



NITIC

National Information Technology
Innovation Center

Labor Market Bytes

A data-driven briefing designed to inform IT faculty and workforce stakeholders of the latest employment trends, in-demand skills, and projections shaping the tech landscape.

March 2026

Mega BILT Industry Trends Labor Market Report – April 2026

Case Studies in IT Hiring Challenges

During the NITIC Business and Industry Leadership Team meeting on April 28, 2026, a central theme was employers' difficulty in filling roles. Due to the relatively low national unemployment rate of 3.8% for IT roles¹, BILT organizations reported facing challenges identifying and hiring qualified talent. This report examines factors contributing to these hiring difficulties, including constraints in labor supply and potential mismatches between candidate qualifications and employer expectations. To do so, two occupations that were highlighted during the meeting discussion are used as focused case studies: Database Architect (SOC 15-1243) and Information Security Analyst (15-1212). Specifically, the analysis includes the following:

- Overview of the labor market for the selected occupations
- Analysis of the labor supply using professional networking profile data and job postings
- Alignment of skills and qualifications in profiles to that of job postings

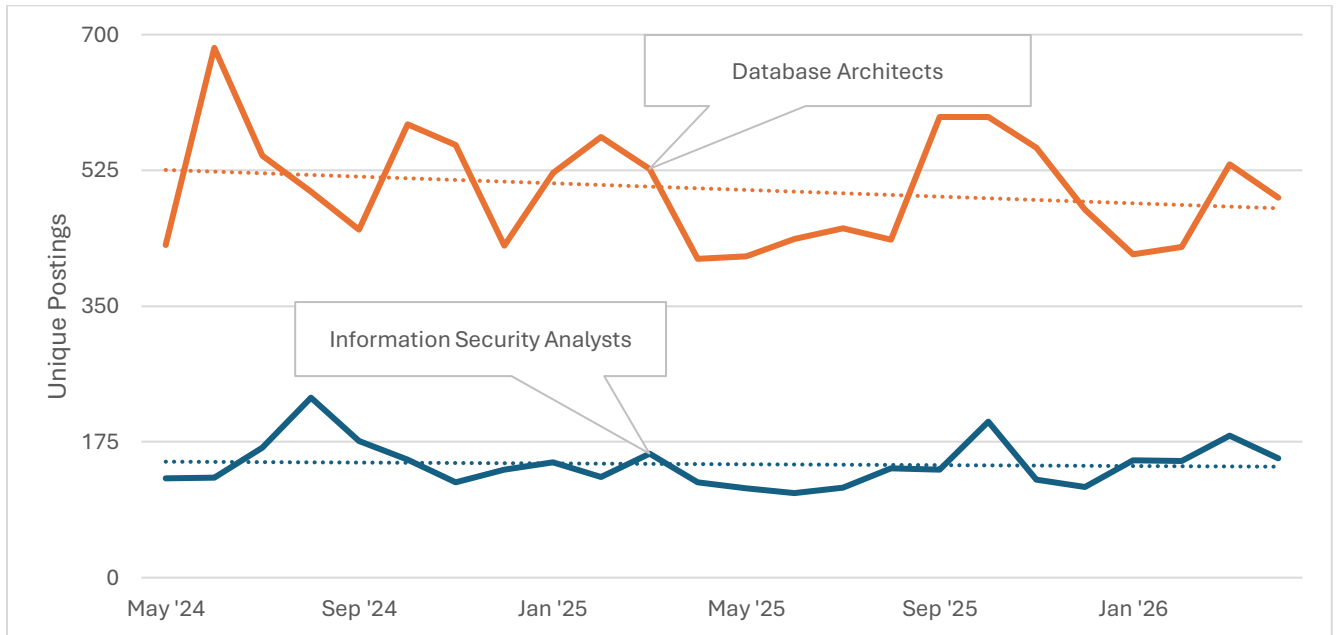
Generally, this report investigates the potential misalignment of skill prioritization between the labor supply and job postings with a discussion of solutions grounded in career education. All labor market data in this report is sourced from Lightcast in May 2026.

Occupation Background

To assess current hiring challenges, this report analyzes data from May 2024 through April 2026. Entry-level positions, defined as 0-3 years of experience and an associate degree, for both occupations are relatively stable or slightly trending downward. Average monthly postings are 500 for Database Architects and 146 for Information Security Analysts.

¹ April 2026 Tech Unemployment Rate from The Wall Street Journal: <https://www.wsj.com/cio-journal/tech-unemployment-ticks-up-to-3-8-in-april-amid-ai-driven-layoffs-214b0ca4>

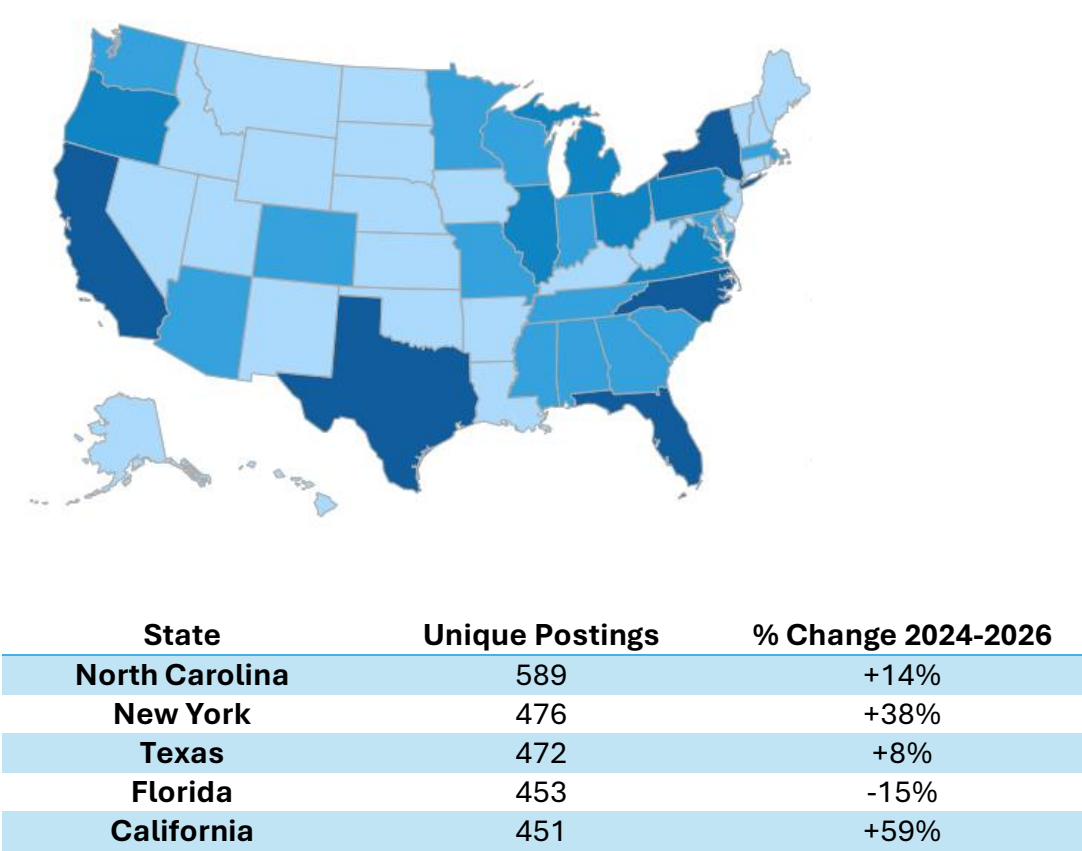
Graphic 1: Two Occupation Posting Frequency Between May 2024 to April 2026



During the two-year reporting period, there were 5,555 unique postings for Database Architects from 2,053 companies, approximately 2.7 postings per employer. Demand is geographically distributed across the country with Charlotte, NC; New York City, Houston, Dallas, and San Antonio representing the top five markets. While these roles were filtered for positions requiring an associate degree, 38% of postings indicated a preference for a bachelor's degree and 7% for a master's degree. As a result, candidates meeting minimum qualifications may still face competition from more highly credentialed applicants. Industries that these positions are hired from are concentrated in education and healthcare.

Information Security Analyst positions are less prevalent with 1,623 entry-level positions in the two-year reporting period from 613 companies: 2.6 positions per employer. Key markets for this occupation are Albany, Phoenix, New York City, San Antonio, and Arlington, VA. This field is more competitive across education backgrounds with 57% of associate-minimum positions indicating a preference for a bachelor's degree and 10% a master's degree. Leading industries include computer systems design services, higher education, medical insurance, and healthcare.

Graphic 2: Combined Geographic Distribution of Job Postings



Professional Networking Profiles

While job postings reflect employer demand, professional networking profiles provide insight into available labor supply. Lightcast aggregates data from platforms such as LinkedIn and Indeed, offering a complementary perspective on workforce characteristics. For profiles with less than four years of experience whose jobs align with the two occupation codes from this report, 22,000 have been updated within the last year suggesting a relatively current dataset.

Comparing labor supply and demand, the ratio of unemployed individuals to open roles in April 2026 is approximately 1:1 (836 unemployed individuals to 950 postings). However, this estimate does not account for currently employed individuals who may be actively

seeking new opportunities, which would likely increase the effective talent pool available to employers.

The top cities where skilled talent is located are New York City, Houston, Los Angeles, Chicago, and Washington DC. When compared with job posting locations, there is meaningful overlap across major regions, including the West Coast, South, and Mid-Atlantic. This suggests that geographic distribution alone is unlikely to be a primary driver of hiring challenges for these occupations.

Alternatively, educational backgrounds of the talent pool reveal significant variability of minimum associate degree holders. Business Administration is the largest segment of the top five programs at 16.15% with Computer and Information Sciences following at 10.46%. Third is Liberal Arts and Sciences with 9.13%, fourth Computer Science with 7.03%, and finally Security Science and Technology with 5.99%. The prominence of non-technical degrees indicates that many individuals transition into IT roles after completing degrees in other disciplines, possibly acquiring technical skills outside of formal academic pathways.

Graphic 3: Combined Geographic Distribution of Networking Profiles

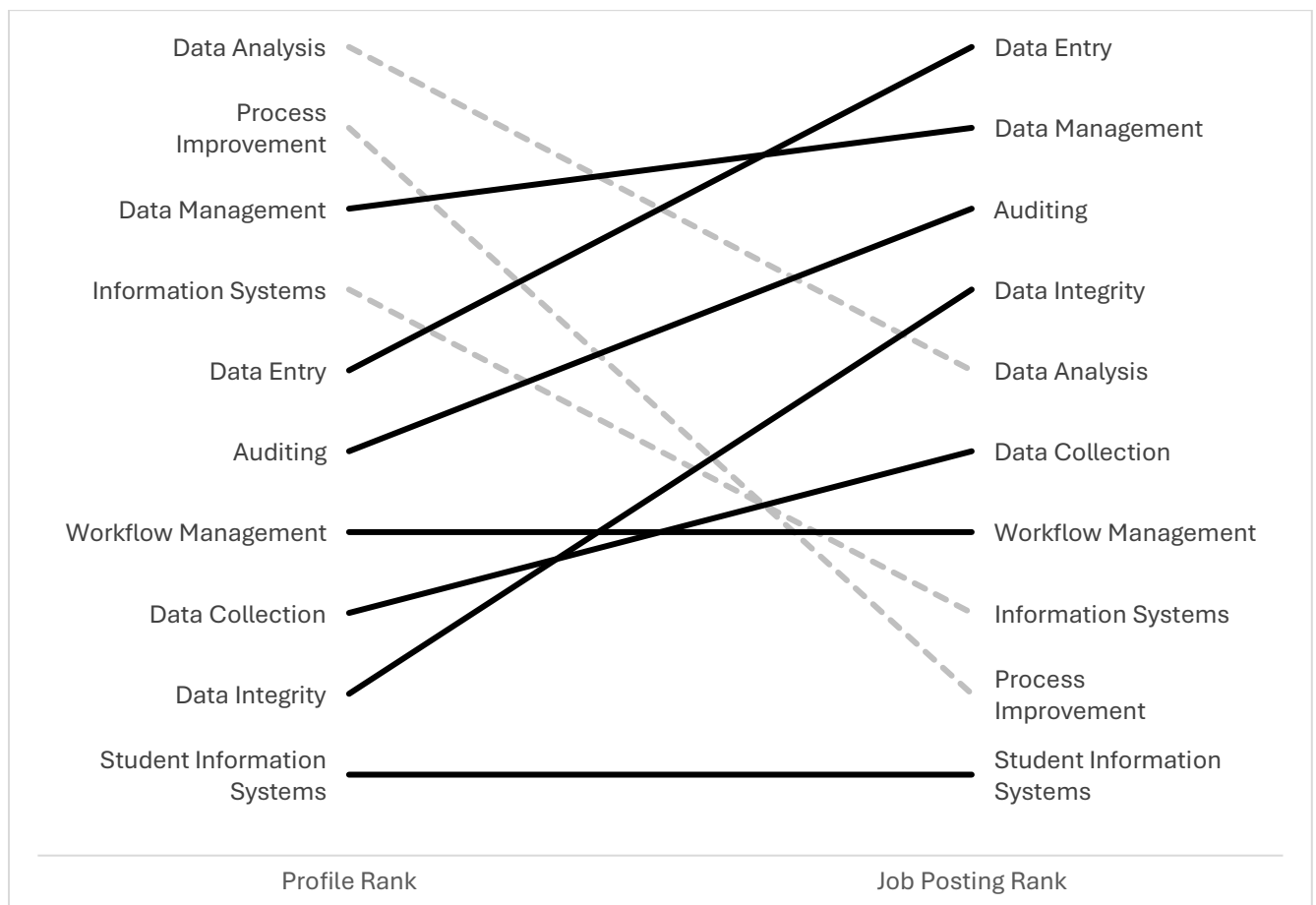


Supply and Demand Skill Alignment

An additional lens for understanding hiring challenges is the alignment between skills emphasized by employers and those highlighted by candidates. This analysis compares the ranking of the top ten skills identified in job postings with their ranking in professional profiles. The skills with a solid black line between the two rankings indicate that networking profiles rank the skill lower than job postings do or rank them at the same level, whereas a dotted grey line indicates the inverse.

For Database Architect roles, the most frequently requested skills in job postings at the top half include core competencies such as data entry, data management, auditing, data integrity, and data collection. Feedback from the NITIC BILT process consistently reinforces the importance of these fundamentals. Specifically, remarks from participating employers suggest that basic IT skills and an understanding of business processes are being lost in favor of artificial intelligence skills instead of being acquired in tandem.

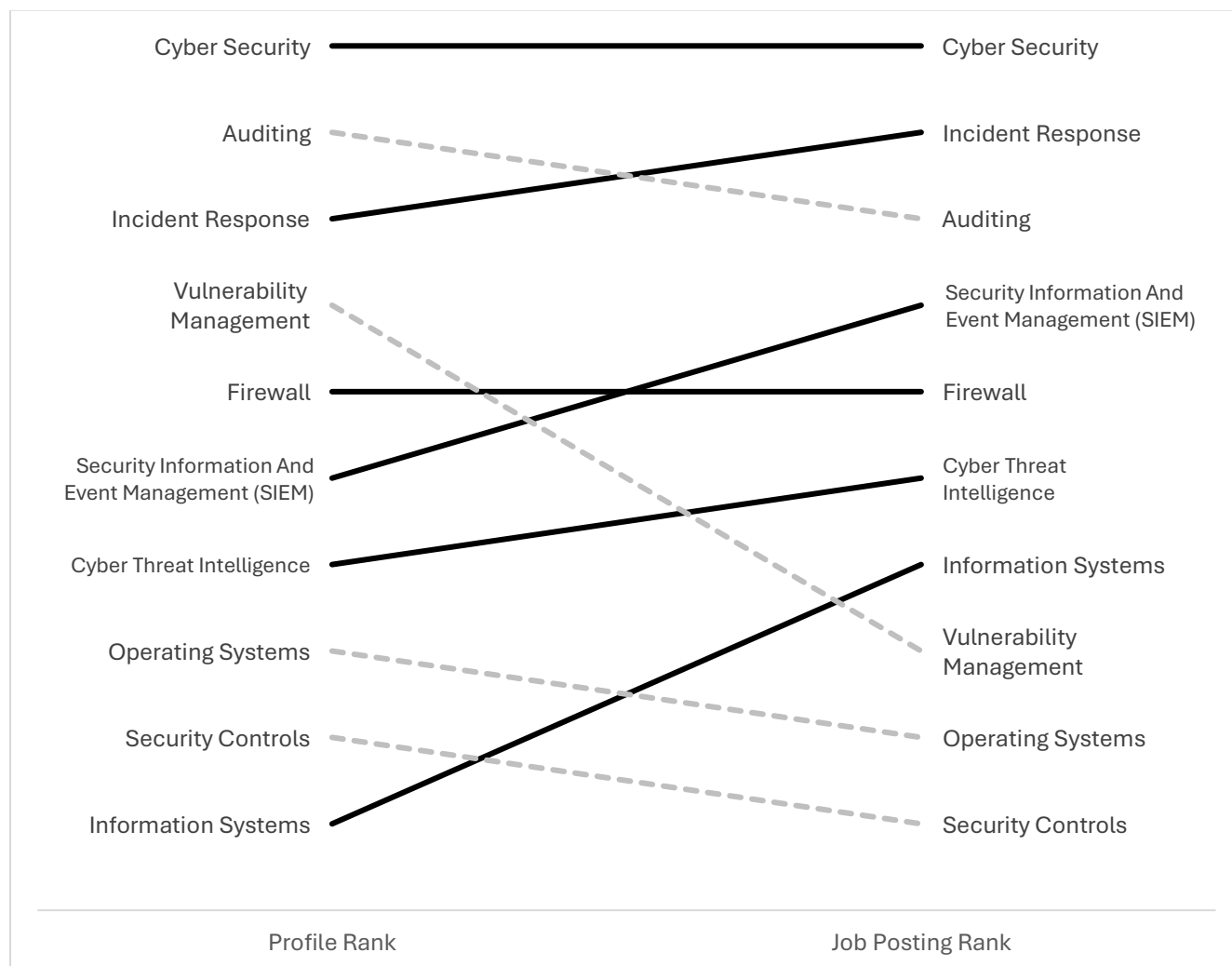
Graphic 4: Database Architect Skill Alignment



While responsibilities are changing with the advent of new technologies and AI, the core of any IT job still requires knowledge of the basics, as evidenced both in the Database Architect alignment and Information Security Analyst alignment. The message this report seeks to convey to its readers is not that skills with dotted lines should be deprioritized from a student's curriculum but rather that there is misalignment with how candidates present themselves, frequently ignoring the fundamental skills.

Certainly, fundamental skills are not being ignored during instruction; however, the student may not be informed enough to appropriately communicate basic skills to employers to demonstrate competency. It is more likely a misalignment solved by additional career education and communication than curriculum adjustment.

Graphic 5: Information Security Analyst Skill Alignment



One strategy to bridge this gap is the increased use of industry-recognized credentials (IRCs). These credentials provide standardized validation of skills and help align language between candidates and employers. By serving as clear indicators of competency, IRCs can enhance transparency and confidence in candidate qualifications.

The following visualization shows the priority misalignment between the credentials prospective employees value on their networking profiles versus what postings prioritize. The BILT framework and associated NITIC resources offer valuable guidance in aligning educational outcomes with industry needs, particularly by identifying which certifications are most in demand by employers. Strengthening this alignment can improve student readiness and employer satisfaction, ultimately supporting more effective workforce development pathways.

Graphic 6: Information Security Analyst IRC Alignment

