

Career Trends: Team Report

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Summary: For this report, our group has analyzed various studies and resources to highlight the Current and Projected state of 21st Century Careers. To provide a generalized approach that we believe will trickle down into other industries, we will be focusing on two of the largest industries - Information Technology (IT) and Education.

Industry 1: Information Technology

Current State of Careers

Computer and Information Technology occupations will continue to be in demand across nearly every industry as businesses become increasingly dependent on technology, cybersecurity, cloud-based services, and big data. Career fields include software development, cybersecurity, data science/analytics, cloud computing, network/systems administration, computer support, and artificial intelligence/machine learning. The BLS notes that as of May 2024, the median annual wage for computer and information technology occupations was \$105,990. This is much higher than the median annual wage for all occupations, which was \$49,500.

Projected State of Careers

Employment in Computer and Information Technology occupations is projected to grow much faster than the average for all occupations. Many of the fastest-growing careers include Information Security Analysts, Computer and Information Research Scientists, Data Scientists, and Software Developers. With technology constantly evolving, employers are seeking skills in artificial intelligence, cybersecurity, cloud computing, data analytics, automation, programming languages, as well as soft skills such as critical thinking, communication, and collaboration.

Industry Trends

Within IT, the strongest current trend is the adoption of Artificial Intelligence, with “Artificial Intelligence fundamentals [continuing] to rank as the top skill job seekers plan to learn and develop” (*Job Seeker Trends | CompTIA Research*, 2026). This information is further backed by “more than 275,000 active job postings” requiring AI skills (Comp TIA, 2026). Naturally, with the adoption of AI, Cybersecurity is a second close industry trend due to the need to “develop new cybersecurity strategies and skills in a fast-changing digital environment” to match the pace of AI implementation (Comp TIA, 2026).

Occupational Trends

Given the growing AI and Cybersecurity sectors, occupational trends point to strong growth in Information Security positions, as well as in various analyst and engineering roles. Within the next decade, job growth is expected to be “[420% for] Data Scientists and Analysts”,

“[346% for] Cybersecurity Analysts and Engineers”, and lastly “[188% for] Software developers and Engineers” (Comp TIA, 2026).

Employment Statistics

The computer and information technology (IT) workforce is projected to grow significantly in the next few years. The U.S. Bureau of Labor Statistics (BLS) estimates around 5.2 million total job gains between 2024 and 2034, with computer and mathematical occupations growing faster than average and generating roughly 317,000 annual job openings due to both growth in the industry and replacement needs. Similarly, CompTIA projects about 1.9% growth in the U.S. tech workforce in 2026, adding approximately 185,000 jobs, with more than 275,000 AI-related job postings in 2026. These occupations offer strong pay and stability, with a median wage of \$105,990 compared to \$49,500 for all occupations, and a median job tenure of 4.3 years versus the U.S. national average of 3.9 years.

Workforce behavior in this sector is highly dynamic and diverse across demographic groups. About 31% of U.S. workers are actively seeking a job change within a short period, while CompTIA further categorizes workers as 51% “Career Content”, workers who are satisfied in their current roles, and 49% “Career Curious”, workers who are open to opportunities but not actively searching. Job turnover also differs by sub-population, with younger workers, women, and individuals in service occupations showing higher turnover rates, while higher levels of education are associated with longer job tenure.

Role of Technology in the Marketplace and Relationship to Job Skills

Technology is the foundation of the IT industry, shaping how organizations operate, communicate, and secure information. Cloud computing, cybersecurity, artificial intelligence (AI), automation, and data analytics have transformed business operations while increasing the demand for skilled IT professionals. As these technologies evolve, IT workers must continually expand their technical knowledge and adapt to new tools.

Technology has also reshaped the daily work of IT professionals. IT professionals are expected to support digital transformation while ensuring systems remain reliable and secure.

Industry organizations also recognize the changing demands of the IT workforce. In addition to technical expertise, employers value communication, collaboration, critical thinking, and problem-solving, as IT professionals regularly work with teams across an organization.

Overall, technology has transformed the IT industry by improving efficiency, enabling innovation, and creating new workforce demands. Success in today's IT field requires a combination of technical expertise, professional skills, and a commitment to continuous learning as technology evolves.

Threats from AI with Alternatives and Best Approaches

Artificial intelligence (AI) is transforming computer and information technology jobs by automating routine tasks such as programming/coding, software testing, system monitoring, and technical support. Research by Brynjolfsson, Li, and Raymond (2023) found that generative AI can significantly increase worker productivity when used to supplement rather than replace human workers, allowing employees to retain responsibility for decision-making while benefiting from AI-generated assistance. As AI integration increases, employers increasingly recognize the need for continuous reskilling and upskilling in technology-related areas to help workers adapt to evolving job requirements (World Economic Forum, 2025). Overall, the most effective approach is a human-AI partnership in which AI supports repetitive and data-intensive tasks while technology professionals apply judgment, solve problems, drive innovation, and provide cybersecurity expertise and ethical oversight (Brynjolfsson et al., 2023; NIST, 2023).

Industry 2: Education

Current State of Careers

Educational instruction and library occupations will continue to make up a significant portion of the workforce. Demand is dependent on job openings at schools and universities due to student enrollment, retirements, and the need to replace workers who leave the occupation. Career pathways include Elementary, Middle, and High School teachers, Postsecondary instructors, Special Education Teachers, School counselors and consultants, Instructional Coordinators, and Librarians or Library Media Specialists. As of May 2024, the median annual wage for education majors was \$59,220. The BLS states that this is above the median annual wage of all occupations at \$49,500.

Projected State of Careers

Employment in education and library occupations is projected to grow 1 percent between 2024 and 2034. Although education will see little growth, many of the job openings will come from those who retire or leave the profession, not from newly created positions. Skills educators of the future will need include teaching in an online or hybrid capacity, using data to inform assessments and lesson planning, familiarity with classroom technology tools, and soft skills like communication, collaboration, adaptability, and problem-solving.

Industry Trends

From a broad perspective, the largest trend is the implementation of more Education Technology. There is widespread use of Artificial Intelligence, Adaptive Learning, and Remote Platforms. Through the introduction of these programs, “the walls of the classrooms are no

longer a barrier as technology enables new ways of learning, communicating, and working collaboratively” (How Has Technology Changed Education? 2024). The broad scope of these trends has increased access for individuals in profound ways, such as Adaptive Learning programs that can monitor special needs students completing math problems by “[observing] their work patterns and [identifying] exactly where their learning process breaks down” (Admin & Admin, 2025).

Occupational Trends

With the large push for Educational Technology, we are seeing increased demand for specialized positions such as Instructional Coordinators and Education Program Assistants. These positions help ensure that the curriculum developed using AI and Adaptive learning still “ensures alignment with education standards” (2026 Fastest-Growing Careers for Education Degree Graduates | [Research.com](https://www.research.com), 2026). While there is a large portion of hiring increased due to Education Technology, there is a steady increase in demand for Elementary School Teachers, Special Education Teachers, and Early Childhood Educators due to “expanding student populations and policy-driven mandates like teacher-student ratio requirements” as well as “increased awareness of early developmental benefits” (2026 Fastest-Growing Careers for Education Degree Graduates | [Research.com](https://www.research.com), 2026). Within the next 5 years, each of these positions is expected to have a growth need of at least 7 to 10%, if not higher.

Employment Statistics

According to the U.S. Bureau of Labor Statistics (BLS, 2024-2025), educational instruction and library occupations are projected to grow by approximately 0.6% from 2024 to 2034, with about 62,200 additional jobs. Most openings come from replacement needs due to retirements and workers leaving the occupation, indicating a moderate turnover from attrition rather than new growth. Unemployment dropped from 2014 to 2020, then rose to 5.0% in 2024 and returned to 5.3% in 2024, indicating overall stability. Job tenure is around 4 years, comparable to the national average of 3.9 years.

Role of Technology in the Marketplace and Relationship to Job Skills

Technology has become an essential part of the education industry. It has changed how educators teach, students learn, and schools operate. Digital learning platforms, cloud-based collaboration tools, artificial intelligence (AI), and learning management systems (LMS) have expanded access to education while improving communication and administrative efficiency. As these technologies evolve, educators must develop the skills needed to use them effectively.

The U.S. Department of Education identifies technology as a key driver of student success. In its 2024 National Educational Technology Plan (NETP), the Department states that

educational technology should "raise the bar for all elementary and secondary students" by addressing barriers to technology access, instructional design, and technology use (U.S. Department of Education, 2024). The report also highlights the "Digital Design Divide," emphasizing that educators need professional development to effectively integrate technology into instruction.

Technology has also changed educators' daily responsibilities. Teachers now use digital tools to deliver lessons, assess student performance, communicate with parents, and personalize instruction using student data. Online learning platforms, video conferencing, and AI-powered educational tools are now common in classrooms, allowing educators to create more flexible and engaging learning experiences.

UNESCO's 2023 Global Education Monitoring Report emphasizes that technology should support rather than replace educators and that successful implementation depends on teacher preparation and equitable access to digital resources (UNESCO, 2023).

As technology becomes more integrated into education, educators need additional job skills beyond traditional teaching methods. Digital literacy, proficiency with instructional technologies, data analysis, and understanding the responsible use of AI are increasingly important.

Threats from AI with Alternatives and Best Approaches

Artificial intelligence is transforming educational instruction and library occupations by supporting routine tasks such as grading, lesson planning, and information retrieval (UNESCO, 2023; U.S. Department of Education, 2023). However, these developments also raise concerns about academic integrity, misinformation, data privacy, and the importance of human oversight in educational decision-making (UNESCO, 2023). UNESCO (2023) and the U.S. Department of Education (2023) both emphasize that AI systems in education should be used in transparent, ethical, and properly governed ways to protect learners and maintain institutional trust. These reports also highlight the importance of AI literacy and professional development for educators and librarians to effectively evaluate and integrate AI tools into their work (UNESCO, 2023; U.S. Department of Education, 2023). Overall, both sources support a human-centered approach in which AI is used to strengthen educators' and librarians' efficiency in routine work, while professionals in the field continue to provide instruction, critical thinking, ethical decision-making, and personalized support (UNESCO, 2023; U.S. Department of Education, 2023).

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