impact of AI disruptions on young job seekers is unlikely to be a temporary blip. Instead, there are signs that workplace structures and systems are changing fundamentally with long-term consequences.

As early as 10 years ago, researchers studying the impact of robotic surgery in Europe and the US had noted its unintended consequences on the medical industry. Robotic surgery was initially aimed at augmenting the performance of surgeons by magnifying micro details which the human eye would not have been able to detect in a regular open surgery situation. Remotely controlled robotic instruments also enabled surgeons to dissect tissues more carefully and reach organs harder to access. But at the same time, the new technology changed workplace structures and dynamics in complex ways, in particular the role of trainee surgeons and their relationship and relevance to senior surgeons.

In the past, surgery used to be teamwork requiring careful coordination among lead surgeons and residents in training, as well as anaesthesiologists and scrub nurses. Residents would assist surgeons side by side, preparing the instruments and lights, positioning clamps, and helping to move tissues or suction blood while surgeons operated on the patient.

With robotics, however, the surgeon controls the surgery at a main console some distance away from the patient, while residents are rendered as mere observers in the process. They no longer have opportunities to assist surgeons hands-on. As Dutch management professor Anastasia Sergeeva and her colleagues noted in a 2020 study, “residents are demoted from participants to students”. Where apprenticeships used to mean that trainees' work and learning were tightly knitted with the surgeon's work, such interactions were now significantly reduced, with trainees left to track the surgeon's movement on a monitor instead.

This has called into question how trainees can receive sufficient training and experience to build their surgical skills, and to handle complex situations if things go wrong. US academic Matt Beane, who similarly studies robotic surgery in the US, has been inspired by GitHub to build a crowdsourced open-sourced platform for “annotated and annotatable surgical videos” that viewers can interact with to enhance active learning.

Extending beyond the medical field, organisations and society as a whole will need to relook how to nurture and integrate young talent across industries in a way that allows them to contribute meaningfully as part of real work processes, while they develop into mature professionals. This may mean thinking of new models of apprenticeship and designing new opportunities for career development.

It would require significant commitment from multiple parties – government, people and private sectors, and radical actions on all fronts, perhaps even from AI firms.

As Dr Amodei himself suggested: “I wouldn't exclude the notion of levying a tax on AI companies.” Much of the massive total wealth created by AI companies would go to these handful of AI companies and less to ordinary people, he admitted. “(It's) definitely not in my economic interest to say that, but I think (levying a tax) on AI companies) is something we should consider.”

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