

Early Impact of AI on Skills and Jobs

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About This Brief

This brief is the first in a series analyzing emerging trends in the impact of artificial intelligence (AI) on the workforce, grounded in both labor market research and Business Roundtable member company experience.

This brief assesses the evolving demand for skills and jobs in the United States in light of AI adoption.

Future briefs in the series will identify effective approaches to employer-led reskilling and to building new career pathways.

Key Takeaways

- + AI is changing the work people do within their jobs and the skills required across jobs more than it is eliminating roles.
- + Early data show that AI is increasing demand for some jobs, especially those that require judgment and creativity rather than routine, repetitive work.
- + Jobs with clearly scoped, carefully prescribed tasks appear more vulnerable, though AI exposure alone does not determine whether a job grows or declines.
- + There is some softening in hiring for early-career workers as demand shifts toward more experience.
- + Demand is growing for jobs associated with the AI infrastructure buildout, and new jobs are emerging in areas adjacent to AI.

AI Is Changing Skills and Tasks in Existing Jobs

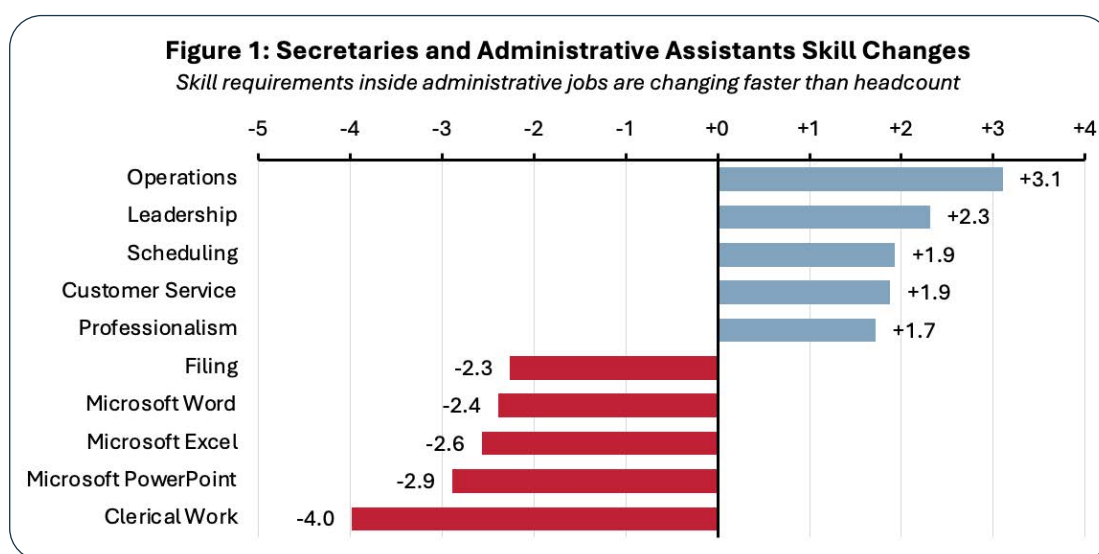
Nearly four years since generative AI entered mainstream use, we are beginning to identify how it is changing work, where new jobs are emerging and how companies are redesigning workflows as they adopt and adapt to this new general-purpose technology.

General-purpose technologies typically reshape work in three stages. First, new tools emerge to handle discrete tasks. Second, the technology embeds into everyday workflows. Third, jobs themselves transform, as some decline and others emerge.

One way to understand these stages is to consider the growth of the internet. In the first stage, email replaced the memo, and a customer relationship management software system replaced the Rolodex. In the second stage, the technology worked its way into how marketers run research, how schedulers book meetings and how publishers lay out content. Only in the third stage did jobs themselves change in their entirety: some disappeared, such as encyclopedia salespeople whose services became redundant alongside the rise of online reference systems, and other jobs such as social media managers were created as the technology created entirely new industries.

AI is moving out of the first stage and into the second: embedding into workflows but not remaking the occupational structure. Its clearest effect so far is on the work inside existing jobs. From 2023 to 2025, Burning Glass Institute's job-posting data show that most AI-automatable skills were 16% more likely to decline in demand than baseline skills, while the most AI-augmentable skills were 7% more likely to rise. The automatable skills are those tied to codifiable, repetitive output such as data entry, proofreading and bookkeeping. The augmentable ones are those where AI accelerates the work without replacing the judgment behind it such as research, data analysis and software design.

This reshaping of work shows up inside large, familiar occupations. Secretaries and administrative assistants number roughly 1.8 million, and the occupation has been shrinking slowly for a decade. As seen in Figure 1, the skill mix for this occupation has evolved much faster than change in overall employment: filing, clerical work and Microsoft Office are less common in job postings, while operations, leadership, scheduling and customer service are more frequent.



Source: Burning Glass Institute analysis of job postings. Change in share of postings citing each skill, 2018–22 vs 2023–25.

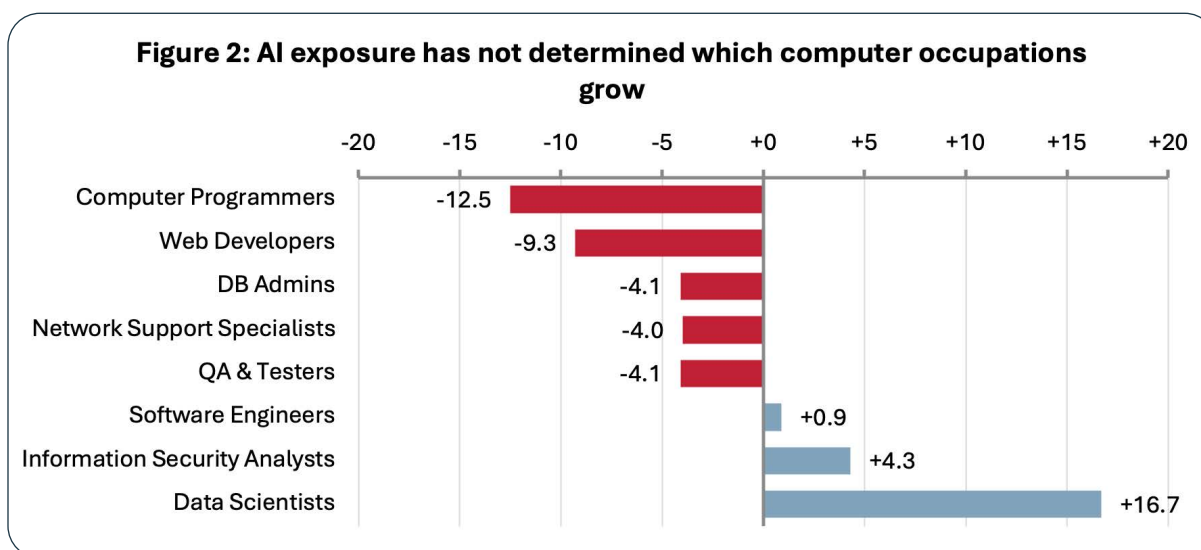
AI's Initial Impact on Existing Jobs

AI's impact on overall levels of employment in specific jobs is a nuanced story.

Early data show that AI is increasing demand for some jobs. Jobs that require judgment and creativity, and that are not built on routine, repetitive tasks, are growing. Data scientists have grown 16.7% annually since 2023, a period in which AI has let them work faster and take on analysis that was previously out of reach.

Understanding AI's potential impact starts with exposure. AI exposure, as measured by the Burning Glass Institute, is a task-by-task estimate of how much of an occupation's work AI can automate and how much it can augment. According to the data, the occupations most exposed to automation include sales representatives for services, brokerage clerks, advertising sales agents and human resources assistants. The data show that those who will see their work most augmented by AI include budget analysts and compensation and benefits analysts. Beyond these examples, the lists of occupations automated and augmented by AI overlap heavily, so exposure by itself does not predict decline.

Early evidence suggests that jobs that can be clearly scoped, with tasks carefully delineated and prescribed, appear more vulnerable to decline due to AI exposure, while jobs that cannot be as neatly defined may be poised to grow. As seen in Figure 2, computer programmers who write code to clear specifications have declined 12.5% annually, while information security analysts (cybersecurity analysts) who perform risk analyses and judge technical tradeoffs have grown. However, task specification is one signal among several of AI's impact on jobs, and in some occupations, the mechanism(s) for determining impact is not yet clear.

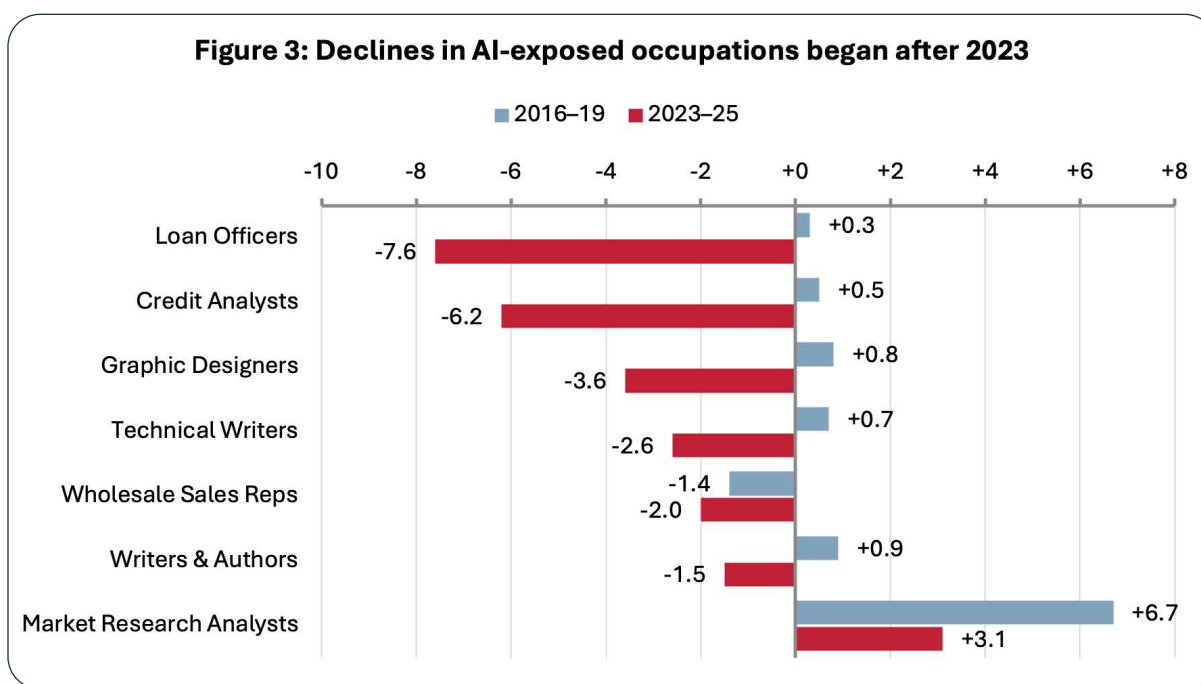


Source: Burning Glass Institute analysis of BLS OEWS, May 2023 and May 2025. Annualized rates of change.

As seen in Figure 3, some occupations with high AI exposure are starting to shrink, based on early employment data from the Occupational Employment and Wage Statistics (OEWS) survey. Employment among loan officers changed little from 2016 to 2019; since 2023, the occupation has shed jobs at 7.6% a year. Credit analysts moved from nearly flat growth to a 6.2% annual decline. Graphic designers, technical writers and authors have all followed the same trend.

Ascribing clear causality in any specific case is challenging. For many of these occupations, AI is one of several factors rather than the sole driver of employment change. For example, shifts in the interest rate

environment affect loan officer employment independent of AI. In occupations such as graphic design and technical writing, fewer alternative explanations exist, and it is more likely that AI exposure is shrinking demand.



Source: Burning Glass Institute analysis of BLS OEWS, May 2016, May 2019, May 2023 and May 2025. Annualized rates of change.

Figure 3 also shows that employment continues to grow for some occupations with high AI exposure, but at a slower pace. One possible explanation is that AI tools are enabling productivity gains while demand for these services expands. For example, new AI tools can produce robust market research at scale. Market research analysts slowed from 6.7% annual employment growth between 2016 and 2019 to 3.1% since 2023. Insurance underwriters and public relations specialists show similar patterns.

By comparison, employment growth across the overall economy declined only slightly, from 1.5% to 1.2% over the same periods. This suggests that AI-driven productivity gains may allow employers to meet growing demand without increasing headcount at the same rate.

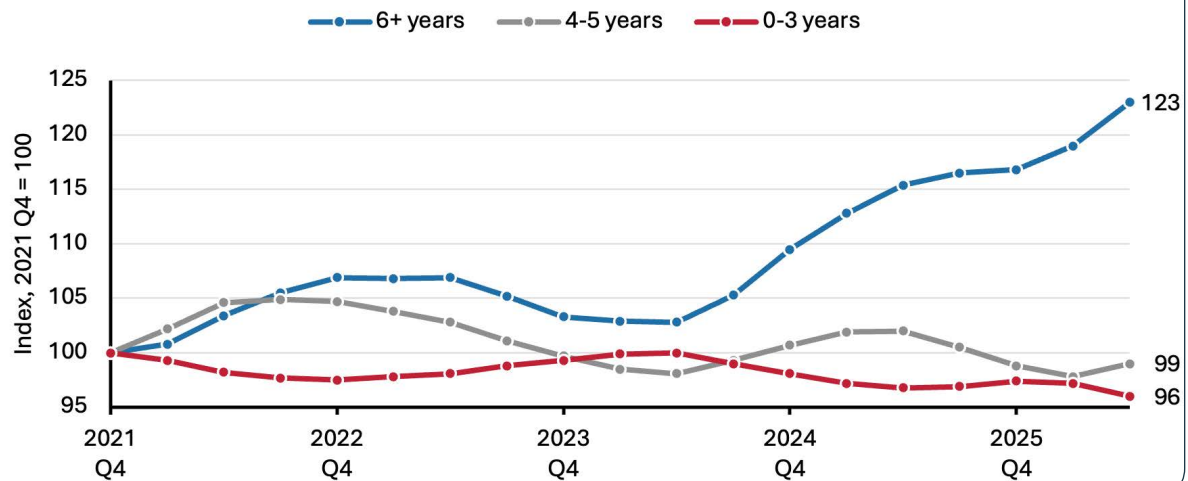
AI's Impact on Early-Career Workers

AI's impact on work elevates the value of skills such as judgment that typically take time and applied practice to acquire. This is driving a shift in hiring toward experienced candidates, and an expectation that early-career hires bring capabilities that have traditionally been developed on the job.

Job posting data point to an early shift in this direction. Among job postings where employers state an experience requirement, the share calling for six or more years of experience has risen from 12% to 15%, while the zero-to-three-year band has dropped from 69% to 67%.

The change is more pronounced in Figure 4. Instead of the share of postings, Figure 4 assesses how the volume of job postings in each experience category has changed relative to late 2021. This shows that demand has recovered more strongly for candidates with six or more years of experience, while postings for candidates with zero to three years remain below their late-2021 level. Overall, the data suggest a shift toward more experienced hires, not a broad retreat from entry-level hiring.

Figure 4: Stated experience requirements are shifting slightly toward more senior candidates



Source: Burning Glass Institute analysis of Lightcast U.S. job postings, 2021 Q1 to 2026 Q2. Includes only the postings that state an experience requirement, roughly 46% of the total. Twelve-month averages; staffing and temp agencies excluded.

Software development is the clearest early example of this trend. The profession has grown roughly 1% annually since 2023, so the evidence does not point to significant job loss. But the composition of demand has changed decisively: demand for the most experienced engineers is up more than 40% since the public release of ChatGPT, while demand for entry-level jobs has softened.

The skills employers seek in software developers are shifting as well. Computer language-specific skills such as Java, JavaScript and HTML/CSS are falling out of software postings. Rising in their place are technical skills in AI and machine learning, cloud (running systems on hosted infrastructure) and CI/CD (automated pipelines that test and release code). Job postings increasingly request problem-solving, code review and mentorship skills, which are strengthened through work experience rather than in a technical training class. For early-career candidates, this combination may make the first job harder to secure: employers are placing less weight on some teachable technical skills and more on the judgment and experience that workers have traditionally gained after being hired.

The pattern is not confined to technology jobs. Marketing managers, HR specialists and paralegals show similar trends. In marketing, for example, AI proficiency is becoming a baseline expectation, but demand is rising almost as quickly for cross-functional business acumen. Marketing professionals increasingly need to understand how the company creates value, what customers need, and how finance, legal and product teams assess priorities. This institutional knowledge is specific to the organization and cannot be easily replicated by AI.

Taken together, the early evidence suggests that AI's primary near-term impact on early-career hiring may be less about eliminating entry-level work and more about shifting opportunity toward candidates who already possess experience, judgment and organizational context.

AI's Impact on New Jobs

The AI infrastructure buildout is driving increased demand for many jobs associated with energy and power, fiber optics, chip manufacturing, cooling, data centers and other physical upstream foundations.

However, new jobs are emerging in areas adjacent to AI. These include:

- + New technology development: Jobs in AI research, new model development, and AI safety and governance.
- + New sectors and business models: Jobs in firms developing and managing AI technology and the platform economy built on top of it.
- + Integration and deployment: Jobs focused on embedding AI into existing workflows and deploying AI into various enterprise platforms.

At the dawn of the internet, few could have envisioned the job of social media manager, a field that posted 65,000 U.S. openings last year, or foreseen that information security would become a distinct profession. AI is similarly likely to generate new jobs across a range of channels, some of which are already taking shape and some that are theoretical and may not become apparent until after a transition period.

Conclusion

Taken together, these signals describe a labor market in flux, with a shift toward greater emphasis on judgment, context and creativity, and with important implications for workers, employers, training providers and education institutions.

The early data support four conclusions:

1. AI is changing the work people do within their jobs and the skills required across jobs more than it is eliminating roles.
2. Exposure to AI does not predict displacement — jobs that lean on judgment are growing even where exposure is high.
3. Some of the clearest early adjustments are appearing in entry-level and early-career workers as demand shifts toward more experience.
4. Workforce adjustment may occur as much through slower hiring, attrition and job redesign as through layoffs.

In future briefs in this series, we will explore how these changes affect workforce planning, employer reskilling programs, job design and career pathways.

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