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**EPISODE 934:**  
**IN CASE YOU MISSED**  
**IT IN SEPTEMBER**  
**2025**



Jon Krohn: 00:00 This is episode number 934 on whether AI is replacing junior workers. Welcome back to the SuperDataScience Podcast. I'm your host, Jon Krohn. Today's topic is whether AI is starting to replace junior workers. I'll be focusing on the US because that's where I could find the most relevant research, but hopefully the content in this episode is relevant to listeners and other economies as well. So the job market has been sending mixed signals recently. While economic growth remains relatively healthy, job creation has slowed dramatically. In August, the US economy added just 20,000 jobs down sharply from 160,000 jobs in April. This slowdown has sparked an important question. Is Gen AI beginning to eat into employment opportunities for human workers, particularly those at the start of their careers? At first glance, the answer appears to be no. The share of white collar jobs most vulnerable to AI automation has remained stable as a proportion of total employment.

01:03 Over the past year, research published in October by Yale University's budget lab found no major shifts in the kinds of jobs people are doing since Chad GT's debut in late 2022. So case closed, right? Well, not quite. When you dig deeper into company level data, a concerning pattern emerges. New research published in August by Stanford's, Eric Brisen, for example, analyzed actual payroll records covering over 25 million workers, and found that employment for workers age 22 to 25 in AI exposed occupations declined 13% since late 2022. While older colleagues in the same jobs saw employment growth of about six to 9%, so decline of 13% for folks for workers aged 22 to 25 in AI exposed occupations and an increase in employment for older colleagues. Complimenting these payroll data researchers at Harvard took a different approach. These Harvard folks named Hassani and Inger, if you're looking for the original research, used AI to parse through 200 million job postings, identifying firms, hiring



generative AI integrators, workers whose job is to embed AI technology into daily operations.

02:16 Like probably many of our listeners out there, these Harvard folks found about 10,000 firms hiring these kinds of generative AI integrator workers. And so they labeled those firms that hired those people, AI adopters, and the vast majority of the firms, the remaining 280,000 companies served as a control group. So 10,000 companies are AI adopters because they hired these generative AI integrators. While the vast majority of companies, 280,000 of them serve just as a control group. So here's where both studies align. The Stanford study and the Hartford study, while junior level positions declined across the board after 2023, the decline was 8% steeper at AI adopter firms compared to non-ad adopters. No such gap appeared in senior hiring. So software developers aged 22 to 25 saw employment drop nearly 20% from late 2022 to this summer, this northern hemisphere summer. And so this suggests that entry level work, debugging code, reviewing documents, conducting research, seems particularly susceptible to being handed over to AI systems.

03:29 Stanford's Brison offers an explanation. He says that largely language models are trained on books and written material, the kind of learning people get at universities, but older workers have tacit knowledge from experience that may never be written down anywhere, so they're not being replaced as much. The Harvard Study reveals another troubling dimension that I want to get into. It's that mid-tier university graduates fared much worse than those from top tier or bottom tier schools. Companies may be keeping top tier recruits for their specialist skills while retaining bottom tier graduates for their lower cost. It's the middle tier graduates who face the strongest competitive threat seemingly from ai. We're already seeing this play out at some major firms. For example, Goldman



Sachs and Morgan Stanley executives are considering cutting junior analyst hires by up to two thirds according to recent reporting. But here's an important counterpoint.

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Entry-level workers with AI skills actually saw their salaries rise 12% from last year to this year. This creates a bifurcated labor market. Young workers who can effectively leverage AI tools see opportunity while those competing directly with AI capabilities face displacement. What does this mean for you? If you're early in your career, focus on developing skills that compliment AI rather than compete with it. Become skilled at working with AI tools yourself, specialize in areas requiring deep expertise or focus on interpersonal skills that machines can't replicate. Probably if you're listening to this show, you're already going in the right direction on AI skills. The bottom line is that we're not seeing an AI driven jobs apocalypse in aggregate data, but multiple studies now confirm that AI adoption is affecting hiring patterns for entry level positions. It's a subtle but measurable effect. And one worth watching closely is AI capabilities continue to advance.

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And a stat that I'd like to really highlight here is that the number of firms right now that our AI adopters where these effects are being noticed, they are a very small percentage. So again, that Harvard study, out of the almost 300,000 companies that they looked at, only 10,000 had hired these gen AI integrators and were AI adopters. So today most firms aren't really that advanced with respect to ai. This is definitely something to keep an eye on for the future as more and more become AI adopters that could make a big impact in the data. But I suspect that a lot of the advice that I had in today's episode around becoming skilled at working AI with AI tools yourself or focusing on interpersonal skills machines can't replicate, will still be relevant in many years to come. Alright, that's it for today's episode. I'm



Jon Krohn and you've been listening to the SuperDataScience Podcast. If you enjoyed today's episode or know someone who might consider sharing the episode with them or leave a review of the show on your favorite podcasting platform, tag me in a LinkedIn post with your thoughts, and if you aren't already, be sure to subscribe to the show. Most importantly, however, we hope you'll just keep on listening. Until next time, keep on rocking it out there, and I'm looking forward to enjoying another round of the SuperDataScience Podcast with you very soon.