

AI May Force These Workers to Retire Earlier Than Planned

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MarketWatch Blog by [Geoffrey T. Sanzenbacher](#)



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Older workers now face two major impediments: looming Social Security cuts and rapidly evolving workplace priorities.

I have been thinking about how artificial intelligence technology affects my college-aged students, both intellectually and economically. But even though I research retirement, I hadn't focused on how AI might impact people later in their careers.

Recently, a [Wall Street Journal headline](#) caught my eye: "The Workers Opting to Retire Instead of Taking On AI." The WSJ article, combined with [anecdotes](#) that some tech layoffs are hitting older workers, piqued my interest. The result was an [issue brief](#) that looked at whether older workers exposed to AI are leaving work more frequently than they used to.

Going in, I didn't know what to expect, but I wasn't automatically envisioning a late career "job apocalypse." Consider the example of a website editor. On the one hand, the types of technologies that have exploded since the launch of ChatGPT in November 2022 can automate tasks like editing grammar or verifying facts and figures. That automation has the potential to put a premature end to our editor's career.

On the other hand, the editor could automate those tasks and focus their energy on generating new ideas that appeal to their audience, something AI would struggle with. If this adoption of AI increases our editor's productivity, it could *extend* their career.

Which of these possibilities plays out with respect to career length is important. The Social Security Trust Fund will run out in 2032 and, if nothing is done, benefits will be cut for both current and future beneficiaries by 22 percent. If this benefit cut occurs, workers will need longer, not shorter careers to shore up their retirements. An across-the-board benefit cut would likely be politically unpalatable, so it seems probable that some change to the program will happen in the next six years. But suggested changes to the program **often include increases** in the retirement age, again necessitating longer, not shorter careers to maintain one's benefits.

Since the relationship between career length and AI is unknown, I turned to the data. I began with the Current Population Survey (CPS), the dataset used by the Bureau of Labor Statistics to estimate the monthly unemployment rate. In the CPS, I identified workers ages 55+ and followed them for a year to see if they kept or stopped working.

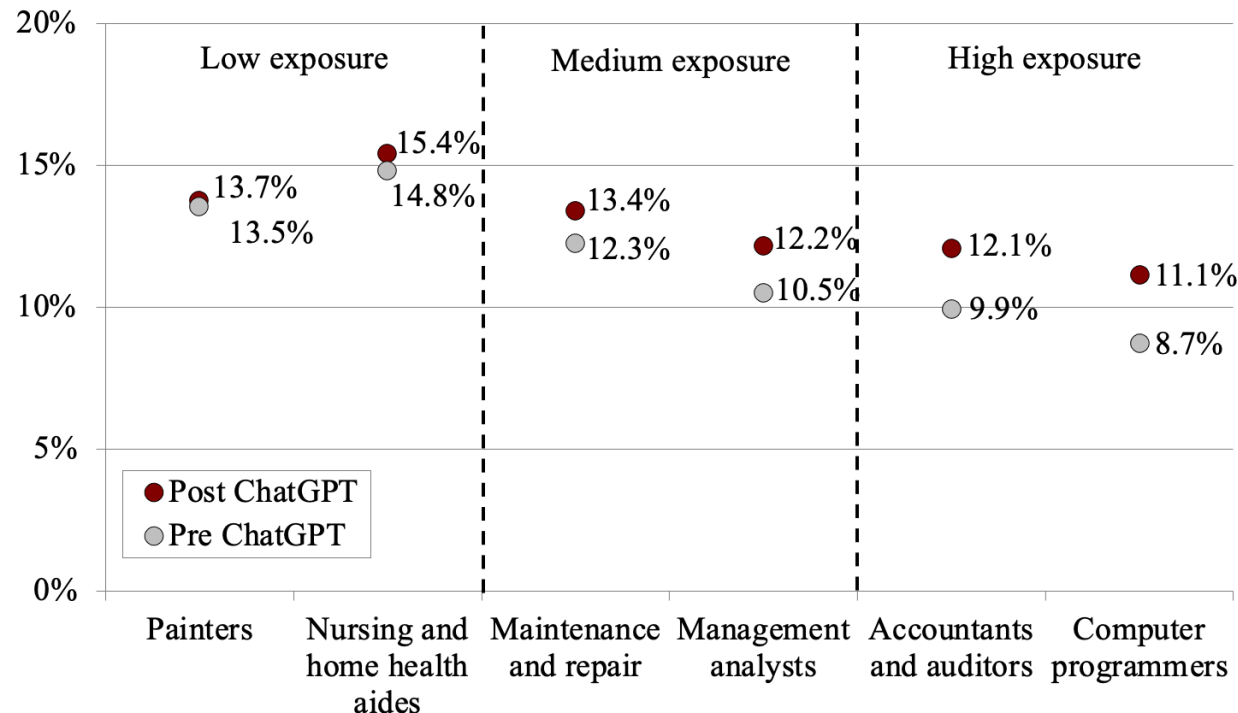
Then I used workers' reported occupations to merge them onto **Digital Planet's new AI Exposure metric**. I like this metric, because it doesn't just try to figure out how many workers will be replaced by AI. Instead, it captures what portion of a job's tasks can be done efficiently with technologies like large language models and machine learning. Jobs with many such tasks – like web designers or data scientists – could be replaced by AI. But they could also be made more productive.

The question is: how are these forces playing out for older workers at this early stage in AI's development?

The hard thing about answering this question is that workers whose jobs are now exposed to AI have in the past typically had different end of career patterns than others. A web designer (high AI exposure) is often going to work longer than a house painter (very low exposure) due to the different physicality of the work. To address this issue, I ran a regression that used the period before ChatGPT's launch as a sort of "pre-treatment" period that also controlled for things like the worker's education and earnings. The regression asks whether workers ages 55+ who are exposed to AI are leaving work more often than similar workers with the same exposure before ChatGPT's launch.

The key result: workers in more exposed occupations saw larger relative increases in exits from work than those less exposed. Figure 1 illustrates how the model's predicted transitions to out-of-work change for workers in six jobs ranging from low to high in AI exposure. These predictions are formed using the average characteristics for workers in that job (e.g., race, education, marriage, earnings, etc.) and for an average economic period between 2014 and 2025 (excluding 2020 and 2021 due to the COVID Pandemic). Thus, the predictions reflect only the expected impact of AI-exposure – if computer programmers see an increase in demand due to economic growth (for example) it would not be reflected in the figure.

Figure 1. *Predicted Change in Transitions to Out of Work Associated with AI Exposure, Select Jobs*



Sources: Author's calculations from IPUMS CPS (2014-2026) and Digital Planet Initiative (2026).

The figure makes it clear that some jobs could see relatively large increases in transitions out of work, while others are mostly unaffected. For example, painters – with a low exposure score of 5 – see barely any increase. For computer programmers – on the other end of the spectrum – the increase is over 25 percent. And in the middle of the exposure distribution the effect is likely to range from a 9 percent to 16 percent increase in exit. These predicted increases in job exit for middle- and highly-exposed workers are not at all trivial and are occurring at a sensitive time given that looming Social Security shortfall.

The figure also shows that the impact of AI may be bigger for higher paying jobs, a departure from recent versions of automation that hit middle-income workers harder. While the higher paying jobs in the figure still have lower

transitions out of work even after ChatGPT, AI exposure may reduce the gap in career length between low- and high-paying occupations.

Social Security reformers should take note of these findings. That proposal I mentioned above to increase the retirement age suggested it be targeted at the top 40 percent of earners, i.e., those most exposed to AI. While that may have been good policy in the past since those workers often had an easier time working longer, that gap may be eroding.