



The Next Stage of the AI Job Takeover

Why credit defaults among the safest borrowers may be one of the signs that AI is already moving beyond entry-level jobs.

Publication note

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For many people, the job market feels broken. A growing number of job seekers report rising stress and anxiety as they struggle to stand out in an increasingly crowded field. While young college graduates have been among the first to feel its effects, the problem appears to be spreading.

Over the past year, entry-level job openings have slumped across multiple fields. Computer science and other technical majors, which had long been reliable paths to good careers, are now struggling alongside historically less marketable fields that are themselves seeing entry-level declines.

This slump is almost certainly the result of Artificial Intelligence (AI) eroding job opportunities. Entry-level work is where the first impact is being felt, but I believe the effect will expand as AI capabilities continue to improve. Recent credit data may already contain evidence that this wave of job elimination is now starting to reach more senior workers, including an unusual rise in defaults among even the most creditworthy borrowers.

Early Warnings in the Job Market

A little over a year ago, unemployment data started showing a foreboding problem. Young people under 25 and recent graduates were having trouble finding jobs that matched their college degrees and expectations. The overall employment numbers looked good, but both unemployment and underemployment for this group were disproportionately high. Moreover, the difference between this group and the overall employment numbers was also at a record high.

In addition to the official employment data, I was also seeing corroborating anecdotal evidence firsthand. Undergraduate advisees were reporting very different experiences compared to past years. Previously, many of the students in my school's spring advising groups would be deciding between multiple six-figure job offers from premier companies. But that year was markedly different. Instead of the usual "quandary of riches," I was hearing many students, including a couple with perfect 4.0 GPAs, worrying about getting no offers at all. When I mentioned this to colleagues, both at UC Berkeley and at other schools, they reported similar observations. Along similar lines, students in fall advising groups were discouraged in their job searches and more than usual were considering graduate school as a way to buy time and hopefully increase their odds in the job market.

Online sentiment was also shifting. Forums focused on job seeking and layoffs were filling up with negative stories. People described spending weeks or months sending out hundreds of applications with no success. Posters frequently reported that the positions they were applying to had thousands of other applicants. Soon news stories started to appear, documenting the unprecedented struggle suddenly facing fresh college grads. This bleak situation facing new job seekers has now become a widely recognized problem.

Technical Majors Lose Their Preferred Status

The fields hit hardest included computer science (CS) and other technical majors that had, until recently, been safe career bets. For decades, a CS degree from a top-ranked school was almost a guarantee of great job options, but that was no longer true. Non-technical majors were also affected, but the impact appeared proportionally larger for STEM fields as they fell from favored status.

In the past, people would have blamed outsourcing, offshoring, or H-1B visas, but those explanations do not fit this current situation. India's "fresher" market, usually a destination for outsourced jobs, has also declined dramatically. Fresh graduates in India are now encountering similar problems as their counterparts in the US. Many other areas, including Europe and the UK, are showing similar trends. If some form of job migration were the explanation, then those other markets would be benefiting. Instead, other countries are seeing similar effects.

This article focuses on the US job market and economy, but AI's effects will be global. As noted above, many of the same concerns apply to Canada and Europe, but together these regions still account for only a fraction of the world's population. Countries that currently produce much of the world's manufactured goods will also be affected, perhaps in different but equally serious ways. As AI-driven automation reduces labor costs, the incentives to locate factories in low-wage regions will diminish. This could lead to massive job losses in countries that have become depend on manufacturing.

Why AI Fits the Pattern

The obvious explanation is Artificial Intelligence (AI). AI affects the job market in many ways. In some cases, it eliminates a type of job completely. Very often, it reduces the number of people needed to do a given job. Even when a job position is not eliminated, AI may lower the skill required to perform the work, which results in wider competition and lower pay.

The explanation that AI is the culprit matches the concentrated impact on entry-level jobs that we are now seeing. AI technologies, such as large language models like ChatGPT, have advanced rapidly. Their capabilities today seem like magic compared to only a few years earlier, but they are still not at the level of top human performers. They are, however, in many ways comparable to an average university graduate with no experience.

In other words, where before a company might have had to hire a number of entry-level workers to do relatively simple work that supported a more senior worker, that company now may instead get by with just the senior worker and a set of AI-powered tools. A steady stream of corporations have been announcing AI-motivated layoffs and staffing companies are starting to offer AI workers at a fraction of what a human would cost. In this light, the coincident slump in entry-level openings is, unfortunately, not surprising.

The Acceleration Problem

When the entry-level job slump first started to show up, many people felt the situation was troubling but ultimately not a significant long-term problem. Articles at the time pointed out that AI still failed at complex tasks, produced unreliable output, and generally underperformed compared to more skilled or experienced workers. While that perspective felt comforting, and still does today, it ignored the accelerating speed of AI's unrelenting improvement.

AI is not a static technology. Moore's Law predicts that computing power doubles every few years. That prediction is specifically about computer chips, but nearly every aspect of computing, including AI, has followed similar exponential growth. Every few months, a new generation of AI tools has emerged, each dramatically more powerful and less error prone than the last. At the same time AI capabilities are also growing due to hardware improvements.

Some pundits have predicted that AI would "hit a wall" for various reasons, but most of those predictions are unconvincing. In any case, no wall has been hit. Even if progress were to slow, AI has already reached a level where for a wide range of tasks it generally performs comparably to average workers.

A New Warning Signal: Defaults Among the "Safest" Borrowers

Now there is a new piece of troubling data. Over the last year, the number of credit defaults by "super-prime" borrowers has more than doubled since this time last year.

A super-prime borrower is someone with a very good credit score, between 780 and the maximum of 850. These borrowers don't typically default on their payments.

Not only has the number of defaults doubled, but a growing proportion are for car loans and mortgages. That means a dramatically growing number of households once considered financially stable are now failing. Higher interest rates and inflation surely play a role, but those factors can't explain why defaults are rising fastest among the borrowers least expected to fail. The unusual rise in defaults among super-prime borrowers points to income loss affecting previously high-earning individuals and families.

I think this is a symptom of AI starting to expand into the realm of more skilled and experienced workers. *To be clear, this opinion I'm sharing is fairly speculative.* However, the emerging pattern fits what one would expect to see as improving AI becomes increasingly capable. It's easy to explain away subtle early warning signs, especially when they foretell something we don't want to hear. However, sometimes those warnings are real and we ignore them at our own peril.

For at least the past decade, many high-earning workers with high-demand skills expected that they would have little trouble finding another high-paying job if they needed to. Most of them also expected their incomes to keep going up over time. Many of them expected big payouts from stock options or other bonuses. With those expectations, it is easy to rationalize a big-spending lifestyle with little savings. However, with no cushion, an unexpected layoff followed by months of no income or greatly reduced income can easily force credit card, car loan and home mortgage defaults.

Older and more senior employees are also vulnerable financially. They may have savings, but they also have higher fixed expenses and lifestyles built around higher incomes. If they lose their jobs and cannot replace them with similar pay, their ability to continue their lifestyle depends entirely on how much they have saved. For most, a countdown starts as they burn through savings until they eventually can no longer meet their financial obligations.

What Happens Next

I do not think the AI impact on the job market is temporary. As AI continues to grow in capabilities, I expect to see broader impact, both across a wider range of jobs and among increasingly skilled and senior positions.

If this prediction is correct, then one symptom we might expect is that in the next couple of years we are going to see further increases in prime and super-prime credit defaults. Expensive homes and cars will become unaffordable to owners who will have been displaced from high-paying jobs, and who will try to escape what will have become unmanageable financial burdens.

I don't think anyone should assume they are immune to the possibility of their job being eliminated by AI. Even jobs that require deep, specialized knowledge will eventually be vulnerable. This prediction includes my own job as a university professor, and it most likely includes yours as well. This issue is not "somebody else's problem," and all of us should be paying attention to it.

In the past, people have adapted to new technologies, so that as old jobs were eliminated, new ones were created. However, unlike past technological shifts, I do not believe the pattern of old jobs being replaced by new ones will hold with AI.

Historically, we have always needed humans to make decisions. Technology could enhance productivity, but it could not replace human judgment. Even a minimally skilled person can respond to an unexpected problem with some course of action. That capacity to decide, even imperfectly, has always been uniquely human. That has changed as today's deep neural networks can process novel, unstructured input and make autonomous decisions. We can critique how effective those decisions are, but the same can be said for human workers. The revolutionary difference is that machines can now make autonomous decisions, not just execute instructions. That changes everything.

Adapting Before It's Too Late

This looming situation sounds alarming to most people, as it should. Indeed, the more one thinks about it, the more concerning the implications become. When AI eventually reaches the point where it is more capable than an "average person," does that mean half the population becomes unemployable? When inexpensive robots become capable of performing most manual tasks, will the trades start to see similar job losses?

Many elite experts confidently declare that AI is not yet at their elite level of performance, but that group is only a small proportion of the population. Most people are, by definition, average workers. When we consider what is best for society, our focus should be on the majority of people, not just a relative few. What job can any of us expect to get when a machine is able to do our work faster, better, and cheaper? Would it lead to 50% or 80% unemployment?

However, the idea of machines doing most work for us is not itself a problem. Most people would prefer not to spend their time doing routine, difficult, or unpleasant tasks for an employer's benefit. Having machines do the work that humans would rather not do should be a good thing. Ideally, the better and faster the machines work, the better off we should all be.

The real problem is that in our society, people survive on income from their labor. If AI does the labor, then people lose their income. Unless we change the system, most people will be left without a way to support themselves. Avoiding dystopian outcomes will require restructuring society so that survival and prosperity are not tied to holding a traditional job.

AI can and will take over most work. That is both an opportunity and a crisis. If we find a way to ensure that people can live without jobs, then AI can make the future better for all of us. If we do not, I am certain that the outcome will be bleak.

On the individual level, people can try to protect themselves as we navigate through this uncertain time. We already see evidence that those who can are saving more, keeping their jobs as long as possible, and avoiding unnecessary long-term financial commitments. I think these are good strategies, but one should also keep in mind that the value of investments, such as a college education or real estate, may soon be changing in unexpected ways.

At the societal level, we need to consider universal basic income (UBI) or something similar. Funding it will be difficult. Most of the US government's revenue today comes from taxing income or payroll. If jobs disappear, that tax base disappears as well.

This reality means that solutions for at least two major challenges will be required. First, we need to establish a new tax system that is not funded primarily by human labor. Second, we need a system to provide a livable income to people who no longer have jobs, and this system will need to work at a massive scale involving a large fraction of the population. Whether it is through taxation or somehow privately organized, neither individual prosperity nor government funding can stay tied primarily to labor.

This form of UBI is not about human workers supporting non-workers. It is about machines supporting humans. In the past, UBI would have essentially involved one group of people working to support another group, which some people find objectionable. That objection does not apply when it would be machines doing the work to support people.

Our future is still a choice. If we do nothing, the situation will worsen. On the other hand, if we act wisely, the societal outcome could be wonderful for all of us. I think that rising defaults among super-prime borrowers is not a minor signal. It is an alarm. Increasingly capable AI systems will not politely stop at entry-level jobs. The question is whether we heed the warnings and restructure our systems before the alarm becomes a full-blown catastrophe.

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