Center for Business Analytics and Community Research
UNIVERSITY OF SOUTH CAROLINA UPSTATE

Building the Workforce the Upstate Economy Will Need

AI, Expertise, and the Future of Work

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The future of work is uncertain...

Artificial Intelligence:

- Changes tasks and how work is performed
- Shifts the relative value of skills
- Influences hiring and workforce development –
- May reshape how experience and expertise develop

…but the direction is increasingly clear!

- Adaptability and continuous learning become increasingly important
- Human capabilities and AI will be increasingly complementary

AI in 2026: Past the Pilot Stage

Findings from the Stanford AI Index 2026 and the sources it draws on

88%

of organizations use AI in at least one business function (78% in 2024)

McKinsey, via Stanford AI Index 2026

53%

adoption of generative AI in 3 years – faster than the PC or the internet

Harvard Project on Workforce, via AI Index 2026

$286B

U.S. private AI investment in 2025 – up from $109B in 2024; 23× China

Quid, via Stanford AI Index 2026

58%

of employees worldwide use AI at work on a regular or semi-regular basis

Univ. of Melbourne / KPMG, via AI Index 2026

2.56%

of all U.S. job postings require AI skills – up ~55% in a single year

Lightcast, via Stanford AI Index 2026

64%

of Americans expect AI to mean fewer jobs over 20 years; only 5% expect more

Pew Research, via AI Index 2026

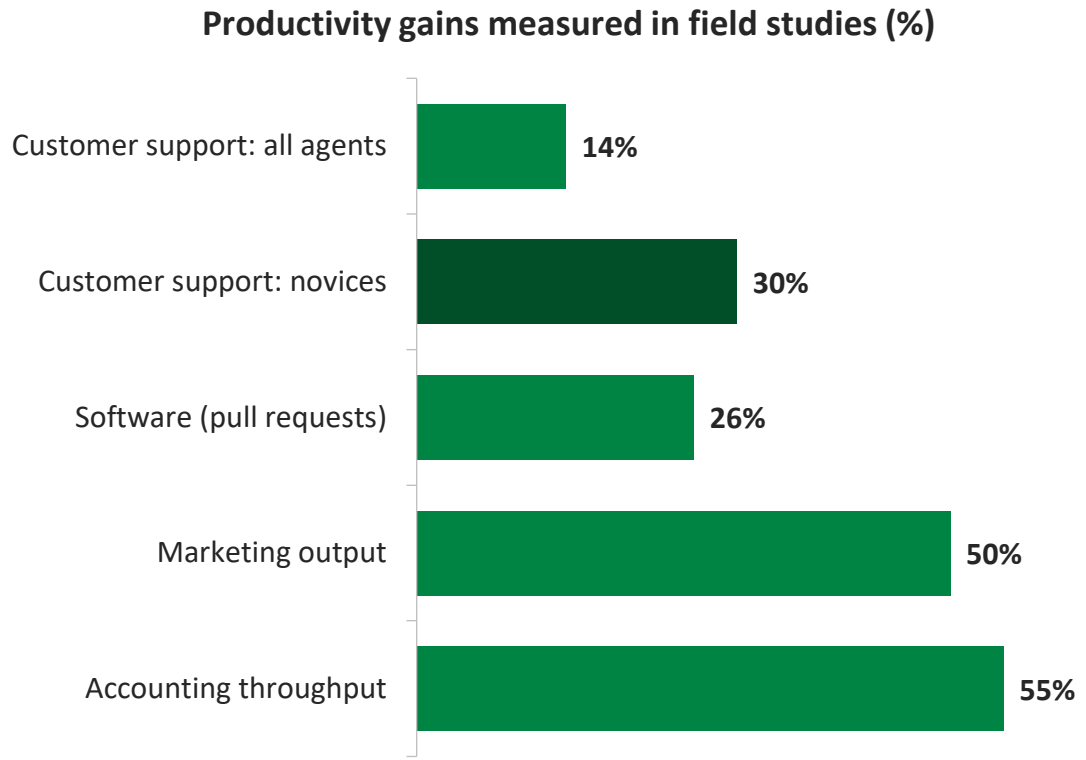
Interesting Statistic: 1.4% = AI skills in entry-level job postings 0-2 years of experience , 9.3% = AI skills in postings requiring 5+ years of experience
(Lightcast, October 2026)

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Where The Workforce Impact Is Emerging

Current evidence suggests the earliest measurable labor market effects are concentrated in hiring pipelines and entry-level roles rather than broad workforce displacement.

- **Young workers feel it first.** Employment among workers ages 22–25 in highly AI-exposed occupations was approximately 19% below the counterfactual trend estimated using less-exposed workers. (Brynjolfsson et al., Aug 2026).
- **Hiring, not firing.** The decline comes from fewer entry-level hires. Software developers ages 22–25 are down nearly 20% since 2024. *(Stanford AI Index 2026, Ch. 4)*
- **Some employers expect workforce reductions in selected business functions.** One-third of organizations expect AI to reduce their workforce next year, mostly in service operations, supply chain, and software engineering. *(McKinsey 2025, via Stanford AI Index 2026)*
- **No broad displacement yet.** The effects are uneven and show up first in specific functions. *(Stanford AI Index 2026, Ch. 4)*
- **AI is Changing Career Pathways Before Employment.**



Sources: Stanford AI Index 2026, Ch. 4 (citing Brynjolfsson et al.; Cui et al.; Ju & Aral; Choi & Xie; McKinsey 2025). Novice customer-support gain is 30–35%; 30% shown.

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How AI Is Changing Work

What the 2026 evidence says about how work is actually changing

1 Changing how work gets done

Augmenting more than automating

Augmentation regained the lead in AI use (52% vs. 45% automation, Nov 2025) after automation briefly led in Aug 2025. These findings reflect observed interactions with Claude, not AI across the broader economy.

Anthropic Economic Index, via AI Index 2026

2 Changing how workers learn

Learning becomes self-directed and continuous

Workers are picking up AI skills outside formal education and listing them on résumés. AI literacy is growing faster than engineering AI skills. Five of LinkedIn's ten most popular courses in 2025 focused on AI.

Stanford AI Index 2026, Education chapter
LinkedIn Learning Insights: The Top 10 Courses Driving Skills in 2025

3 Changing how expertise is built

AI accelerates productivity but changes how experience is gained

AI helps less-experienced workers become productive more quickly. Building professional judgment, however, still requires experience.

Stanford AI Index 2026, Ch. 4

4 Changing what employers expect

The entry-level bar is rising

Entry-level roles most exposed to AI are 7× more likely to require senior-level skills: judgment, leadership, creativity.

PwC 2026 Global AI Jobs Barometer

These changes are not limited to replacing workers. They also affect how work is organized, how expertise develops, and what employers expect.

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Technical Fluency × Human Capability*

The key to regional workforce value: ***Workforce value increasingly comes from combining technical fluency with human capability***

AI fluency

Understanding and working with technology

- AI literacy
- Data literacy
- AI interaction
- AI Evaluation
- Digital workflow proficiency
- Current examples:
  - ChatGPT
  - Copilot
  - Chatbots
  - Prompt engineering – (one of the current phrases for AI interaction)

AI skills now tracked in job-postings data (Lightcast, via Stanford AI Index 2026, Ch. 4)

Human skills

***Domain knowledge**, experience, and judgement*

Top core skills employers rate essential

- Analytical thinking
- Resilience, flexibility and agility
- Self-awareness and motivation
- Leadership and social influence; empathy and active listening
- Curiosity, creative thinking, continual learning

(World Economic Forum, Future of Jobs Report 2025)

Most requested in Upstate job ads

- Communication: 18,747 ads
- Teamwork / cooperation: 14,392 ads
- Problem solving: 7,148 ads

(Chmura JobsEQ, Upstate SC bachelor's-level postings, Nov 3, 2025 – Nov 3, 2026.) Rising in 2026: cross-functional collaboration, team management, mentorship (LinkedIn Skills on the Rise, Feb 2026)

Labor Market Signals

the combination pays (although dependent on occupation)

- **11x** growth in demand for AI fluency since 2022 *(McKinsey Global Institute, September 2026)*
- **28%** salary premium (~$18,000/yr) in postings requiring AI skills *(Lightcast, Jul 2025)*
- **51%** of AI-skill postings are outside IT and computer science *(Lightcast, Jul 2025)*
- **7×** more likely: Entry-level jobs with high AI exposure request traditionally senior-level skills. *(PwC, Jun 2026)*

*The relative importance of technical fluency and human capability varies across occupations, but their interaction helps create workforce value.

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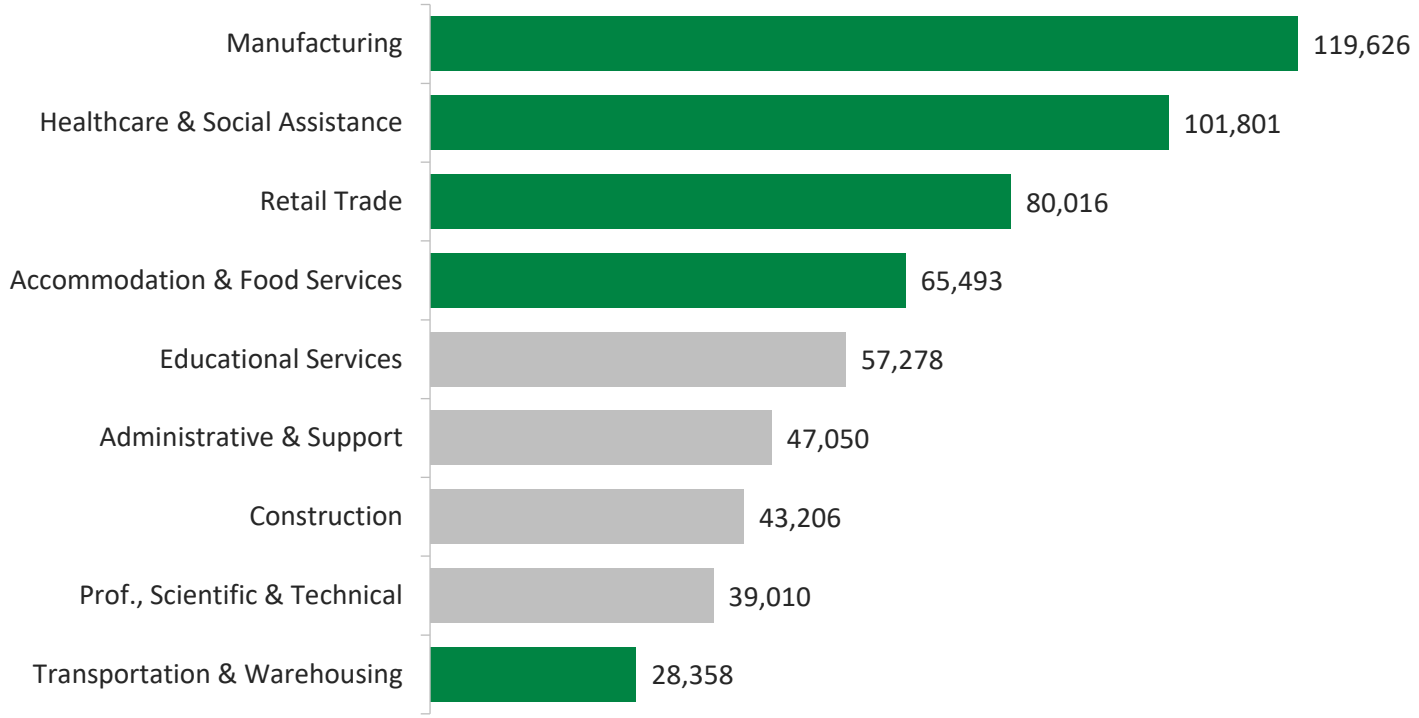
Building the workforce the Upstate will need…

The industries that drive the Upstate economy are not disappearing…

…but the work within them is evolving.

The Upstate Workforce: Which Occupations Are We Talking About?

Employment by industry, ten-county Upstate (2025Q4). Highlighted sectors are the focus of this presentation because of their regional employment, projected workforce demand, and relevance to AI-enabled changes in work,



Source: 2026 Upstate Workforce & Talent Report, p. 13 (Chmura JobsEQ, 2025Q4; Greenville–Spartanburg–Anderson CSA). Eight largest sectors plus Transportation & Warehousing.

~395,300

jobs in five of our primary industries (highlighted)

2026 Upstate Workforce & Talent Report, p. 13 (JobsEQ 2025Q4)

767,473

Upstate labor force. Prime-age (25–54) participation is 82.0%

2026 Upstate Workforce & Talent Report, p. 2 (JobsEQ)

63,868

projected manufacturing openings over 5 years, the region's largest source of demand

2026 Upstate Workforce & Talent Report, p. 14 (JobsEQ 2025Q4)

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Manufacturing & Logistics: Technical Fluency in Action

Our two largest goods-producing and goods-moving sectors

Manufacturing

119,626 Upstate jobs · 63,868 openings *(2026 Upstate Talent Report, pp. 13–14)**

- **AI hiring:** 4.7% of postings require AI skills, up 39% in a year *(Lightcast, via Stanford AI Index 2026)*
- **Technicians rising:** could grow 6× faster than production jobs; top local openings are assemblers (8,962) and inspectors (3,032) *(Deloitte & MI, Sept 2026; Upstate Talent Report, p. 15)*
- **Right here:** BMW Spartanburg's humanoid robot helped build 30,000+ X3s in an 11-month pilot *(BMWBLOG, Jun 2026)*

Technical fluency

- AI-enabled production
- Automation & robotics systems
- Machine vision
- Predictive maintenance

Human capability

- Troubleshooting
- Continuous improvement
- Safety
- Problem solving

Implication: Robots take repetitive, heavy and unsafe tasks; demand shifts to maintenance, automation and quality technicians.

Transportation & Warehousing

28,358 Upstate jobs – 17,092 openings *(2026 Upstate Talent Report, p. 13 and Chmura)**

- **Roles changing:** supply chain is among the functions where firms most expect AI-driven reductions and transitions. The demand for reliability, maintenance and engineering staff likely increases. *(AI Index 2026; MHI & Deloitte 2026; Amazon 2024)*
- **Higher-value roles:** U.S., material movers earn about $38K with 4% growth, machinery mechanics and maintenance workers $64K with 14% growth, logisticians $82K with 18% growth (BLS 2025-35).
- **Right here:** Cardinal Health's Greenville warehouse runs 76 robots with 200 workers; Idealworks opened its U.S. robotics HQ here *(Post and Courier 2024; Idealworks 2026)*

Technical fluency

- Warehouse automation
- AI-assisted logistics
- Routing & scheduling systems

Human capability

- Operational decision-making
- Customer service
- Adaptability
- Problem solving

Implication: Based on economy-wide data, warehouse tasks are becoming increasingly automated, while demand grows for workers who supervise, maintain, and optimize technology-enabled operations.

*5-year estimated total talent demand across Upstate, includes new demand, replacement and transitions demand.

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Healthcare, Retail & Hospitality: Workforce Transformation in Services

AI is changing how services are produced – and how workers contribute value

Healthcare & Social Assistance

101,801 Upstate jobs · 59,901 openings*
(2026 Upstate Talent Report, pp. 13–14)

- 81% of physicians use AI, up from 38% in 2023 *(AMA, Mar 2026)*
- AI scribes: up to 83% less time writing notes, with lower burnout *(Stanford AI Index 2026, Ch. 6)*

Technical fluency

- AI-assisted diagnostic analysis
- Clinical decision support
- Ambient documentation
- Population health analytics

Human capability

- Clinical judgment
- Patient communication
- Empathy
- Ethical decision-making

Implication: AI gives time back to a short-staffed workforce. Integrate AI literacy into clinical and administrative training. Ultimately, AI integration depends on clinical validation and responsible implementation.

Retail Trade

80,016 Upstate jobs · 57,478 openings*
(2026 Upstate Talent Report, pp. 13–14)

- "AI is going to change literally every job." then-CEO Doug McMIllon, Walmart*(CNBC, Sept 2025)*
- Walmart expects flat headcount and offers free AI training to its workforce *(Fortune, Feb 2026)*

Technical fluency

- Inventory analytics
- AI-assisted merchandising
- Customer analytics
- Scheduling systems

Human capability

- Customer relationships
- Sales judgment
- Adaptability
- Communication

Implication: AI is changing retail tasks and workflows, making frontline training and adaptability increasingly important.

Accommodation & Food Services

65,493 Upstate jobs · 61,905 openings*
(2026 Upstate Talent Report, pp. 13–14)

- 26% of restaurant operators use AI, mostly for marketing and admin; 6% for ordering *(NRA via Restaurant Dive, 2026)*
- 82% of hotel tech leaders expect AI use to grow in 2026 *(Canary via Hospitality Net, 2026)*

Technical fluency

- Revenue management
- Scheduling
- Marketing automation
- Reservation systems

Human capability

- Guest engagement
- Service recovery
- Communication
- Cultural awareness

Implication: AI is increasingly supporting scheduling, marketing, and administrative activities, while effective guest service continues to depend on human capability.

*5-year estimated total talent demand across Upstate, includes new demand, replacement and transitions demand.

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Building the Workforce the Upstate Needs

Future-proofing the Upstate workforce

Employers

- Make AI literacy universal, frontline included
- Redesign entry-level roles instead of cutting them. Protect the talent pipeline
- Pair every AI rollout with training. Novices gain the most *(Stanford AI Index 2026, Ch. 4)*
- Hire for skills, adaptability and judgment
- **The Key**: Investigate/create career pathways and the development of expertise.

Workforce Board & Partners

- Support AI upskilling through eligible Incumbent Worker Training programs
- Integrate AI literacy into WIOA-funded training and SC Works services
- Partner with employers and training providers to develop industry training
- Expand apprenticeships and work-based learning to build AI-related competencies
- **The Key**: Investigate/create career pathways and the development of expertise.

Workers

- Build AI fluency by using the tools every day
- Double down on human skills: communication, judgment, care
- Treat learning as continuous, not one-and-done
- Adaptability is the defining skill *(LinkedIn, 2025)*
- **The Key**: Investigate/create career pathways and the development of expertise.

Building the workforce the Upstate needs is a shared responsibility—and it requires creating opportunities for workers to learn, adapt, and advance. Go all in on resilience, adaptability and skills refresh.

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Today’s AI will change…

Learning and adaptability will endure.

As technology changes what we do, our greatest opportunity is to strengthen what people can do.

Sources & Resources

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- Post and Courier – Cardinal Health Greenville distribution center robots (Aug 2024)
- Idealworks – U.S. headquarters in Greenville, SC (Apr 2026)
- AMA – AI use among physicians doubles (Mar 2026)
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- Lightcast – 2026 Labor Market Predictions
- Entrepreneur – NYT report on Amazon automation plans (Oct 2025)
- Columbia Business Monthly – Cobots are the Newest Work Partners in Manufacturing and Other Sectors
- Upstate Workforce Board – WIOA Local Plan 2024
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