Jobs for the Future

Digital Jobs and Credentials: Labor Market Analysis Through 2024

Understanding the landscape of opportunities and credentials

Methodology

Labor Market Data Analysis

Source: Lightcast 2024.3 and 2024.4 job posting and employment data

Time Period: November 2023 to October 2024

Geographic Scope: National

Occupational Focus

"Core IT Occupations" Framework: Analysis of 16 specific IT occupations

Focus on roles requiring 0-1 years experience

Special attention to roles that require less than a bachelor's degree

Cross-industry examination

Core Analysis Components

Credential Analysis

Analysis of employer-requested credentials

Scanning for 50,000+ available digital credentials

Cross-sector credential requirements

Examination of vendor-neutral vs. branded credentials

Industry Segmentation

Health care and social assistance

Cybersecurity

Advanced manufacturing

Emerging focus on public administration

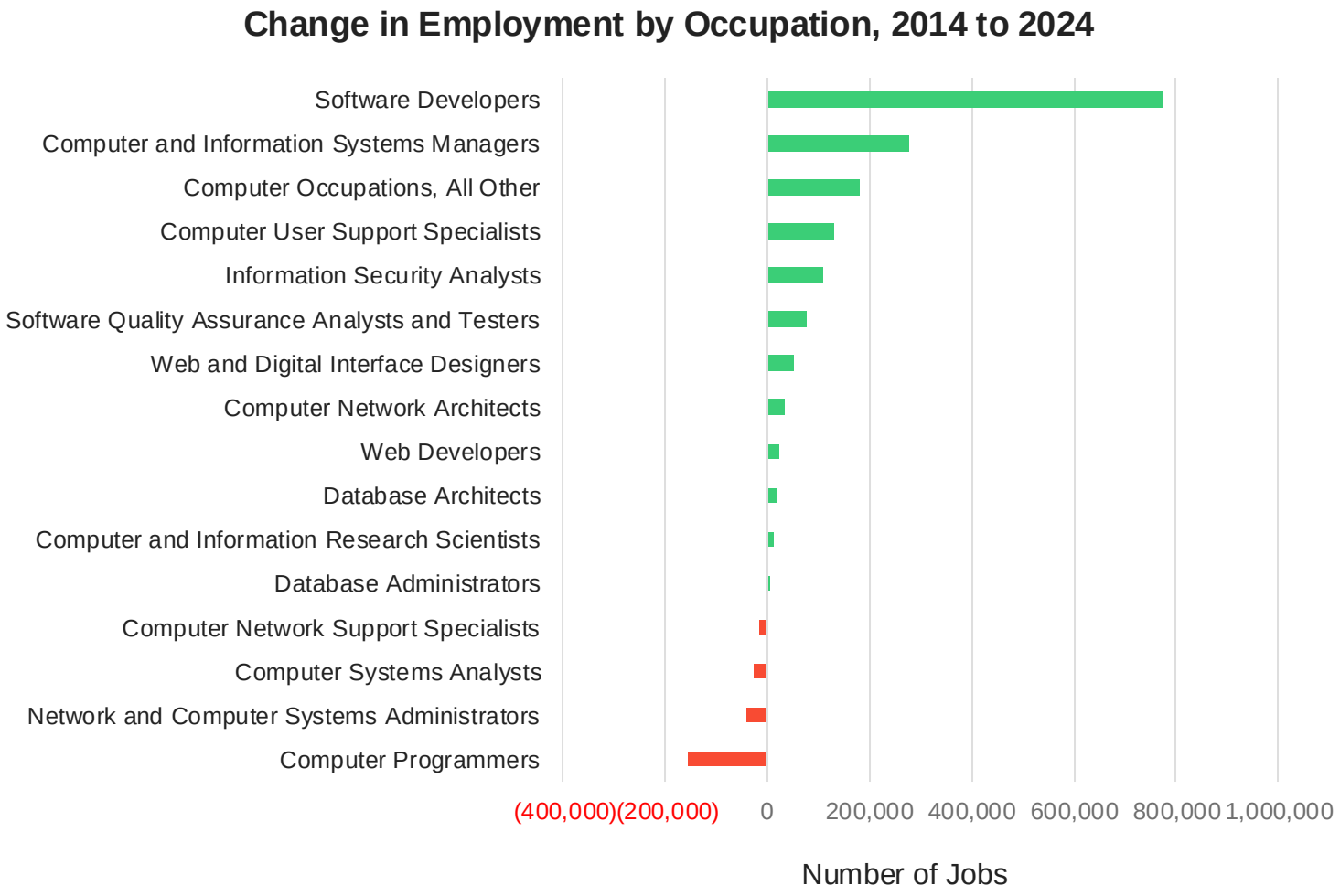
Working Definition of 'Core IT' Digital Jobs

For this report, the definition of "core IT" digital jobs includes common information technology roles such as network and database architects, programmers, user support specialists, and managers of computer and information systems. It doesn't include "tech-adjacent" roles such as statisticians, animators, or health care technicians.

Here's the list of the 16 occupations analyzed in this report, along with their Standard Occupational Classification codes:

SOC	Description
11-3021	Computer and Information Systems Managers
15-1211	Computer Systems Analysts
15-1212	Information Security Analysts
15-1221	Computer and Information Research Scientists
15-1231	Computer Network Support Specialists
15-1232	Computer User Support Specialists
15-1241	Computer Network Architects
15-1242	Database Administrators
15-1243	Database Architects
15-1244	Network and Computer Systems Administrators
15-1251	Computer Programmers
15-1252	Software Developers
15-1253	Software Quality Assurance Analysts and Testers
15-1254	Web Developers
15-1255	Web and Digital Interface Designers
15-1299	Computer Occupations, All Other

Employment Trends in Core IT Roles



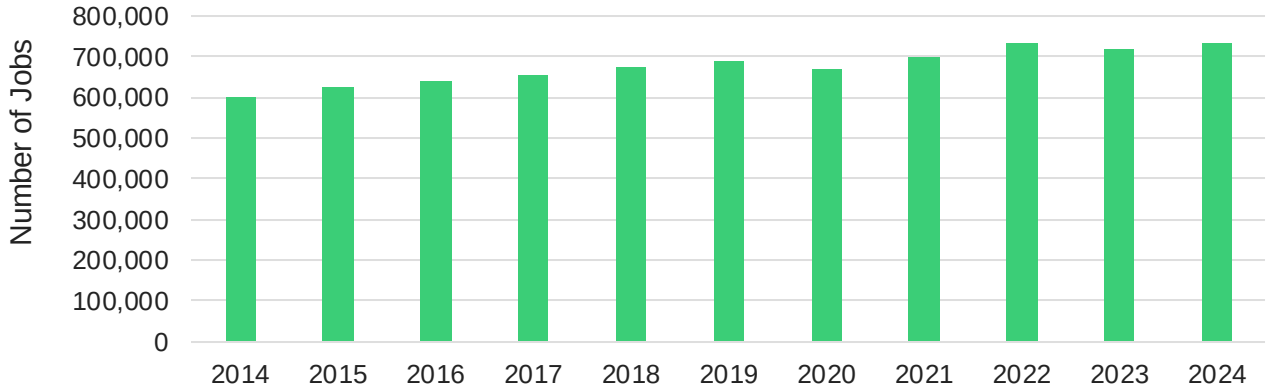
Source: Lightcast 2024.4

Between 2014 and 2024, most of the growth in IT employment took place in a handful of occupations. The five roles with the biggest increases in employment accounted for the vast majority of growth in that 10-year period.

- Of the nearly 1.5 million new IT positions added from 2014 to 2024, more than half were software developers.
- The computer user support specialist role, the only core IT role that doesn't require a bachelor's degree, grew by 130,000 positions, representing a 22% increase.
- The number of computer programmer jobs decreased significantly, falling by nearly 154,000 positions between 2014 and 2024.

Trends in Computer User Support Employment

Change in Overall U.S. Employment of Computer User Support Specialists, 2014 to 2024



Source: Lightcast 2024.4

Change in Employment of Computer User Support Specialists by U.S. Metro Area, 2022 to 2024

Region	Change in Number of Jobs	Percentage Change
United States	(2,172)	(0%)
New York-Newark-Jersey City, NY-NJ	1,245	3%
Miami-Fort Lauderdale-West Palm Beach, FL	742	6%
Washington-Arlington-Alexandria, DC-VA-MD-WV	484	2%
Nashville-Davidson--Murfreesboro--Franklin, TN	415	10%
Houston-Pasadena-The Woodlands, TX	269	2%
Boston-Cambridge-Newton, MA-NH	(731)	(4%)
San Jose-Sunnyvale-Santa Clara, CA	(895)	(13%)
Phoenix-Mesa-Chandler, AZ	(1,067)	(6%)
Chicago-Naperville-Elgin, IL-IN	(1,385)	(7%)
Los-Angeles-Long Beach-Anaheim, CA	(2,760)	(12%)

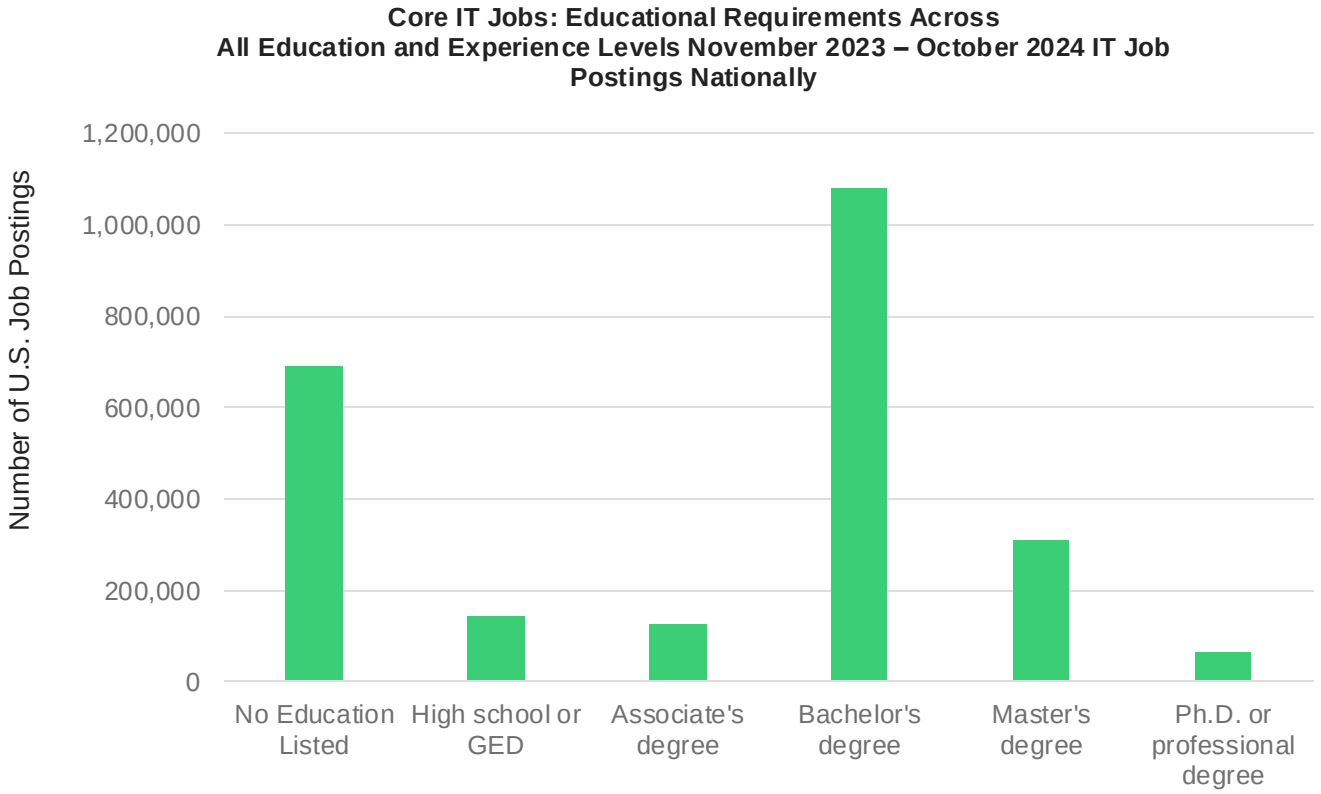
Source: Lightcast 2024.4

While the number of people employed as computer user support specialists grew at the national level from 2014 to 2024, this growth has slowed, and in some regions reversed, particularly since 2022.

- Growth in the number computer user support specialist jobs plateaued nationally between 2022 and 2024, with a slight decrease of less than 1%, compared to average growth of 3% across all occupations.
- Regionally, there were variations in demand between 2022 and 2024, ranging from a 3% increase of 1,245 jobs in the New York metro area to a 12% decrease of 2,760 jobs in the Los Angeles area.

Digital Jobs Landscape Overview

In recent years, there has been a meaningful shift in the digital jobs market, where educational requirements are becoming less rigid.

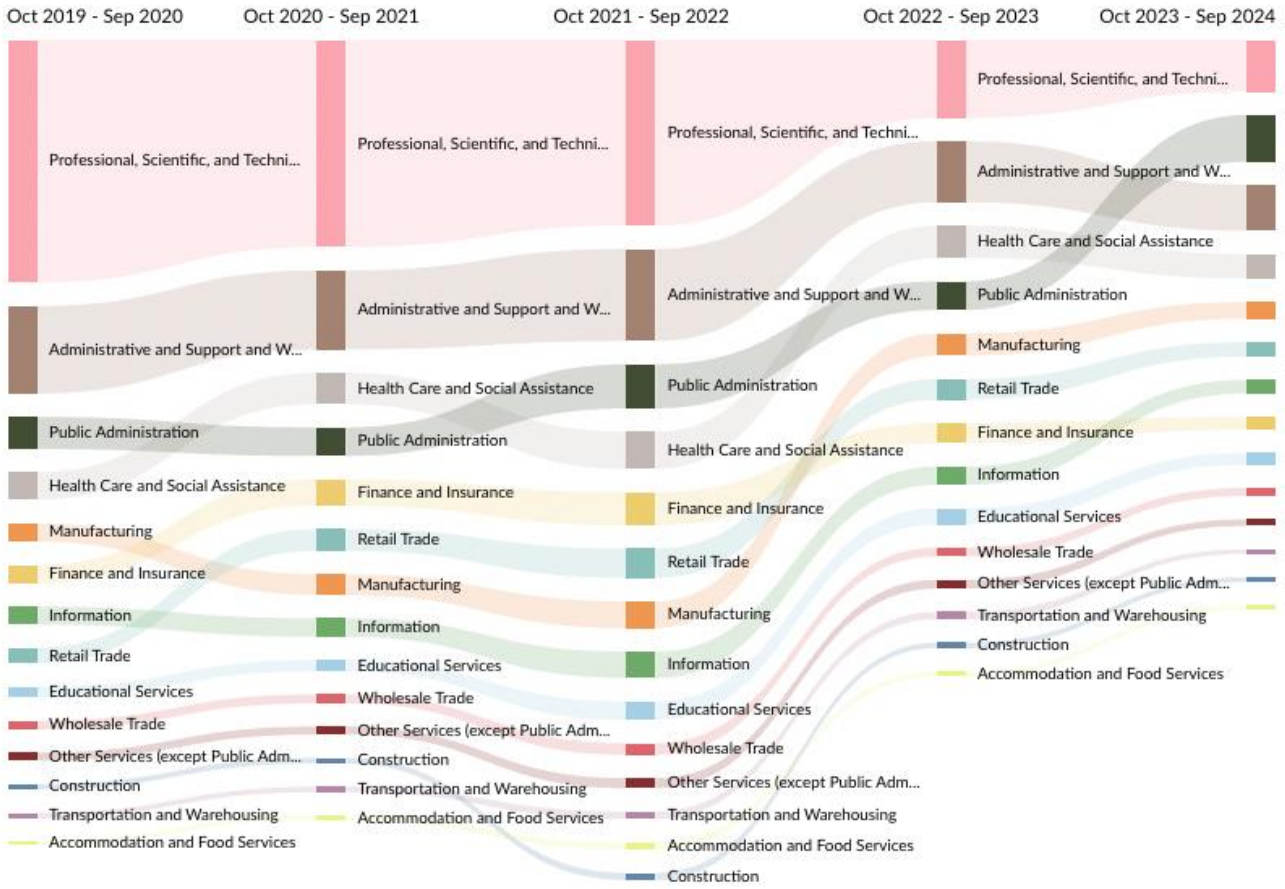


Source: Lightcast 2024.4

More than one-third of the postings for digital jobs from November 2023 to October 2024 had no specific educational requirements, revealing significant opportunities for people to pursue noncollege pathways into tech careers.

- 36% of the postings had no educational requirements listed
- Only 7% explicitly required a high school degree or an equivalent credential
- The roles most likely to have limited requirements for education or training — and would therefore be accessible to the widest range of applicants — include technical support, product repair, and health-care-adjacent positions

Emerging Industry Trends in Digital Jobs



Postings for Core IT Jobs Requiring Less Than a Bachelor's Degree and Up to One Year of Experience, by industry

Source: Lightcast 2024.3

Public administration and health care are emerging as significant growth sectors for entry-level digital jobs, challenging traditional tech sector dominance.

- Public administration shows highest recent growth in job postings.
- The health care sector has an increasing number of digital job opportunities.
- Demand for IT workers is still highest in traditional tech fields, but postings in those sectors have contracted recently and employers are requiring higher credentials.
- Since 2019, the professional, scientific, and technical services sector has shown the largest growth in core IT employment, with more than 250,000 new jobs. Interestingly, the number of core IT jobs in public administration has grown by only 35,000 since 2019, and IT employment in health care has remained nearly static since 2019.

The Most In-Demand Digital Skills Certifications

Qualification	Postings with Qualification
CompTIA A+	4,369
CompTIA Network+	2,000
CompTIA Security+	1,543
Microsoft Certified Professional	1,070
Cisco Certified Network Associate	892

Number of job postings with the qualification November 2023 to December 2024

Source: Lightcast 2024.4

	Health Care	Cybersecurity	Advanced Manufacturing
CompTIA A+	468	4193	138
CompTIA Network+	157	1907	67
CompTIA Security+	105	1385	114

Number of job postings with the qualification November 2023 to December 2024, by sector

Source: Lightcast 2024.4

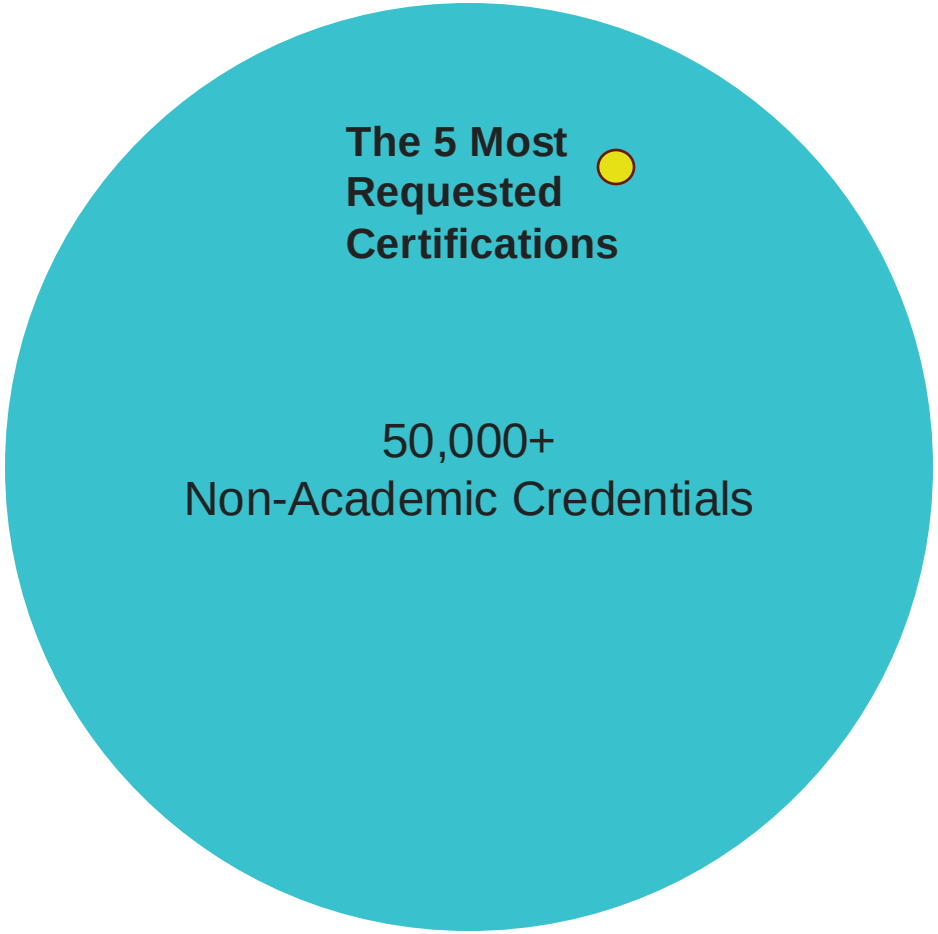
CompTIA Certifications Are the Most In-Demand:

- CompTIA A+: 4,369 postings
- CompTIA Network+: 2,000 postings
- CompTIA Security+: 1,543 postings

This pattern of demand holds across industries, but with wide variations in volume.

Employers in certain industries often also require supplemental credentials in postings listing CompTIA credentials. For example, in health care, postings often include both CompTIA credentials and health care credentials like like the Registered Health Information Technician (RHIT) certification.

The Digital Credentials Market Gap



A fractured marketplace

There are more than 50,000 non-academic digital credentials available, yet **only these five certifications** are consistently requested by employers:

- CompTIA A+
- CompTIA Network+
- CompTIA Security+
- Microsoft Certified Professional
- Cisco Certified Network Associate

This shows a clear preference among employers for established certifications, with limited recognition of newer credentials.

Implications and Future Research From JFF

Key Findings

- 36% of digital jobs now have no specific degree requirements
- Public administration and health care are emerging as key growth sectors
- There's a clear employer preference for established credentials (like those offered by CompTIA, Microsoft, and Cisco)
- There's a significant gap between the number of credentials available (50,000+) and the number of credentials most actively sought by employers
- There's strong and growing demand for computer user support specialists, the role with the most flexible credential requirements

Future Research

1. **Regional Market Analysis**
   - Development of three or four detailed regional market scenarios
   - Analysis of local labor market dynamics
   - Analysis of industry-specific regional variations
2. **Learner Pathways**
   - Creation of detailed learner personas
   - Mapping of effective learning pathways
   - Analysis of credential progression paths
3. **Employer Research**
   - Examination of credential valuation across markets
   - Analysis of talent acquisition strategies
   - Assessment of skill signal interpretation

Recommendations

1. **Market Alignment**
   - Bridge gap between credential supply and employer demand
   - Support standardization of credential recognition
   - Improve credential marketplace transparency
2. **Sector Development**
   - Support emerging public-sector opportunities
   - Develop pathways to digital jobs specifically for health care
   - Strengthen regional workforce ecosystems
3. **Accessibility**
   - Expand nondegree pathways
   - Clarify certification requirements for specific occupations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