AI AMPLIFIES NEED TO ADDRESS EXPERIENCE GAP

By Nathan Ringham, Vice President, Research and Insights at CICP
and Sally Reasoner, Vice President, Talent Strategy at TechPoint

TECHPOINT + CICP Central Indiana Corporate Partnership

A DECADE AGO, THE MESSAGE WAS SIMPLE: BROADEN THE PIPELINE AND YOU'LL CLOSE THE TECH TALENT GAP

Nationally, the White House's TechHire and Computer Science for All initiatives leaned in on the idea that hundreds of thousands of open IT roles could be filled with faster training, apprenticeships, and expanded K–12 computer science curriculum.

That drumbeat of scarcity, more jobs than people, set expectations for a generation of students, with policymakers and industry leaders alike driving the message.

As AI adoption accelerates, the narrative is being rewritten with generative models, growing agentic systems and emerging technologies.

CONTRIBUTORS

CASEY OSTERKAMP
SVP & COO
TechPoint

CHELSEA LINDER
VP Innovation & Entrepreneurship
TechPoint

GINGER LIPPERT
VP Marketing & Engagement
TechPoint

KRISTEN ELFERING
Senior Director of Talent Program Operations
TechPoint

TAYLOR DOOLEY
Director of Talent Programs
TechPoint

HANNAH MILNER
Operations Manager
TechPoint

EDIT & DESIGN

LARA BECK
Beck Communications Group

THERESA WILCOX
Sassafras
Graphic Design

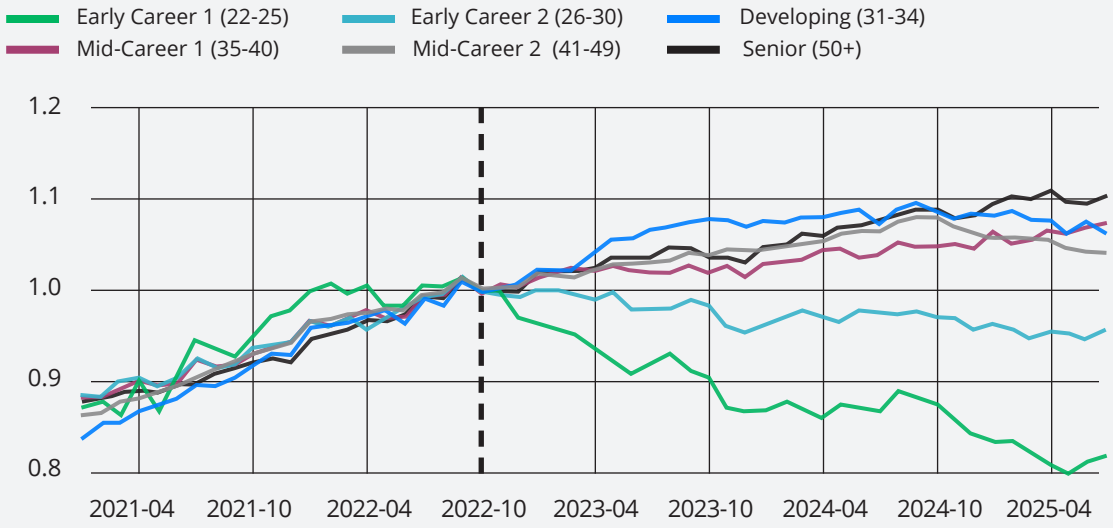
While the jury is still out when it comes to AI's impact on the labor market more broadly, it does seem to be affecting some entry-level workers, particularly in certain AI-exposed occupations.

Indiana was an early adopter of computer science standards for K-12 students. With the digitization of work increasing opportunities for the tech workers across critical industries, tight labor markets prompted business leaders and industry groups, including TechPoint, to encourage more Hoosiers to consider careers in tech. As AI adoption accelerates, the narrative is being rewritten with generative models, growing agentic systems and emerging technologies.

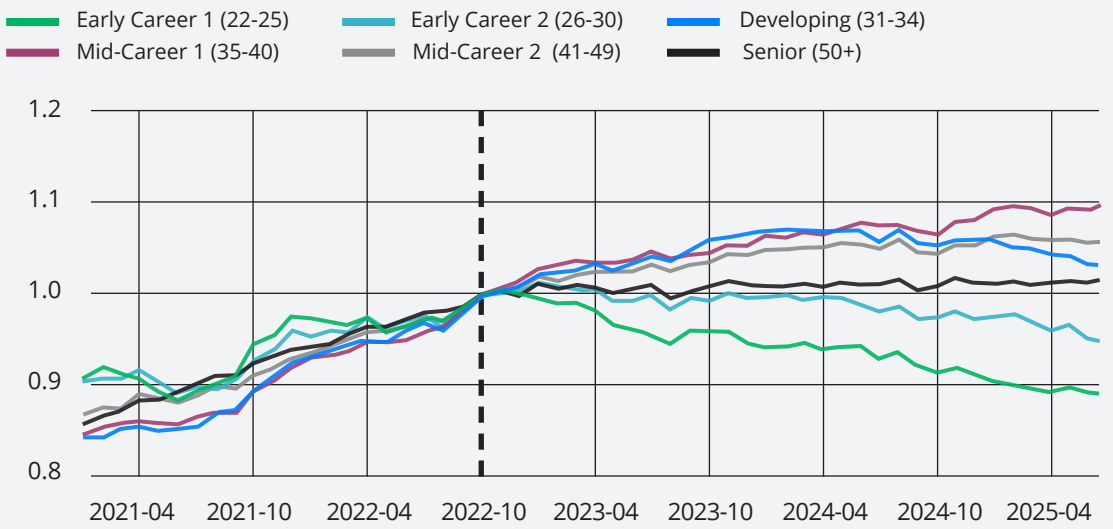
In the summer of 2025, a widely discussed New York Times feature captured the shifting mood in human terms: a brand-new computer science graduate, unable to land a tech job, fielding an interview at Chipotle instead. The story ricocheted across tech media and social platforms and came to symbolize the feeling that pathways into the workforce are narrowing as AI tools promise efficiency gains.

While the jury is still out when it comes to AI's impact on the labor market more broadly, it does seem to be affecting some entry-level workers, particularly in certain AI-exposed occupations. The strongest current evidence comes from the Stanford Digital Economy Lab, which linked ADP's payroll microdata with task-level measures of AI exposure. Their August 2025 working paper, "Canaries in the Coal Mine? Six Facts about the Recent Employment Effects of AI," **finds a striking redistribution of opportunity by experience, not a uniform collapse of tech work.** These findings align with a May 2025 report from SignalFire, which found that new graduate hiring at the nation's largest technology firms had declined by roughly 50 percent compared to 2023.

SOFTWARE DEVELOPERS | HEADCOUNT OVER TIME BY AGE GROUP



CUSTOMER SERVICE | HEADCOUNT OVER TIME BY AGE GROUP

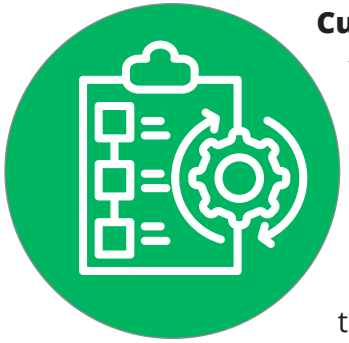


From Erik Brynjolfsson, Bharat Chandar, and Ruyu Chen, "Canaries in the Coal Mine? Six Facts about the Recent Employment Effects of Artificial Intelligence" (working paper, Stanford Digital Economy Lab, August 26, 2025), accessed November 10, 2025, https://digitaleconomy.stanford.edu/wp-content/uploads/2025/08/Canaries_BrynjolfssonChandarChen.pdf.

Early-career workers (ages 22–25) in the most AI-exposed occupations saw a 13% relative decline in employment from late 2022 to mid-2025, as employment for more experienced workers in those same jobs held steady or grew.

AI-exposed occupations (e.g. software developers and customer service agents); are those comprised of tasks that AI tools increasingly perform with the right supervision.

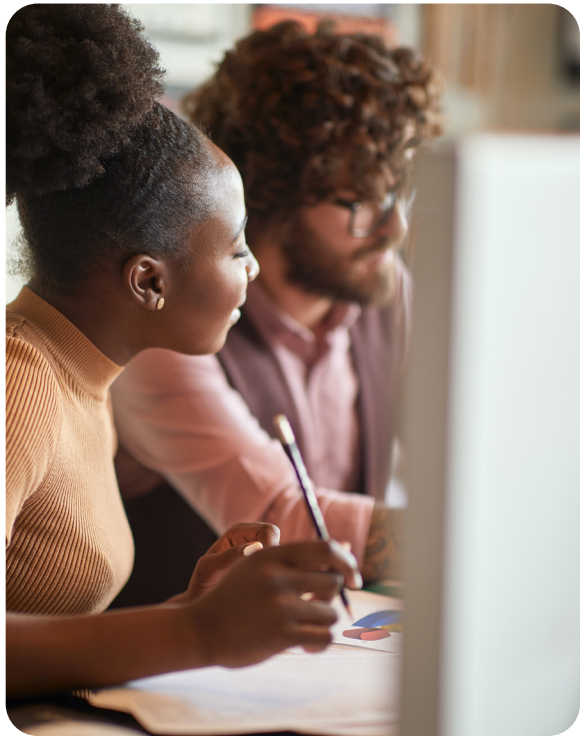
THE STANFORD RESEARCHERS SUGGEST THAT THIS DIVERGENCE IN EMPLOYMENT GROWTH BY EXPERIENCE MAKES SENSE IN THE CONTEXT OF CODIFIED VERSUS TACIT WORK.



Current AI tools excel at codified tasks, work that is routine/standardized, rules-based and well documented, with abundant training data. Tasks like boilerplate code, routine bug fixes, template-based correspondence and basic reconciliations. In other words, the tasks typically done by entry-level workers who are transitioning from education to the workplace.

By contrast, tacit knowledge—things like system architecture trade-offs, security hardening, debugging obscure edge cases, orchestrating multi-team delivery, knowing which "right answer" will fail in production—remains complex and context-laden. In practice, tacit capability accrues via supervision, pairing, code review, post-mortems and live production responsibility. These are the experiences entry-level workers get from working with seasoned colleagues.

Importantly, this does not reflect a failure of higher education. Colleges and universities are doing what they are designed to do: teaching theory, fundamentals and problem-solving frameworks. What is missing is not knowledge, but structured opportunities to apply that knowledge in context.



What is missing is not knowledge, but structured opportunities to apply that knowledge in context.

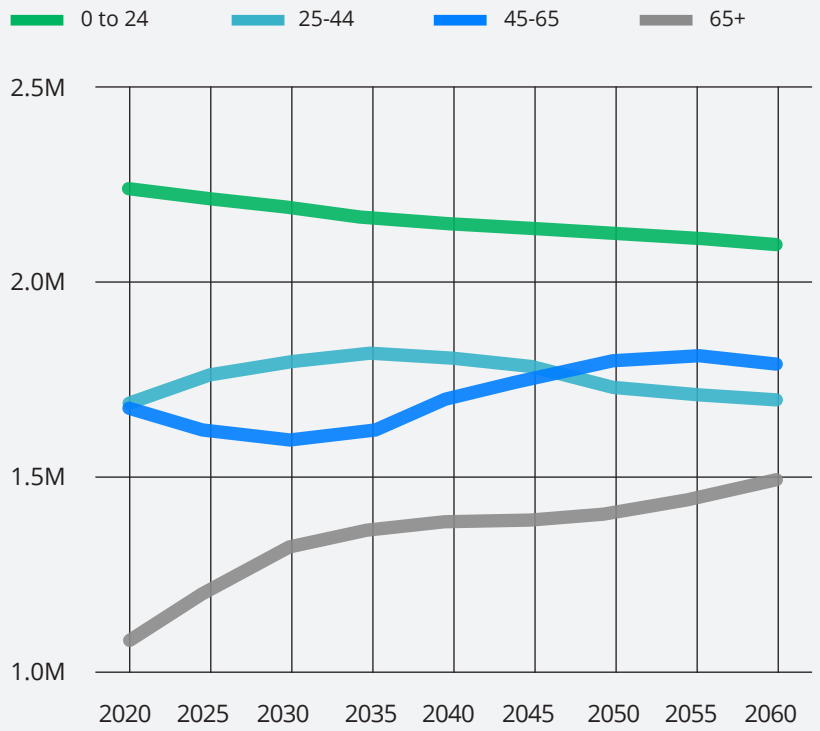
THIS LEAVES A CONUNDRUM:

How are workers supposed to gain the experience needed to develop tacit knowledge if the rungs that teach it disappear?

The traditional ladder of starting with simple tasks, learning the codebase and growing autonomy falters when simple tasks are automated or reserved for AI-assisted senior professionals who can complete them faster and without oversight. Without deliberately redesigning education to workforce connection points, access to experienced talent will eventually dry-up, leaving few with the tacit knowledge firms say they need.

For Indiana, solving this quandary isn't merely about "someday." It is about succession and continuity in the near-term. The state's median age now sits at 38 years old and rising. Projections from the Indiana Business Research Center show the 16-24 and 25-44 cohorts flattening while older cohorts grow through 2060, implying intensifying replacement pressure as experienced workers retire. **The policy and practice implication follows: if the market increasingly favors tacit knowledge, Indiana must manufacture tacit knowledge on purpose.**

INDIANA'S PROJECTED POPULATION BY AGE GROUP 2020 TO 2060 (Population in millions)



From Matt Kinghorn, "Indiana Population Projections to 2060," Indiana Business Review 99, no. 2 (Summer 2024), accessed November 10, 2025, https://www.ibrc.indiana.edu/ibr/2024/summer/article1.html.

WORK-BASED LEARNING IS AN ANSWER.

In the tech space, young talent in software, customer service operations, finance ops/automation, and related fields need opportunities where they are hired explicitly to learn in production under structured mentorship. Work-based learning has received increasing attention in recent years, particularly in Indiana. In fact, scaffolding is in place on which to build work-based learning opportunities, but greater scale is needed. And that requires more businesses to engage.

For some time, many businesses have thought of internships, apprenticeships and other work-based learning opportunities as something akin to corporate philanthropy. It's not; it's an investment in the future workforce. For some jobs, AI is making this clear now. For others, it's just a matter of time, particularly as AI becomes more of a general-purpose technology that permeates throughout the economy.

The takeaway is not that "tech hiring is over." It's that who gets hired first is changing.

AI is raising the premium on tacit capability—on judgment, coordination and the wisdom to know when the "right" code will fail in production. Left alone, markets will keep favoring veterans and sidelining novices, putting Indiana's companies and economy at-risk in the years ahead. **The remedy is to rebuild the experience ladder. Do that, and the state will convert an experience gap into a competitive edge.**

VOICES FROM THE ECOSYSTEM:

INDIANA LEADERS ON THE EXPERIENCE GAP

Employer, education, and community perspectives on why experience matters and who must build it.

CASEY STANLEY

President, Boyce Systems

We view our people as long-term investments, and we see it as both our responsibility and opportunity to help shape their growth. Internships and real-world work aren't optional; they're how we build the judgment and knowledge we'll rely on in the future. In a world where technology and AI continue to evolve at an incredible pace, we hire people first and skills second -- knowing the skills will change, but the ability to learn and grow will not.

HALEY GLOVER

Senior Director, UpSkill America

If we want AI to expand opportunity rather than narrow it, we have to rethink how experience is recognized and rewarded. Work of all kinds often develops durable, transferable skills, yet too often that learning goes unrecognized. This research highlights why expanded high-quality work-based learning is essential, allowing students to gain the experience they need and providing employers with a skilled talent pipeline they can rely on.

CHRIS VANNOY

Founder, Axiomatic Consulting and President of Indy Hackers

From teaching at a coding bootcamp, to hiring at startups, and now leading Indy Hackers, I've seen time and again how mentorship helps not just the person being mentored, but the mentor as well.

It's how we grow the next generation of Indiana technologists - through investing in them through mentorship and opportunity.

We don't hire just senior engineers. We grow them. Because that's what Indiana does.

TAMRE PINNER

Chief Operating Officer, Havarti Risk

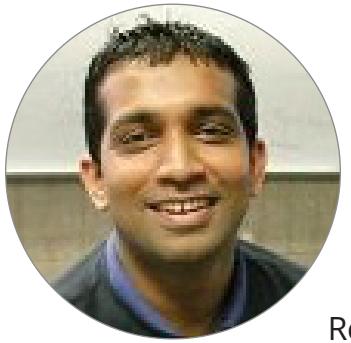
Early-career talent is a strategic investment for Havarti Risk. We hire Xterns with strong technical skills and teach them the context behind our work. When they understand how we operate, we see fast ROI and are able to convert them into full-time hires who are productive and add value from day one.

TROY KELLEY

VP of Software Delivery at E-gineering, Inc

Amidst all the advances in AI, we continue to remain optimistic about bringing on entry-level developers. We believe the key to this approach is just a slight change to what we've been doing for years: deliberate mentoring by experienced developers.

AI changes the game in that, with proper training and mindset, an entry-level dev has access to senior developer knowledge anytime they need it. When **supplemented** by human oversight, this is very powerful.



SRIRAM MOHAN

Department Head of Computer Science and Software Engineering and Professor, Rose-Hulman Institute of Technology

Rose-Hulman students are exceptionally talented - curious, technically adept, and eager to apply what they learn. Our graduates succeed because they don't just master theory; they are grounded in applying the theory to real world problems in the classroom, and enhance their impact by participating in internships, industry-aligned projects, and close collaboration with employers. Rose-Hulman's strong internship participation shows what's possible when employers engage early, and Indiana companies have a real opportunity to help shape, and retain, this next generation of technical talent.

TECHPOINT + CICP

Central Indiana Corporate Partnership