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Hibbs Brief

Hibbs Institute for Business & Economic Research

The New Reality of Work: Automation and AI in Tyler

By Manuel Reyes, D.E.D. and Cecilia Cuellar, Ph.D.

In this edition of the Hibbs Brief, we explore how automation and artificial intelligence (AI) may shape Tyler's workforce, with a focus on potential impacts across occupations and wage levels.

Innovation and technology have long influenced the growth and transformation of the business world. Today, we are bombarded with terms such as automation and artificial intelligence almost every day in our daily routines — but what do these concepts mean? How are they shaping the job market and what changes will they bring to our local communities?

Although often used interchangeably, automation and AI are distinct technologies. Automation refers to the use of machines or software to perform repetitive tasks with minimal human involvement, such as industrial robots assembling parts or programs automating data entry.[1] AI, by contrast, enables machines to carry out tasks that require human-like intelligence, such as recognizing patterns, making decisions or interpreting language.[2] AI applications range from virtual assistants like Siri to systems that detect fraud or tools that forecast inventory needs. While both technologies can displace certain jobs, they also create new opportunities. The growing adoption of automation and AI is increasing the demand for skilled technicians, software developers and engineers to design, operate and improve these systems.

From robotic arms assembling cars to AI-powered chatbots handling online inquiries, automation and AI are no longer distant ideas. They are actively reshaping how businesses operate and how people work. As companies in large urban areas nationwide adopt new technologies to boost efficiency, smaller companies and local businesses in regional communities gradually embrace these changes, and new skills are demanded in the job market.

Jobs involving repetitive or standardized tasks are among the most vulnerable to automation. Roles such as data entry clerks, telemarketers and customer service representatives are increasingly being replaced by machines or software; however, these shifts in the job market are not unique to our times. During the Industrial Revolution, machinery gradually took over many tasks previously performed by hand, especially in sectors like agriculture and manufacturing.[3]

In recent years, warehouse automation has significantly reduced the need for logistics and inventory workers. According to Stanford's 2025 AI Index Report, more than 82% of organizations in the United States now use AI-generated technologies. Adoption is similarly high worldwide, with 80% of organizations in Europe and 75% in Greater China integrating AI into their operations.[4] This rapid expansion is transforming global industries and accelerating labor market changes.

In Tyler, some occupations may be phased out or significantly transformed while others are projected to grow or evolve with new responsibilities. To better understand these shifts, the Hibbs Institute has analyzed the occupational composition of Tyler's labor market and assessed which jobs are most at risk of being replaced by automation.

Potential Automation in Tyler

To evaluate how automation may impact jobs in Tyler, we applied the Automation Exposure Score developed by the Labor Market Information Institute. This score ranges from 1 to 10, with 1 representing the lowest risk of automation and 10 the highest.[5] Table 1 depicts occupations grouped into five categories, from very low risk (scores 1–2) to very high risk (scores 9–10).

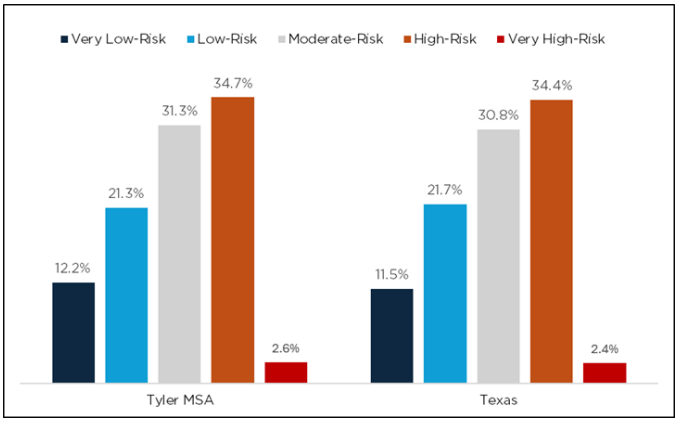
Table 1. Automation Exposure Categories

Score Range	Risk Category	Description
1-2	Very Low Risk	Occupations that rely heavily on human-centered tasks and are not easily automated.
3-4	Low Risk	Jobs that have some potential for automation but still require judgment or interpersonal interaction.
5-6	Moderate Risk	Roles that combine both repetitive and non-routine tasks.
7-8	High Risk	Occupations with many tasks that can be automated using current technologies.
9-10	Very High Risk	Jobs that are highly repetitive or standardized and most likely to be automated.

Source: Hibbs Institute for Business and Economic Research using LMI Automation Exposure Score.

Figure 1 compares the distribution of jobs across automation risk categories in Tyler and the state of Texas. In both cases, the largest share of workers is employed in high-risk occupations. In Tyler, 34.7% of all jobs — approximately 43,000 workers — fall into this category, making them particularly susceptible to automation. A smaller portion, 2.6% of jobs, is classified as very high risk. Although this group is smaller in size, it includes occupations most likely to be eliminated or significantly transformed by advanced technologies in the coming years. Notably, Tyler has a slightly higher proportion of very low-risk jobs (12.2%) compared to the state average (11.5%). These occupations rely more heavily on human decision-making, adaptability and interpersonal skills, making them less vulnerable to automation.

Figure 1. Percentage of Jobs by Automation Exposure Category (Tyler and Texas)



Source: Hibbs Institute for Business and Economic Research using JobsEq and LMI Automation Exposure Index.

The first step in preparing for the transition is identifying jobs that are both growing in demand and less likely to be automated, which are occupations we aim to support and strengthen. Equally important is understanding the jobs that fall into the high-risk and very high-risk categories, which together account for roughly one-third of Tyler's workforce and warrant focused attention. For these roles, retraining or specialization is recommended to help workers adapt to evolving market demands. Figure 2 presents the top five occupations in each automation risk category within the Tyler metro area, including their employment size, recent growth trends, and median compensation.

As technology continues to reshape the workplace, Tyler has a valuable opportunity to proactively equip its workforce for the future. Expanding training and education programs in high-demand fields such as healthcare, education and business services can help workers transition into more secure, better-paying careers. Prioritizing skill development in areas less susceptible to automation will help reinforce the region's economic resilience. With strategic planning and strong collaboration, Tyler can build a more adaptable workforce and ensure sustainable growth in an increasingly automated economy.

This information was also featured in the June/July 2025 issue of TYLER TODAY Magazine. Visit bluetoad.com/publication/?i=847212&p=48&view=issueViewer to read the article for free.

Acknowledgments
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Figure 2. Employment Trends and Wages by Automation Risk Level in the Tyler MSA

Very Low-Risk

Occupation	# Jobs (2024Q3)	%Chg. (2022-2024)	Median Wage ($)
Registered Nurses	4,395	18.4%	$ 83,300
Elementary School Teachers	1,210	3.9%	$ 59,400
Secondary School Teachers	943	4.0%	$ 63,100
Middle School Teachers	598	4.0%	$ 59,700
Business Operations Specialists	530	10.8%	$ 75,200

Low-Risk

Occupation	# Jobs (2024Q3)	%Chg. (2022-2024)	Median Wage ($)
General and Operations Managers	3,245	10.9%	$ 86,600
First-Line Supervisors of Office and Administrative Support Workers	1,279	1.0%	$ 59,400
First-Line Supervisors of Retail Sales Workers	1,270	-0.8%	$ 42,400
Managers, All Other	964	19.2%	$ 122,300
Farmers, Ranchers, and Other Agricultural Managers	827	-16.4%	$ 72,000

Moderate-Risk

Occupation	# Jobs (2024Q3)	%Chg. (2022-2024)	Median Wage ($)
Retail Salespersons	3,611	-0.7%	$ 28,900
Personal Care Aides	3,454	26.1%	$ 23,000
Customer Service Representatives	2,200	2.5%	$ 37,200
Nursing Assistants	1,552	14.0%	$ 32,400
Secretaries and Administrative Assistants	1,457	-0.2%	$ 40,200

High-Risk

Occupation	# Jobs (2024Q3)	%Chg. (2022-2024)	Median Wage ($)
Fast Food and Counter Workers	3,640	7.4%	$ 25,200
Stockers and Order Fillers	2,723	1.4%	$ 37,400
Cashiers	2,486	-0.2%	$ 26,000
Laborers and Freight, Stock, and Material Movers, Hand	2,206	-4.3%	$ 42,500
Janitors and Cleaners	2,053	1.8%	$ 30,700

Very High-Risk

Occupation	# Jobs (2024Q3)	%Chg. (2022-2024)	Median Wage ($)
Cleaners of Vehicles and Equipment	432	12.8%	$ 30,300
Driver/Sales Workers	417	6.8%	$ 23,800
Slaughterers and Meat Packers	311	-6.3%	$ 37,500
Helpers--Production Workers	307	-13.6%	$ 32,500
Postal Service Mail Carriers	214	9.5%	$ 62,700

Source: Hibbs Institute for Business and Economic Research using LMI Automation Exposure Score.

End Notes

[1] Acemoglu, D., & Restrepo, P. 2019. Automation and New Tasks: How Technology Displaces and Reinstates Labor. https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.33.2.3

[2] Bick, A., Blandin, A., & Deming, D. 2025. The Rapid Adoption of Generative AI. https://s3.amazonaws.com/real.stlouisfed.org/wp/2024/2024-027.pdf

[3] Michael, C., Green, M., Travis, G., Ayers, R., Godolphin, A., Denaux, C., Erickson, M., & Hernandez, A. (n.d.). The Industrial Revolution and STS. In Science, Technology, & Society: A Student-Led Exploration. Clemson University. https://pressbooks.pub/anne1/chapter/the-industrial-revolution-and-sts/#:~:text=One%20of%20the%20major%20innovations,Thomas%20Newcomen%2C%20and%20James%20Watt.

[4] Stanford Institute for Human-Centered Artificial Intelligence. (2025). 2025 AI Index Report. Stanford University. https://hai-production.s3.amazonaws.com/files/hai_ai_index_report_2025.pdf

[5] Cook, W. (2025). Automation Exposure Score. LMI Institute. https://www.lmiontheweb.org/automation-exposure-score/

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