ADULT PROGRAM'S RESEARCH CORNER

Jobs at Risk – U.S. Employment in the New Age of Automation
A Society of Human Resource Management (SHRM) Data brief

Summary:

In 2025, SHRM created a new way to measure how likely U.S. jobs are to be affected by automation. This research does not try to guess how many jobs will be lost but instead looks at how different jobs are exposed to being replaced by machines or software. SHRM uses data from O*NET, where workers report how automated their jobs are, and connects that to risk levels, from very low to very high. For example, if most people in a job say their work is already highly automated, it is seen as being at high risk of being taken over by technology soon.

The jobs that are already partly automated could be fully automated more easily with small changes in technology, rules, or customer needs. Jobs that are not automated much yet would only be at risk if significant breakthroughs occurred. SHRM combined this information with employment numbers from the U.S. government to understand the impact on the workforce. While this first step relies on existing data, SHRM plans to build on this work with a large-scale survey to refine and expand these risk estimates.

Key Findings:

In developing and exploring this new measure of automation displacement risk, we have arrived at several key findings:

- 12.6% of current U.S. employment (19.2 million jobs) faces high or very high automation displacement risk.

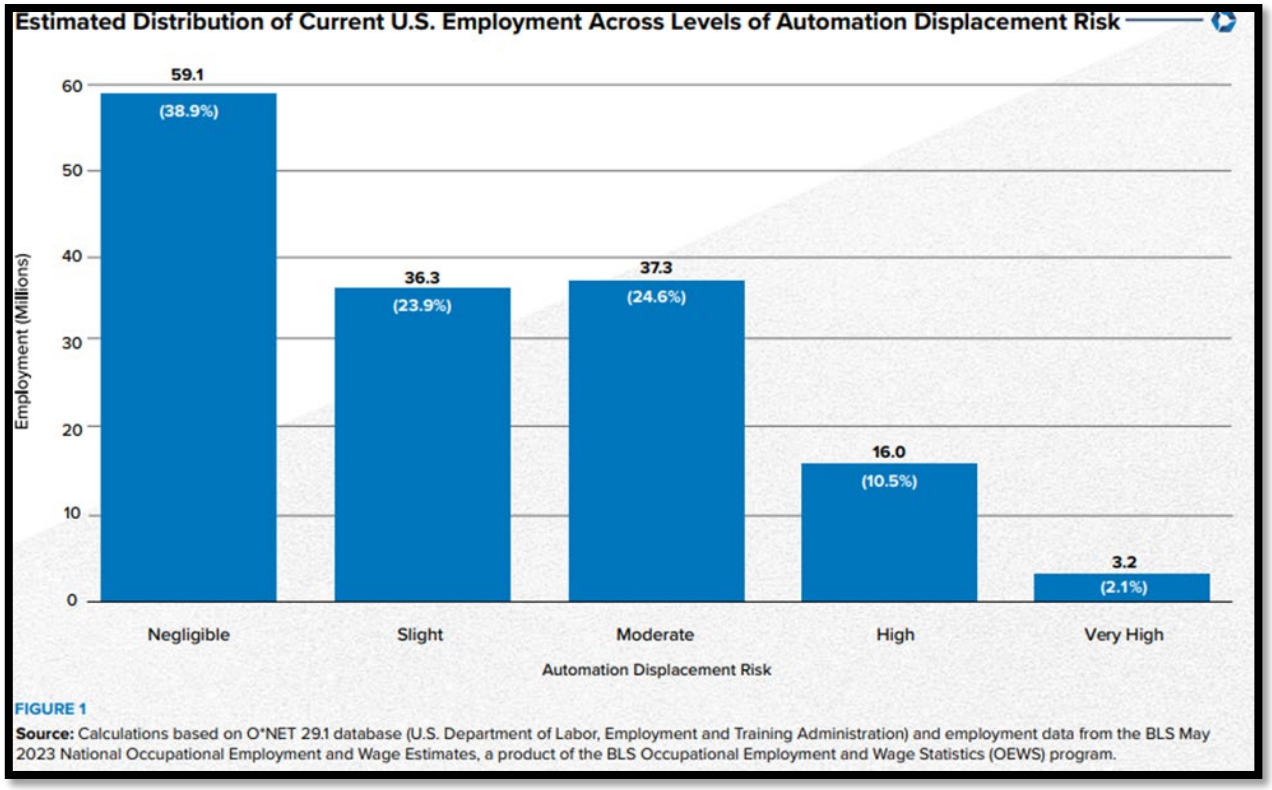
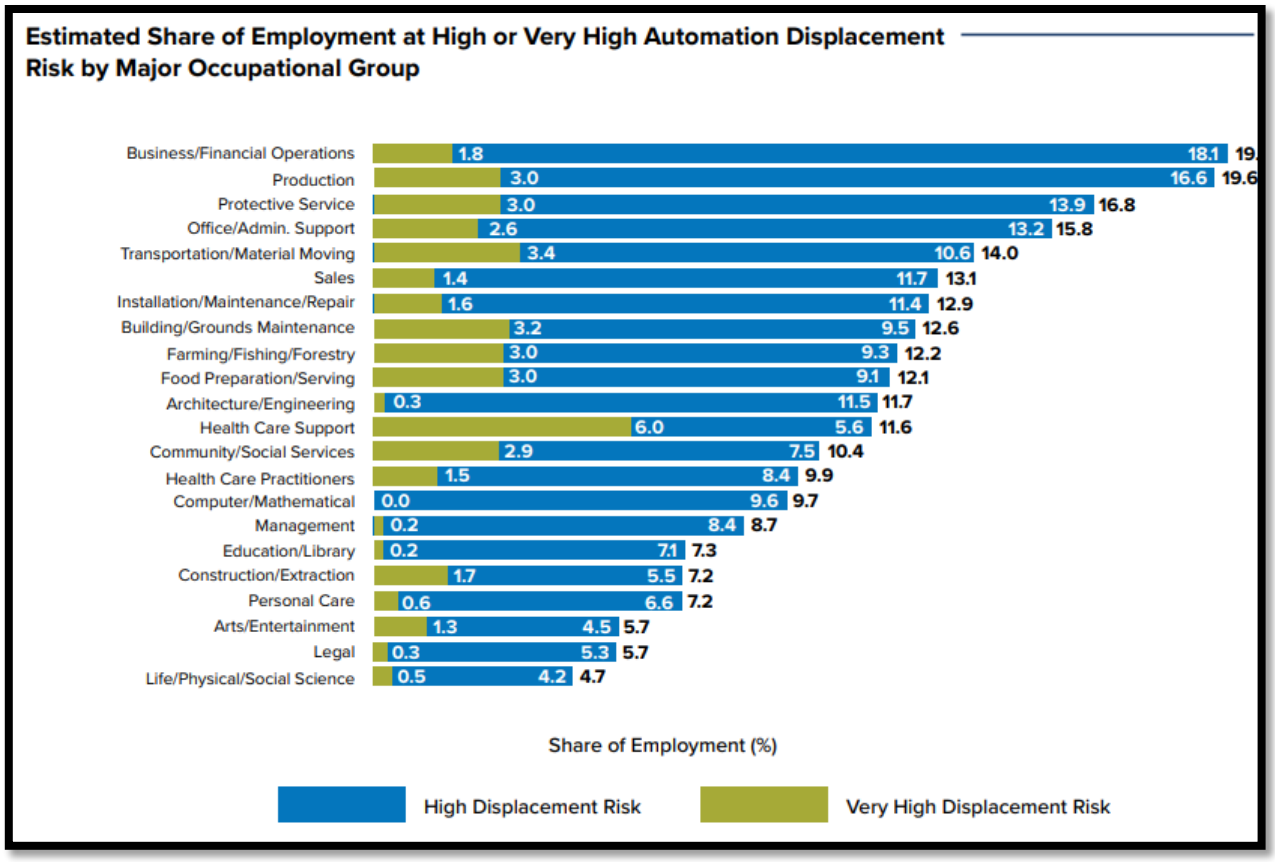


FIGURE 1

Source: Calculations based on O*NET 29.1 database (U.S. Department of Labor, Employment and Training Administration) and employment data from the BLS May 2023 National Occupational Employment and Wage Estimates, a product of the BLS Occupational Employment and Wage Statistics (OEWS) program.

- The share of employment facing high or very high automation displacement risk varies significantly by occupational group, from a low of 4.7% to a high of 19.9%.



- Blue-collar, service, and white-collar administrative support occupations are comparatively likely to face very high automation displacement risk
- The share of employment facing high or very high automation displacement risk also varies significantly by industry, from a low of 8.9% to a high of 17.4%.

The report analyzes how many U.S. jobs are at risk of being replaced by automation, using employment data from the Bureau of Labor Statistics. It estimates that 12.6% of workers (about 19.2 million) are at high or very high risk of automation shortly, while nearly 39% face little or no risk. Most jobs fall somewhere in the middle, with slight or moderate risk. The research shows that automation risk varies by occupation and industry. Jobs that involve routine, repetitive tasks like administrative support or machine operation are at higher risk, while those requiring creativity, critical thinking, or interpersonal skills, such as roles in education or social sciences, are less at risk. Blue-collar workers face slightly more automation risk than white-collar and service workers. Industries like finance, insurance, and retail have higher shares of jobs at risk, while education has the lowest. However, even in low-risk industries, some jobs may still face high automation risk due to the variety of roles each sector includes. Overall, while full job displacement may be rare in the short term, automation is expected to change how many jobs are done, making reskilling important for some workers.

Conclusion:

This new way of estimating the risk of jobs being replaced by automation uses public data and introduces helpful ideas, like the fact that risk can be different even within the same type of job. The study found that about 12.6% of U.S. workers are at high or very high risk of losing their jobs to automation, which is similar to past research. However, the estimates can vary depending on how the studies are done. One challenge with this study is the limited data, especially from O*NET, about how automated jobs currently are. To improve this, SHRM is launching a major research project in 2025 to collect better data through a nationwide survey. This will help get a clearer picture of how workers feel about automation and AI affecting their jobs.

Adult Programs' Summary created: 05/07/2025

Article Summarized: Jobs at Risk: U.S. Employment in the New Age of Automation (Part I)

LITERATURE

Arntz, M., Gregory, T., & Zierahn, U. (2016). The Risk of Automation for Jobs in OECD Countries. OECD Social, Employment and Migration Working Papers, no. 189. https://doi.org/10.1787/5jlz9h56dvq7-en

Ellingrud, K., Sanghvi, S., Singh Dandona, G., Madgavkar, A., Chui, M., White, O., & Hasebe, P. (2023, July 26). Generative AI and the Future of Work in America. McKinsey Global Institute. https://www.mckinsey.com/mgi/our-research/generative-ai-and-the-future-of-work-in-america

Frey, C., & Osborne, M. (2013). The Future of Employment: How Susceptible Are Jobs to Computerisation? Oxford Martin Programme on Technology and Employment. https://oms-www.files.svdcdn.com/production/downloads/academic/future-of-employment.pdf

Kessler, S. (2023, June 10). The AI Revolution Will Change Work. Nobody Agrees How. *The New York Times*. https://www.nytimes.com/2023/06/10/business/ai-jobs-work.html

Kochhar, R. (2023). Which U.S. Workers Are More Exposed to AI on Their Jobs? Pew Research Center. https://www.pewresearch.org/social-trends/2023/07/26/which-u-s-workers-are-more-exposed-to-ai-on- their-jobs/

Manyika, J., Chui, M., Miremadi, M., Bughin, J., George, K., Willmott, P., & Dewhurst, M. (2017). A Future That Works: Automation, Employment, and Productivity. McKinsey Global Institute. https://www.mckinsey.com/featured-insights/digital-disruption/harnessing-automation-for-a-future-that-works

Muro, M., Kinder, M., Liu, S., & de Souza Briggs, X. (2024, October 10). Generative AI, the American Worker, and the Future of Work. Brookings Institution. https://www.brookings.edu/articles/generative-ai-the-american-worker-and-the-future-of-work/

Muro, M., Maxim, R., & Whiton, J. (2019). Automation and Artificial Intelligence: How Machines Are Affecting People and Places. Brookings Institution. https://www.brookings.edu/wp-content/uploads/2019/01/2019.01_BrookingsMetro_Automation-AI_Report_ Muro-Maxim-Whiton-FINAL-version.pdf