

AI May Be Closing Some Entry-Level Doors

A Stanford study finds younger workers are losing ground in jobs most exposed to AI, even as overall employment looks steadier.



An empty office workstation sits near a glowing computer, suggesting AI changing access to early-career jobs.

Newly updated research from Stanford University economists suggests artificial intelligence is hitting some entry-level workers harder than the rest of the labor market. According to reporting by Ars Technica, the August 2026 update of a Stanford paper found that workers ages 22 to 25 in occupations most exposed to AI **disruption** now have **employment** levels 19 percent below their peers in less exposed fields. In last year's version of the same research, that gap was 13 percent.

That matters because the argument over AI and work is no longer only about a far-off future in which machines replace people across the economy. The study points to a narrower but serious possibility: total employment can look mostly stable while the first jobs that help young adults build experience become harder to get. If that is happening, the trade-off is not simply "technology versus jobs." It is between using AI to make work faster and cheaper now, and preserving the early-career training ground that produces experienced workers later.

The researchers used **anonymized payroll** data gathered by ADP, a large human-resources management company. Anonymized means the data does not identify individual workers by name. They then compared occupations by how exposed they are to AI, meaning how likely the tasks in those jobs

are to be affected by AI tools. To measure that **exposure**, they used two approaches: an existing labor-market measure from earlier researchers and the Anthropic Economic Index, which looks at how people use Claude, an AI chatbot made by Anthropic, in different kinds of work.

Across the whole economy, the researchers found little or no relative employment difference between jobs judged most affected by AI and jobs judged least affected. But when they separated out workers ages 22 to 25, the pattern changed. Since 2022, employment for young workers in the top 40 percent of AI-impacted jobs fell by about 11 percent. In the 60 percent of jobs with the least AI impact, employment for young workers grew by 10 percent over the same period.

The study also found that the change seems to be happening mostly through slower hiring, not mass firings. In other words, companies may not be cutting large numbers of young employees already on payroll. Instead, they may be creating fewer openings for people trying to start in those fields. The researchers also found that, for this age group, the effect showed up more in lower employment than in lower pay.

A key distinction in the study is between AI that automates work and AI that augments work. **Automa-**

tion means replacing a task that a human worker would otherwise do. Augmentation means helping a human worker do a task better or faster while the person remains central to the job. The researchers found that entry-level employment looked worse in occupations where AI was used more for automation. Jobs such as accountants and auditors, and receptionists and information clerks, were among those judged more susceptible to automation. Jobs such as chief executive and registered nurse were more often linked to augmentation.

That distinction helps explain why older workers may not be affected in the same way, at least so far. The researchers examined the difference between **codified** knowledge and **tacit** knowledge. Codified knowledge is formal knowledge that can be written down, taught in school, or explained in procedures. Tacit knowledge is know-how gained through practice, **mentorship**, and repeated experience in real situations. AI systems can be especially useful with tasks built around codified knowledge. But many experienced workers also rely on tacit knowledge that is harder to capture in a prompt.

To test that idea, the researchers used the education requirements listed in O*NET, a detailed U.S. database of occupations, as a rough stand-in for how much formal knowledge a job requires. They found that occupations with more codified knowl-

edge had slower entry-level employment growth, while occupations with more tacit knowledge had faster growth for mid-career and senior workers. That does not mean education is useless. The study also found that in occupations with more college graduates, the differences between more AI-exposed and less AI-exposed jobs were less sharp.

The contested question is what to do with evidence like this. Employers may see AI tools as a way to reduce repetitive work, cut costs, or free experienced employees for more complex tasks. Workers entering the labor market may see the same tools as blocking the ordinary route into a career. Colleges and training programs may need to rethink whether they are preparing people for jobs that still exist in the same form. Policymakers may have to decide whether to let businesses adapt on their own or encourage new paths into work, such as apprenticeships, supervised AI use, or training that builds judgment as well as technical skill.

The Stanford study does not say every young worker is doomed, and it does not show that AI has already transformed the entire labor market. Its warning is more specific: the first rung of some career ladders may be weakening before the whole ladder appears to move. That is a different kind of disruption, and it is harder to notice until a generation tries to climb.

Written from reporting by Ars Technica.

THINK IT THROUGH

1. If AI helps companies become more efficient but reduces entry-level hiring, what responsibilities, if any, do employers have to train new workers?

2. Should schools and colleges respond to AI by teaching more technical AI skills, more human judgment and experience-based skills, or both?

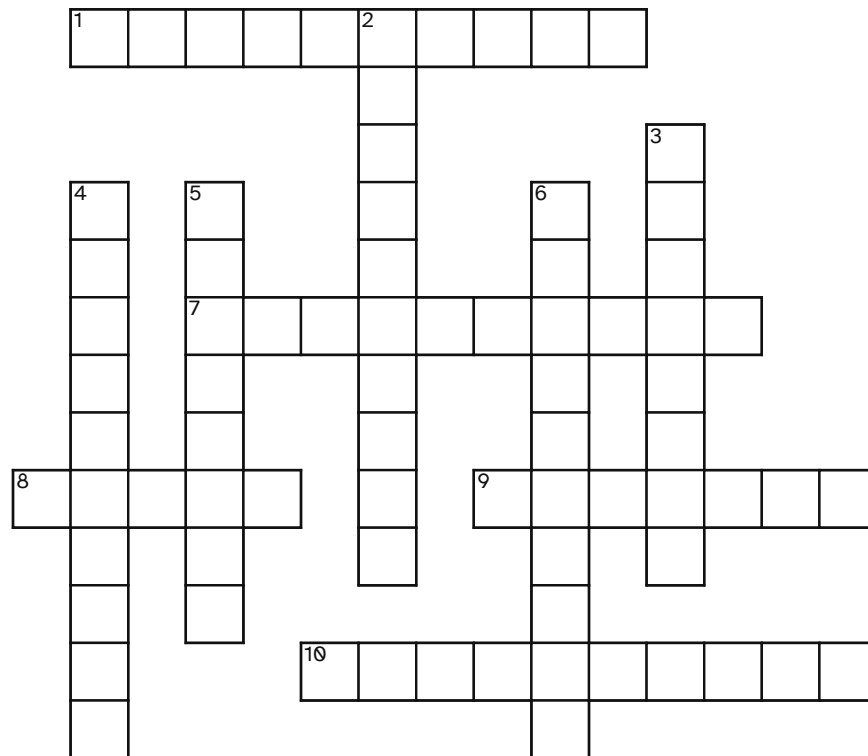
3. What evidence would make this study more convincing, and what evidence might weaken its conclusions?

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R I O C C U P A T I O N R I N I T A
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ANONYMIZED	AUTOMATION	CODIFIED	DISRUPTION
EMPLOYMENT	EXPOSURE	MENTORSHIP	OCCUPATION
	PAYROLL	TACIT	

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ACROSS

- 1 Altered so data cannot be linked to named people
- 7 Major interruption to normal operations
- 8 Understood through experience but hard to put into words
- 9 Company list of workers and their wages
- 10 Having paid work

DOWN

- 2 Help and advice from an experienced guide
- 3 How likely a job is to be affected by a risk
- 4 Career field or kind of job
- 5 Put into official written rules or procedures
- 6 Technology doing tasks once done by people

Where this came from

This article was written for 3andB from the reporting below. It is not a reprint — the wording is ours and the facts are theirs.

Ars Technica

“AI is hitting entry-level jobs hardest, Stanford study finds”

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<https://arstechnica.com/ai/2026/08/ai-is-hitting-entry-level-jobs-hardest-stanford-study-finds/>

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