How Are Businesses Using Artificial Intelligence?

LMI Tuesdays 8/6/24

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LIFESTYLE | CAREERS

AI Is Starting to Threaten White-Collar Jobs. Few Industries Are Immune.

Leaders say the fast-evolving technology means many jobs might never return

"...The thing we need to confront as a society is **the speed** at which this is going to happen." - Sam Altman, Open AI

By <u>Ray A. Smit</u> Feb. 12, 2024 5:30 a

AI Taking Over Jobs: What to Know About the Future of Jobs

Artificial intelligence is poised to eliminate millions of current jobs — and create millions of new ones.



Oklahoma AI task force recommends government workforce reduction in final report

"...the state would **reduce** public sector human employees **by 40%** in favor of a more efficient workforce of "digital employees." Oklahoma state officials said they partially modeled their AI recommendations off a Japanese economic strategy dating back the 1980s.

BY SOPHIA FOX-SOWELL • FEBRUARY 8, 2024

In your opinion, what type of effect will artificial intelligence have on the total number of jobs in the United States in the next 10 years?

75% of Americans Believe AI Will Reduce Jobs



	Increase the total number of jobs	Have no impact on the total number of jobs	Reduce the total number of jobs		
	%	%	%		
U.S. adults	6	19	75		
Education					
Less than a bachelor's degree	5	15	80		
Bachelor's degree or higher	7	25	68		
Age					
18 to 29	9	26	66		
30 to 44	6	23	72		
45 to 59	5	16	79		
60 and older	5	14	80		

May 8-15, 2023 Bentley-Gallup Business in Society Study

What is LEAD doing?



STUDYING AI'S POTENTIAL IMPACT ON THE LABOR MARKET

PARTICIPATING IN AI WORKING GROUPS SHARING INFORMATION VIA BLOGS AND PRESENTATIONS



Are Businesses Using Al?

Data from U.S. Census Bureau's Business Trends and Outlook Survey (BTOS)



Slight Increase in Current AI Use Since 2023

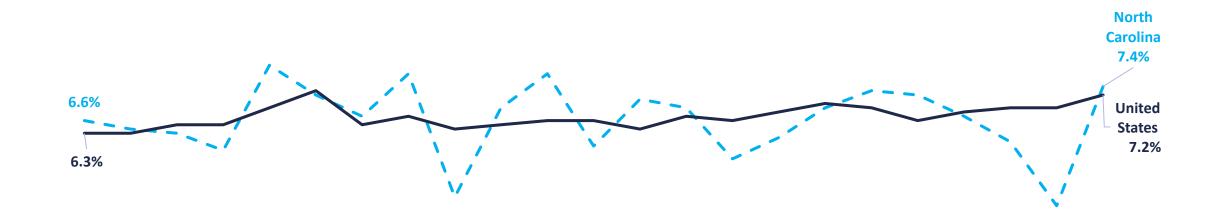


Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun 2	Jun 30	July
2023	2023	2023	2023	2024	2024	2024	2024	2024	2024	2024	2024

COMMERCE

Source: U.S. Census Bureau, Business Trends and Outlook Survey (BTOS), 9/11/23 – 7/28/24

Projected AI Use Has Also Slightly Increased

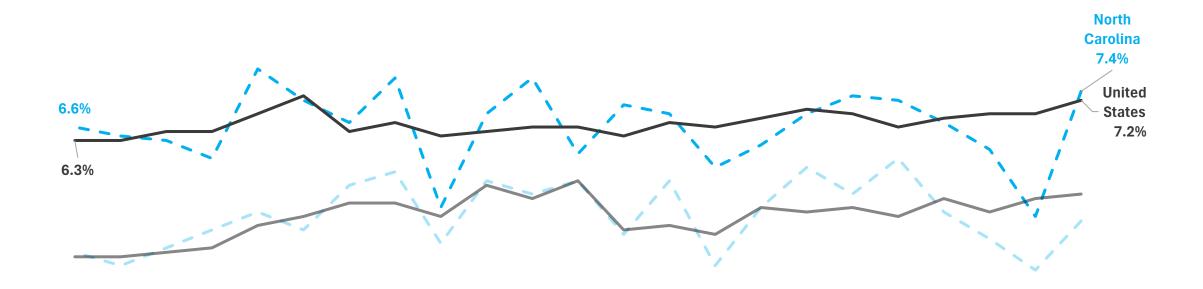


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COMMERCE

Source: U.S. Census Bureau, Business Trends and Outlook Survey (BTOS), 9/11/23 – 7/28/24

Projected Use Higher Than Actual Use



Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun 2	Jun 30	July
2023	2023	2023	2023	2024	2024	2024	2024	2024	2024	2024	2024

Source: U.S. Census Bureau, Business Trends and Outlook Survey (BTOS), 9/11/23 – 7/28/24

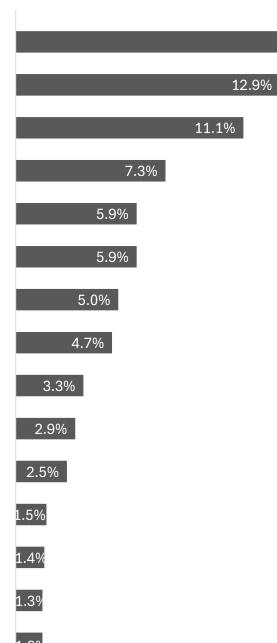
NC DEPARTMENT of COMMERCE LABOR & ECONOMIC ANALYSIS

What Industries Are Using AI?



Current Adoption of Al varies by sector nationally





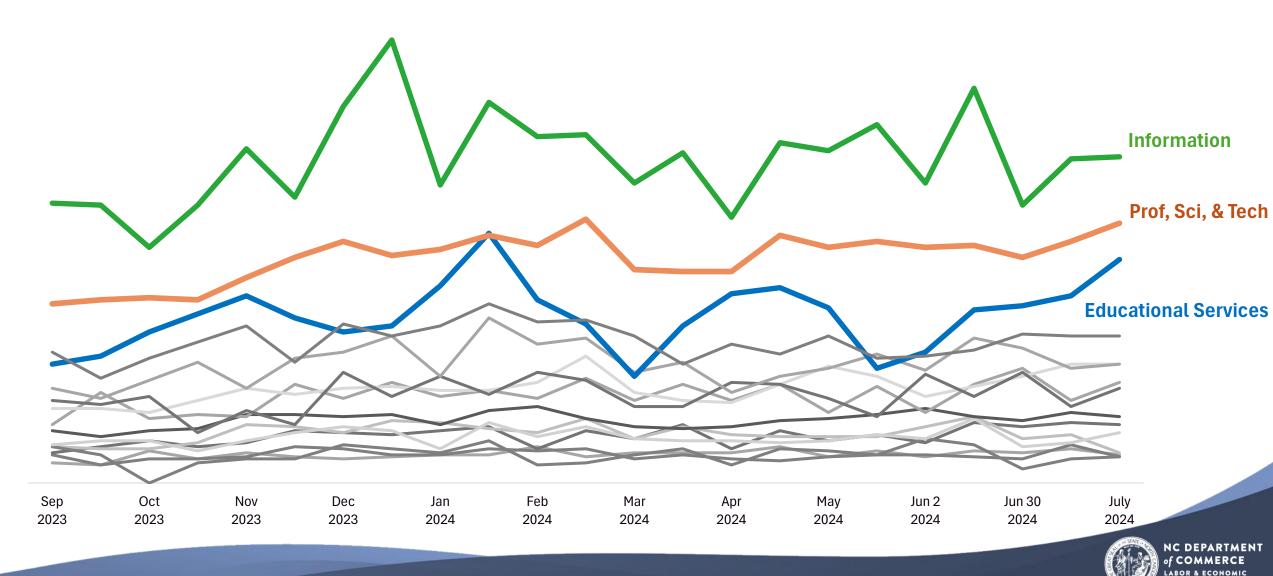
16.2%

Information

Prof, Sci, and Technical Services Educational Services Real Estate and Rental and Leasing Health Care and Social Assistance Finance and Insurance Administrative and Support Services Arts, Entertainment, and Recreation **Retail Trade** Wholesale Trade **Other Services** Manufacturing Construction **Accommodation and Food Services Transportation and Warehousing** 1.3%

Source: U.S. Census Bureau, Business Trends and Outlook Survey (BTOS), Reference Period 7/1/24 – 7/14/24

Current Adoption of AI by Sector



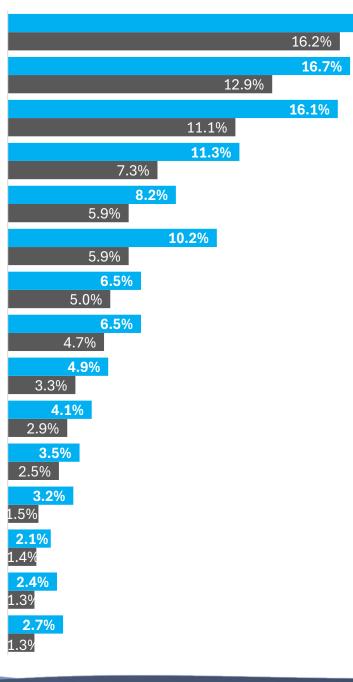
ANALYSIS

Source: U.S. Census Bureau, Business Trends and Outlook Survey (BTOS), 9/11/23 – 7/28/24

Al Adoption is expected to increase in all sectors in next 6 months

21.9%





Information

Prof, Sci, and Technical Services Educational Services Real Estate and Rental and Leasing Health Care and Social Assistance Finance and Insurance Administrative and Support Services Arts, Entertainment, and Recreation **Retail Trade** Wholesale Trade **Other Services** Manufacturing Construction **Accommodation and Food Services Transportation and Warehousing**

Source: U.S. Census Bureau, Business Trends and Outlook Survey (BTOS), Reference Period 7/1/24 – 7/14/24

How Are NC Businesses Using Al?

BTOS: AI Supplement data collected 12/04/2023 to 02/25/2024



How will AI be applied?

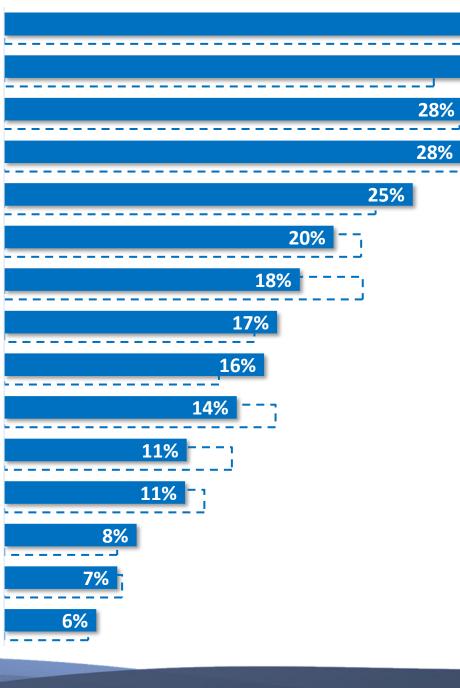
United States

North Carolina 41%

32%

of businesses planning to use AI in next 6 months

United States



Marketing automation using AI

Natural language processing

Virtual agents or chat bots

Data analytics using AI

Text analytics using AI

Machine learning

Speech/voice recognition using AI

Large language models

Image/pattern recognition

Recommendation systems based on AI

Decision making systems based on AI

Other

Machine/computer vision

Deep learning

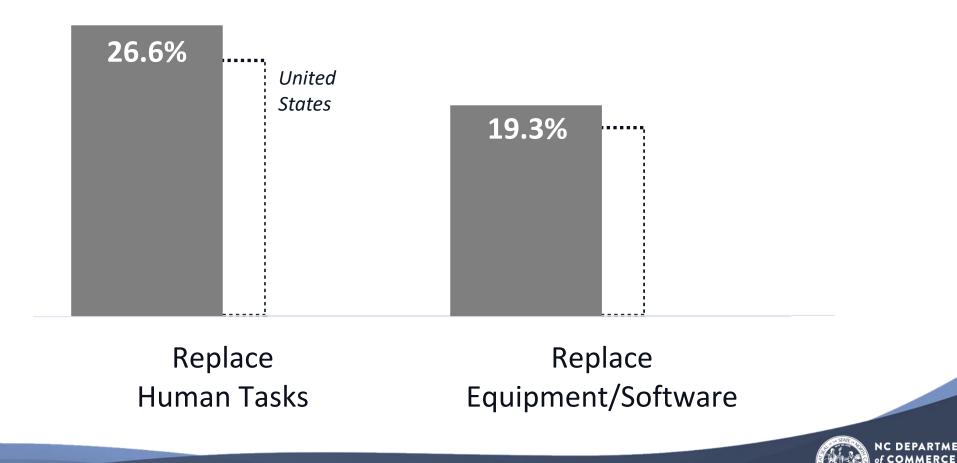
Robotics process automation



How Are Companies Using AI?

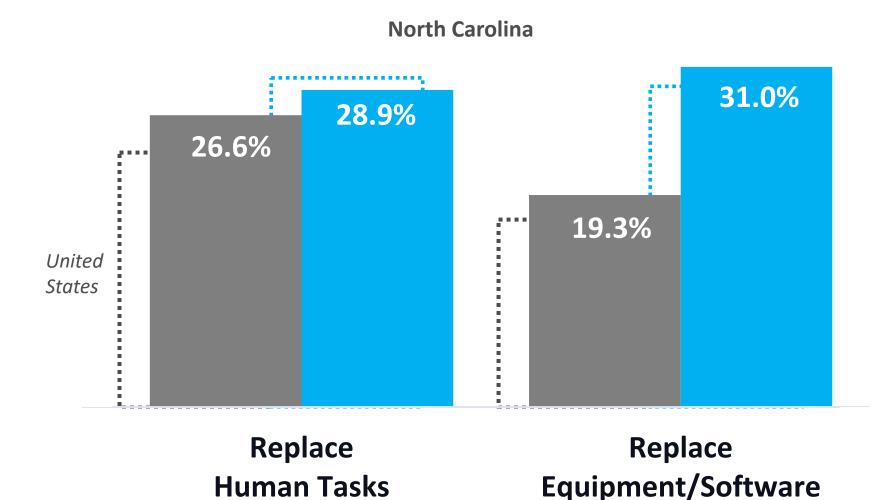
Of those already using AI

North Carolina



How Are/Will Companies Use AI?

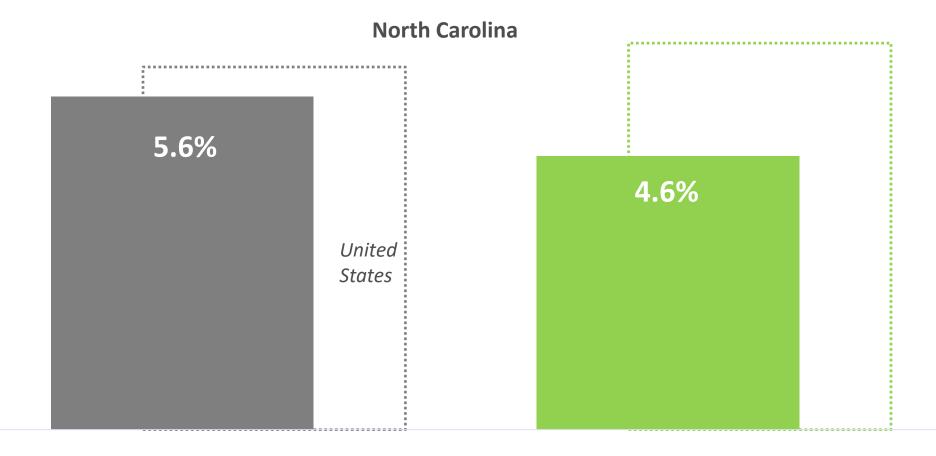
Of those already using/planning to use AI



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Some Expect Growth, Some Expect Declines

employers expecting change due to AI in the next 6 months



Job Cuts due to Al

due to Al

Job Growth



Job Postings Employer Needs Survey



NC Job Postings with AI Skills

Job Posting with AI Skills (% of total)

2.5%

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Source: LEAD's analysis of job postings data from Lightcast

NC Employer Needs Survey (conducted Jan 2024-Feb 2024)

- Of all employers 21% expect to increase use of Al/Automation in next year
 - 37% of employers experiencing hiring difficulties
- Roughly <u>half</u> expect Al/Automation to increase demand for Administrative/Clerical & Production/Operations workers over next 2 years
 - Only <u>one-third</u> expect increase in **Professional/Creative/Technical** or **Sales/Customer** Assistance staff
- 80%+ expect Communications & Problem-Solving skills to be <u>Very</u> or <u>Extremely</u> <u>Important</u> due to Al/Automation over next 2 years
 - 40%+ expect Data Analysis/Interpretation & Technical Operational/Programming skills to be of <u>low</u> or <u>no importance</u> due to Al/Automation



Summary

- Al use is still small
- Firms over-estimated future use
- Companies of all types continue to project increased usage
 - Strong projected use in Information & Pro/Tech sectors
 - Slightly more project decline vs growth in employment
- Small % of job postings with AI skills, but may be growing
- NC Employer Needs Survey also indicates increased usage of Al/Automation
- Not seeing major impacts yet worth monitoring





Questions, Comments?

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