LinkedIn

September 5, 2025

AI Labor Market Update

Tracking AI adoption and skills in the U.S. economy

Key Insights

We're launching a quarterly tracker of AI labor market dynamics, powered by LinkedIn's unique workforce data from over 200 million U.S. members.

Battle for AI talent continues as hiring spreads beyond tech.

- **AI Engineering hiring reaches record levels.** Hiring of AI Engineering talent has grown by more than 25% year-over-year in 2025, marking the fastest pace since the start of the generative AI (GAI) wave. Big tech and well-funded private startups are competing fiercely for talent.
- **Share of AI jobs increasing rapidly.** AI engineering job postings account for nearly 7% of all technical job postings on LinkedIn (+63% YoY), despite AI Talent being less than one percent of LI members.
- **Growth in AI talent is not just confined to the Tech industry as other sectors play catch-up.** Although the fastest growth of AI talent is in Technology (up 3x since January 2017), Education (2.9x), and Professional Services (2.7x), other industries such as Financial Services (2.5x) and Utilities (2.4x) are rapidly growing their share of AI talent.
- **AI foundational model startups are rapidly expanding headcount (+107% YoY).** AI startups in other areas (hardware, vertical applications) are growing headcount more slowly than the prior year, perhaps as investors revaluate business models and product market fit.

Agentic AI and AI literacy are some of the fastest growing skills across the workforce.

- **AI Agents emerge as the fastest-growing AI skill of 2025.** The rise in AI Agents, i.e., systems that execute tasks autonomously, has seen rapid uptake among AI professionals. To date in 2025, members are adding AI Agents as a skill over 70 times faster than during the same period last year.
- **Job postings requiring AI Literacy skills are growing at over +70% YoY, with demand for AI Literacy going beyond technical roles**. Roles in marketing, sales, and design are more frequently listing skills such as Prompt Engineering, underscoring adoption of AI tools across functions.

Despite the race for AI talent, there is limited evidence that GAI has broadly displaced workers.

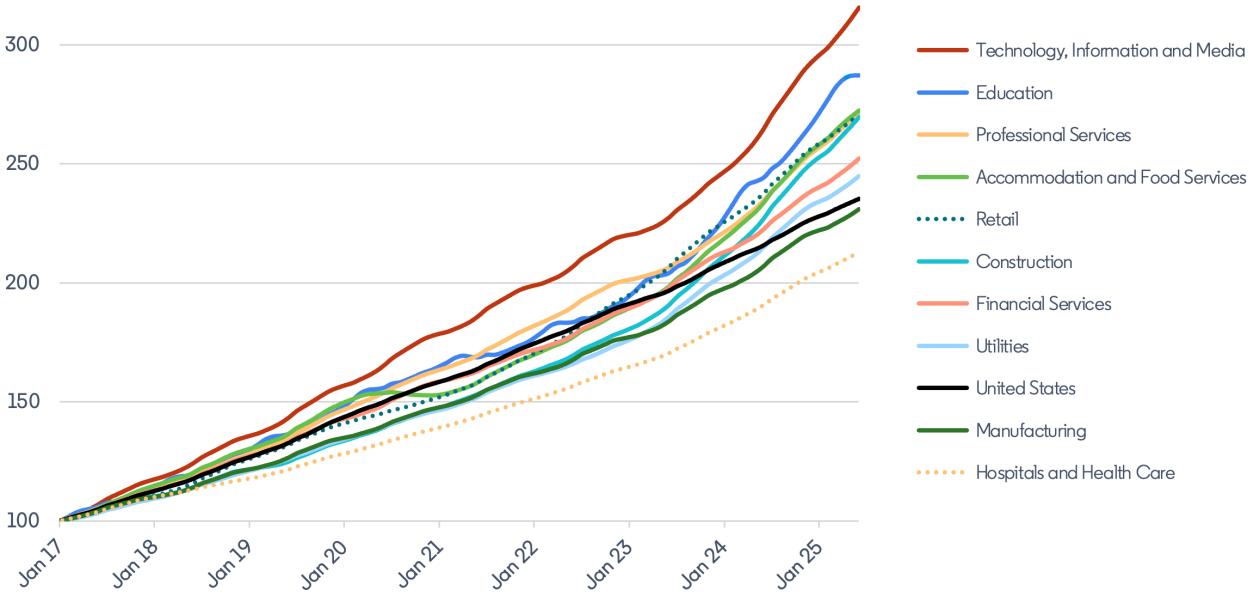
- **Hiring is slowing broadly, but the patterns do not suggest GAI is the culprit**. Hiring in highly exposed roles, such as software engineering, is trending down (-7%), however, hiring is trending down even more in occupations with less GAI exposure, (-13%), such as nursing. This suggests that any job displacement due to AI currently is likely to be limited and narrow in scope for now.

Exhibit 1.

AI Engineering talent continues to diffuse across all industries in the U.S., with Tech, Education, and Professional Services leading the way. Today, more than 3x as many LinkedIn members in Technology, Information, and Media identify as AI Engineering talent—based on their listed occupation or skills—than did in January 2017

Share of LinkedIn members classified as AI Engineering talent by industry

Indexed to 100 in January 2017

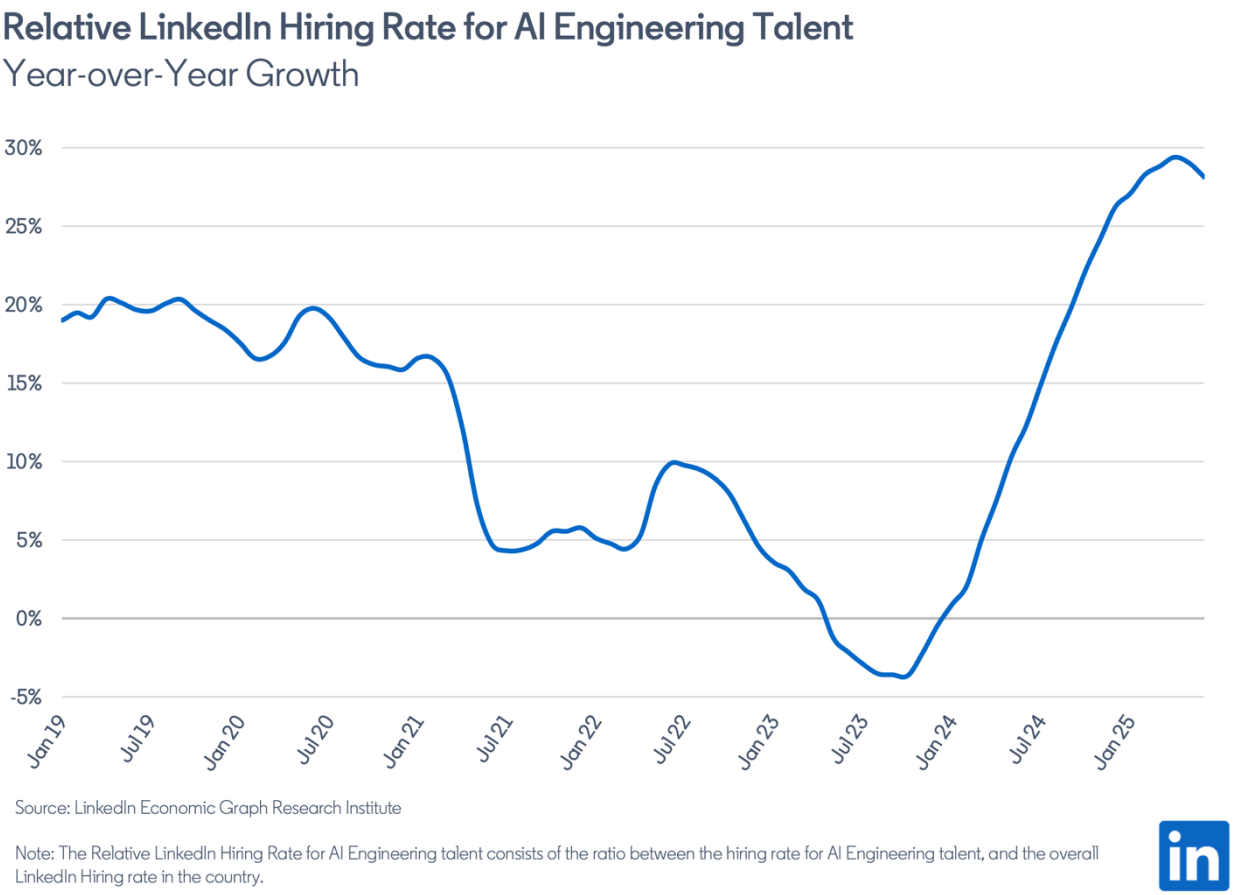


Source: LinkedIn Economic Graph Research Institute

Note: AI Engineering talent consists of members listing 2 or more AI Engineering skills or are currently employed or have worked in an AI occupation before. AI Engineering skills are the competencies involved in building and deploying AI systems. These include machine learning, predictive modeling, and neural networks. The share of LinkedIn members classified as AI Engineering Talent by industry is indexed to 100 in January 2017 and presented as a trailing average over the last six months. For example, a value of 300 means the share of members in an industry classified as AI talent has grown 3x since January 2017.

Exhibit 2.

Hiring of AI Engineering talent reaches record highs. AI Engineering talent hiring growth has outpaced overall hiring growth by nearly 30% in 2025.



Source: LinkedIn Economic Graph Research Institute

Note: The Relative LinkedIn Hiring Rate for AI Engineering talent consists of the ratio between the hiring rate for AI Engineering talent, and the overall LinkedIn Hiring rate in the country.

Exhibit 3.

With AI Agents as the fastest-growing AI skill in 2025 so far, AI Engineering professionals are adopting the latest technologies rapidly.

Fastest Growing AI Skills among AI Engineering Talent

Annual or Year-to-Date

	2023	2024	2025 (Jan – July)
1.	Large Language Models (LLM)	AI Strategy	AI Agents
2.	Model Training	Responsible AI	Azure AI Studio
3.	Hyperparameter Optimization	Automated Machine Learning (AutoML)	AI Productivity
4.	Responsible AI	Model Training	Spring AI
5.	Hyperparameter Tuning	Large Language Models (LLM)	Custom GPTs
6.	Synthetic Data Generation	Chatbot Development	Prompt Flow
7.	Graph Embeddings	Hyperparameter Tuning	Large Language Model Operations (LLMOps)
8.	Time Series Forecasting	Sentiment Analysis	AI Strategy
9.	Meta-learning	Question Answering	OpenAI API
10.	AI Strategy	Random Forest	Automated Feature Engineering

Source: LinkedIn Economic Graph Research Institute

Exhibit 4.

Rapid hiring of AI talent led by startups focused on foundational models. Employment in Foundation Models AI Startups has doubled over the past year.

Change in Employment and Departures and Workforce Demographics

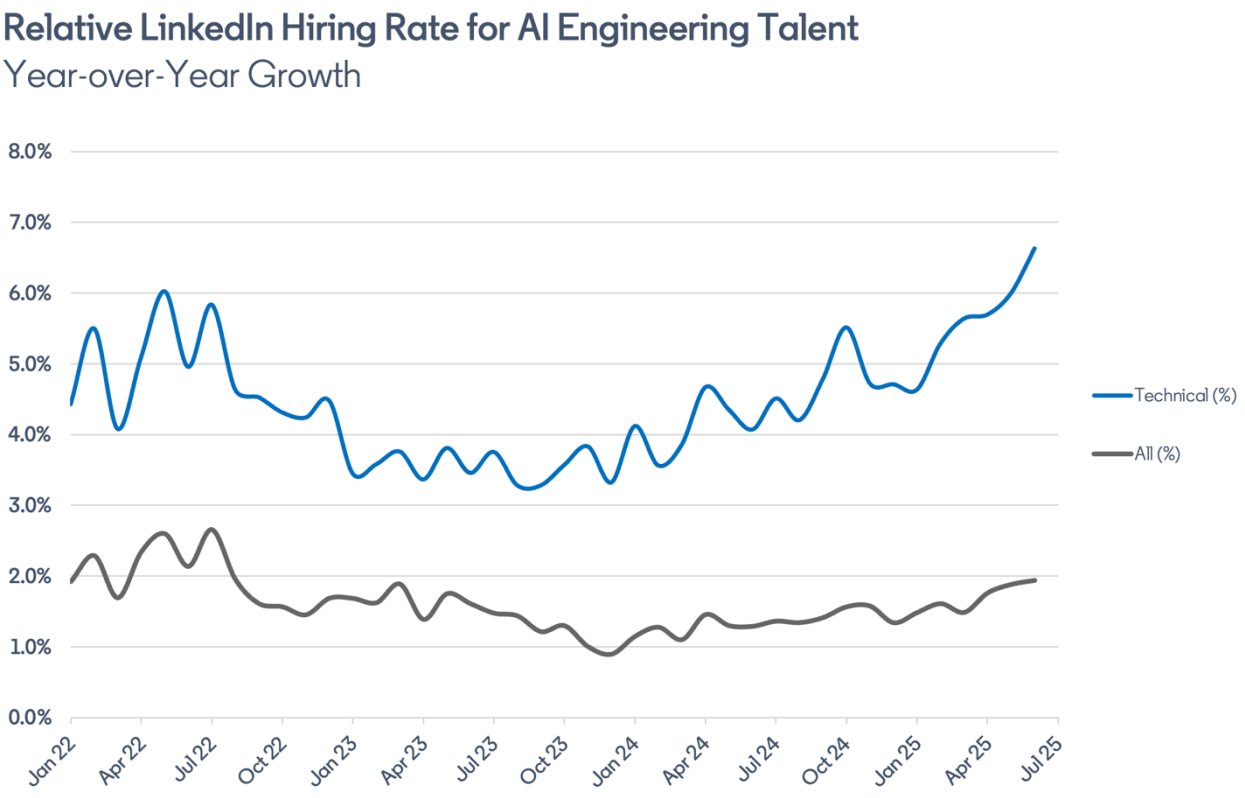
	% Change in Employment from 3 Months Ago	% Change in Employment from 1 Year Ago	% Change in Departures from 1 Year Ago	% of Workforce Classified as AI Talent	% of Remote Workplace Positions
Big Tech	0%	6%	5%	13%	5%
Foundation Models	8%	107%	8%	20%	3%
AI Hardware	0%	4%	8%	9%	6%
AI Tech & Platforms	2%	9%	11%	15%	9%
Computer Vision & Robotics	1%	4%	6%	8%	3%
Vertical Applications	0%	2%	10%	6%	5%

Source: LinkedIn Economic Graph Research Institute

Note: The company categories in this table are constructed based on manual classification of 100+ companies, including AI startups and Big Tech companies. "Big Tech" companies are identified as technology companies that support the AI supply chain or deploy AI in their products and have 20,000 or more employees. All other companies are manually curated into categories based on their products and services. "Foundation models" companies train large scale models on broad datasets that serve as the base for many AI applications. "AI Hardware" companies produce physical infrastructure that powers AI workloads. "AI Tech & Platform" companies produce software tools, frameworks, and platforms that support AI development and deployment. "Computer Vision & Robotics" companies produce technologies that enable machines to interpret visual data and interact with the physical world. "Vertical Applications" companies produce AI solutions tailored to specific industries or use cases.

Exhibit 5.

AI Engineering talent accounts for less than 1% of U.S. LinkedIn members, yet AI Engineering roles represent nearly 2% of all job postings and show a growing trend. AI Engineering job postings account for nearly 7% of all technical job postings.



Source: LinkedIn Economic Graph Research Institute

Note: Technical Job Postings are those hiring for talent in the following functions: Research, Engineering, and Information Technology. For details on this segment refer to "Decoding Technical Talent."

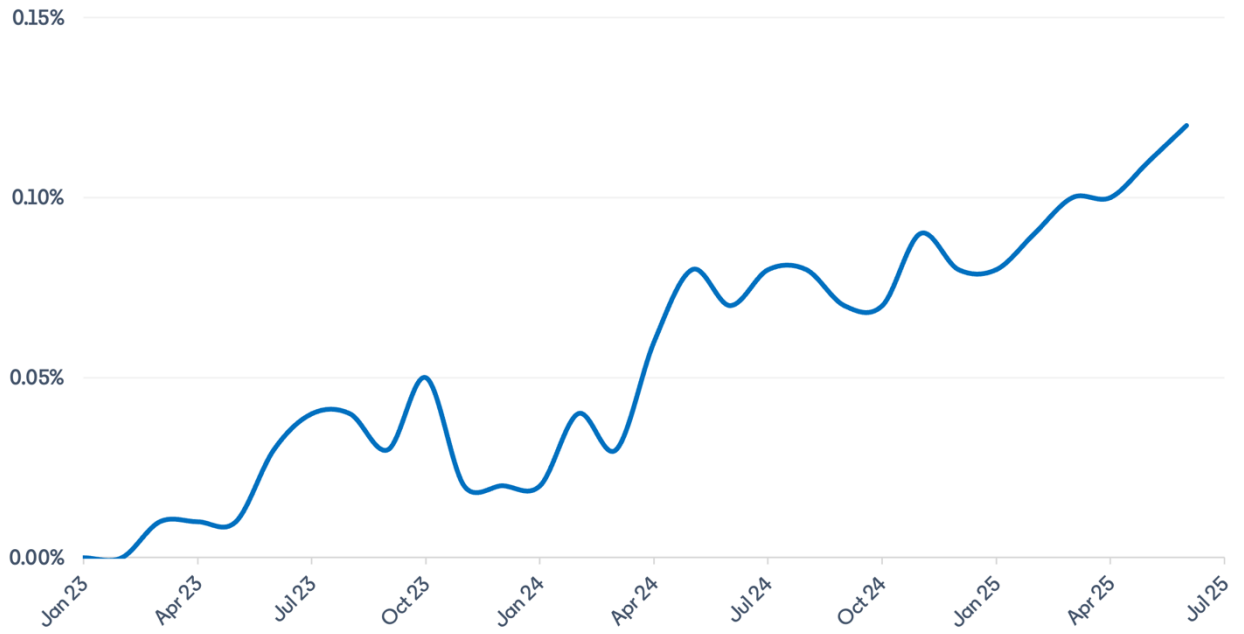
Exhibit 6.

Job postings are increasingly requiring AI Literacy skills across a range of job titles. The share of Job Postings requiring AI Literacy skills increased by 71% year-over-year.

Top 10 Titles Requiring AI Literacy in Job Postings

1. Software Engineer	**6.** Administrative Assistant
2. Architect	**7.** Business Strategy Analyst
3. Information Technology Architect	**8.** Data Analyst
4. Product Manager	**9.** Marketing Specialist
5. Writer	**10.** Program Manager

Job Postings requiring AI Literacy skills
as % of all Job Postings

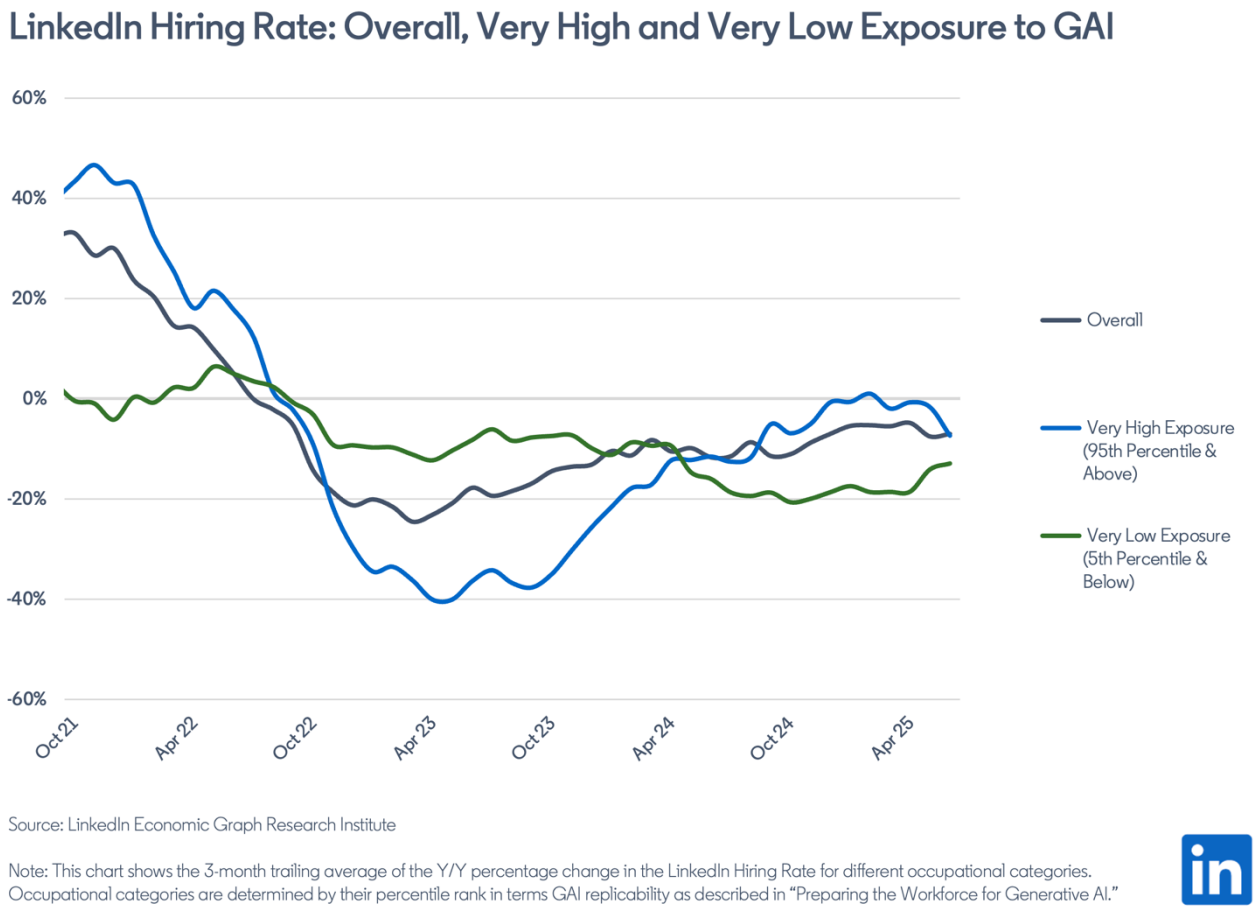


Source: LinkedIn Economic Graph Research Institute

Note: AI Literacy skills are the competencies related to effectively using AI technologies. Examples include Prompt Engineering and using generative AI platforms such as ChatGPT or Copilot.

Exhibit 7.

There are no conclusive differences in hiring trends for occupations at different levels of exposure to Generative AI (GAI)[1]. Hiring for high exposure roles outpaced overall hiring (+5 ppt) in the past 12 months on a year-over-year basis



Source: LinkedIn Economic Graph Research Institute

Note: This chart shows the 3-month trailing average of the Y/Y percentage change in the LinkedIn Hiring Rate for different occupational categories. Occupational categories are determined by their percentile rank in terms GAI replicability as described in "Preparing the Workforce for Generative AI."

[1] The conclusion inferred from this data is consistent with findings in recent work from Harvard, MIT, and Stanford.

Appendix

Methodology

AI Talent. AI Talent consists of members listing 2 or more AI Engineering skills or have worked in an AI occupation before.

AI Engineering Skills. Technical competencies involved in building and deploying AI systems. These include machine learning, predictive modeling, and neural networks.

AI Literacy Skills. Skills related to effectively using AI tools and interfaces. Examples include prompt engineering and using generative AI platforms like ChatGPT or Copilot.

Job Postings. Job postings consist of all sponsored job postings LinkedIn.

LinkedIn AI Talent Concentration. For a given country, we calculate the count of members who have AI engineering skills or who worked in an AI occupation divided by the total number of LinkedIn members in that country.

LinkedIn AI Hiring Rate. For a given country, we calculate the count of hires who have AI engineering skills or who worked in an AI occupation divided by the total number of LinkedIn members in that country. This number is first indexed to the average month in 2016 and then divided through by the LinkedIn Hiring Rate for each country. We compare the year-over-year percent change in this ratio and take a 12 month moving average to filter out seasonal fluctuations.

For more details on how LinkedIn's AI metrics are defined and calculated, please refer to this technical note.