2024 Q1
Montana Cybersecurity Job REPORT

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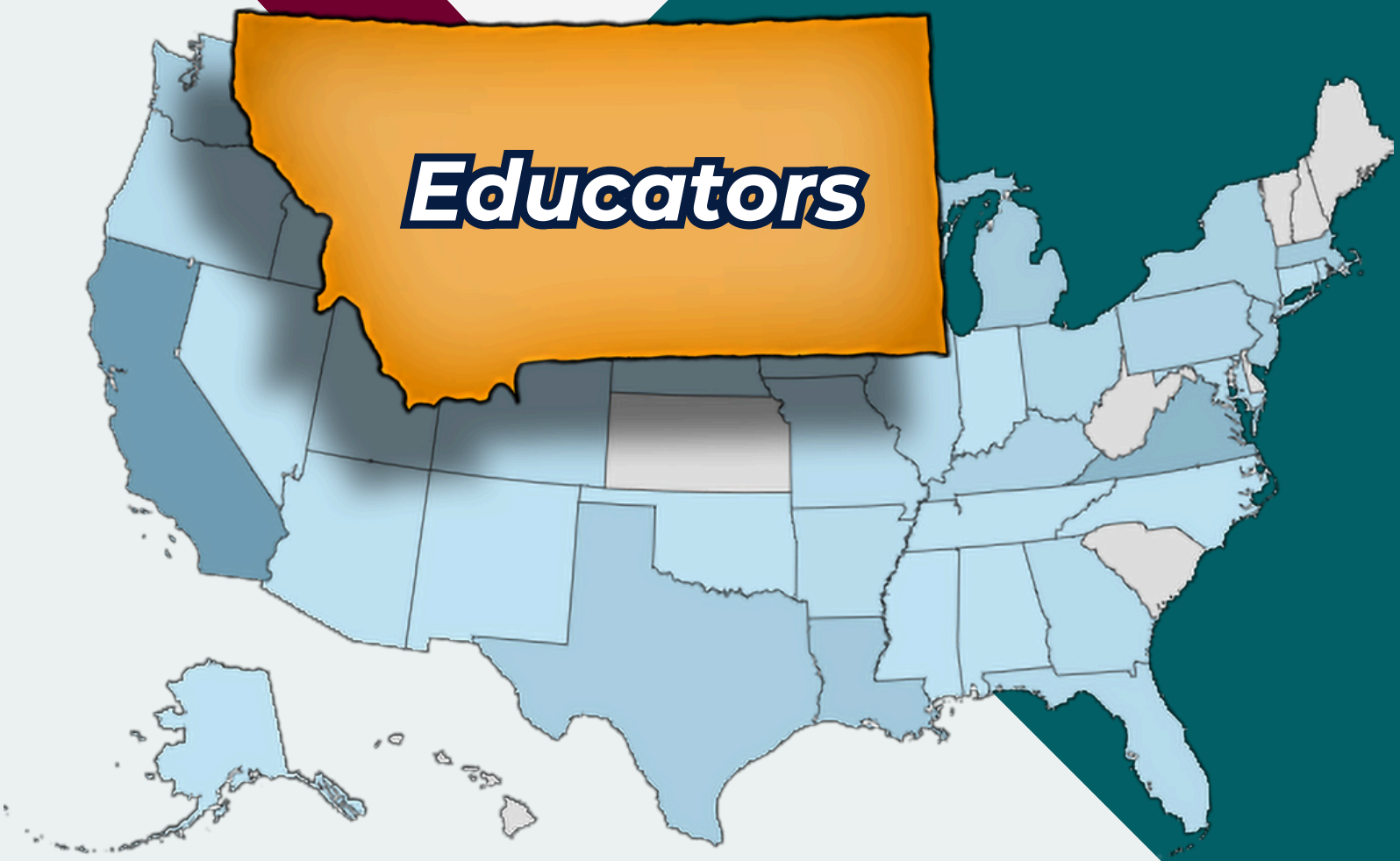

UNIVERSITY OF MONTANA
CENTER FOR CYBERSECURITY WORKFORCE & RURAL POLICY

CYBER MONTANA

JOB REPORT

OVERVIEW

The **Montana Cybersecurity Jobs Report: Educators** Edition presents current and historical Montana cybersecurity job market data focused on specific growth projections, breakdowns of in-demand skills, and detailed summaries on the number and location of job postings in Montana. This information aims to provide educators with resources to integrate into lesson plans, help align their curriculum with industry standards, provide shareable career pathways for students, and assist students in developing job specific skills.

Information for this report is collected from labor market analytics firm Lightcast, the U.S. Bureau of Labor Statistics and Cyberseek.org, a joint effort sponsored by Lightcast, CompTIA, and the National Initiative for Cybersecurity Education (NICE). This report focuses on the following occupations:

- Computer and Information Systems Managers (SOC code 11-3021)
- Computer Systems Analysts (SOC code 15-1211)
- Information Security Analysts (SOC code 15-1212)
- Computer and Information Research Scientists (SOC code 15-1221)
- Computer Network Architects (SOC code 15-1241)
- Database Administrators (SOC code 15-1242)
- Database Architects (SOC code 15-1243)
- Network and Computer Systems Administrators (SOC code 15-1244)
- Computer Programmers (SOC code 15-1251)
- Software Developers (SOC code 15-1252)
- Software Quality Assurance Analysts and Testers (SOC code 15-1253)
- Web Developers (SOC code 15-1254)
- Web and Digital Interface Designers (SOC code 15-1255)
- Data Scientists (SOC code 15-2051)

The quarterly **Montana Cybersecurity Job Report** is a joint effort of the University of Montana's Center for Cybersecurity Workforce & Rural Policy and CyberMontana, a legislatively funded initiative focused on furthering cybersecurity education, enhancing cybersecurity literacy statewide, and expanding the cybersecurity pipeline by connecting IT professionals and students with jobs across Montana.

CYBER MONTANA

UNIVERSITY OF MONTANA CENTER FOR CYBERSECURITY WORKFORCE & RURAL POLICY

EXECUTIVE SUMMARY

In this edition of **The Montana Jobs Report: Educators**, we take a deep dive into relevant workforce data in the field of cybersecurity. We offer guidance to educators to help shape their curriculum around current industry needs so students are ready for careers in the field. We also give a clear look at today's recruiting landscape across in-person, hybrid, and remote work. By staying up to date on the state of the field, educators can best advise their students in their career decisions.

It is encouraging to see that the cyber job market is strong in our state as there is ample opportunity for successful internships and post-graduation placements. **1,731 jobs** were posted in the first quarter (January-March), which is an **increase of 907 jobs from the previous quarter. 15% of job postings were for Montana-based positions** with many offering an option to work remotely. **Software Developers/Engineers were the top recruited positions in Montana.**

Nationally, Software Developers, Data Scientists, Computer and Information Systems Analysts, and Network Administrators are in high demand. Employers frequently request certifications like the **CISSP**, and they place strong value on **programming** and **cloud platform** skills.

The U. S. Bureau of Labor Statistics (BLS) Occupational Outlook Handbook projects about **317,700 job openings in computer and information technology jobs** each year, on average, from 2024 to 2034. For educators, this trend underscores the need to equip students with strong technical skills requested in high-demand IT careers.

Educators can use these trends to refine curriculum, so graduates are well-positioned for today's workforce needs. For more information, educators can direct students to our upcoming third quarter report, which is designed specifically for job seekers, for deeper guidance once it is released.

Drop us a note at **info@cybermontana.org** and let us know what else you'd like to see in upcoming reports. We're always glad to hear from our readers!

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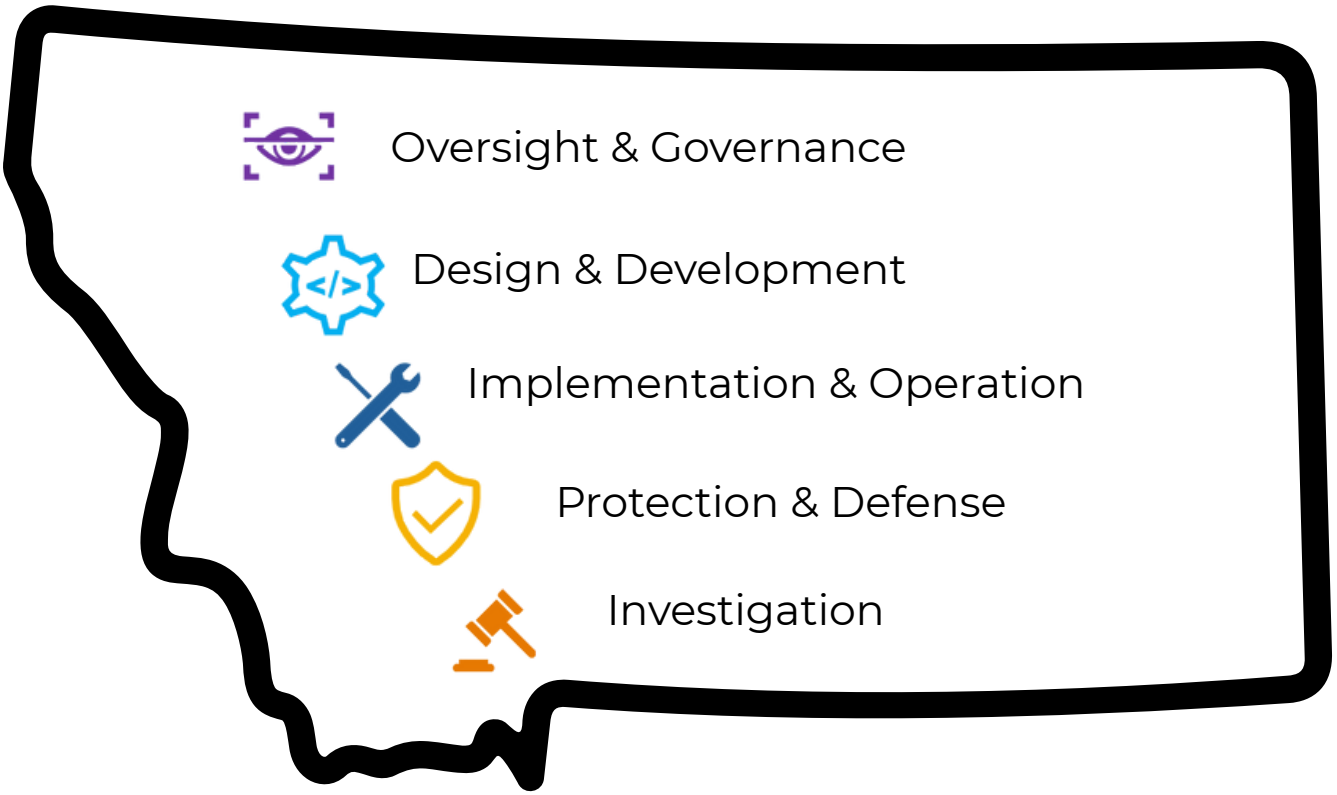
CYBERSEEK AND THE

NICE FRAMEWORK

CyberSeek provides industry-leading information on state and national cyber-related employment. It's important to note that CyberSeek data is annualized - the fine print reveals that job opening figures are reported *over a rolling 12-month period*, not for a given point in time. Dividing by 12 gives a rough monthly average.

The CyberSeek data categorizes job postings into the NICE Framework. This framework encompasses 5 work role categories and 41 work roles that describe the workforce structure in the cybersecurity industry.

Are you developing programs that lead to real IT career outcomes? The **NICE Framework** (National Initiative for Cybersecurity Education), created by the National Institute of Standards and Technology (**NIST**) gives the cybersecurity world a shared language for roles, skills, and career pathways by organizing the field into 41 defined roles. **This information helps educators build cybersecurity curricula using field-specific language and ensure their programs reflect what employers actually expect across public, private, and academic sectors.**



Click Here to Connect to the CyberSeek Website.

The NICE Framework was revised in 2025 and we have incorporated those revisions in all 2024 reports.

CYBERSECURITY

JOB POSTINGS

MONTANA

Beginning in 2024, Lightcast data undergoes an additional CyberMontana specific review to ensure job location and descriptions are accurate. This updated approach improves data quality and is why job posting totals differ from prior years.

The chart below shows the total number of cybersecurity job postings in each quarter. Throughout the four quarters the posting volume fluctuated significantly – highlighting how dynamic hiring cycles can be.

Postings rose **sharply from 824 in Q4 of 2023 to 1,731 in Q1 of 2024, signaling a major surge in recruitment as the year started.**

Montana employers continue to need cybersecurity talent each year, and a small labor market means a few large postings can shift the numbers.

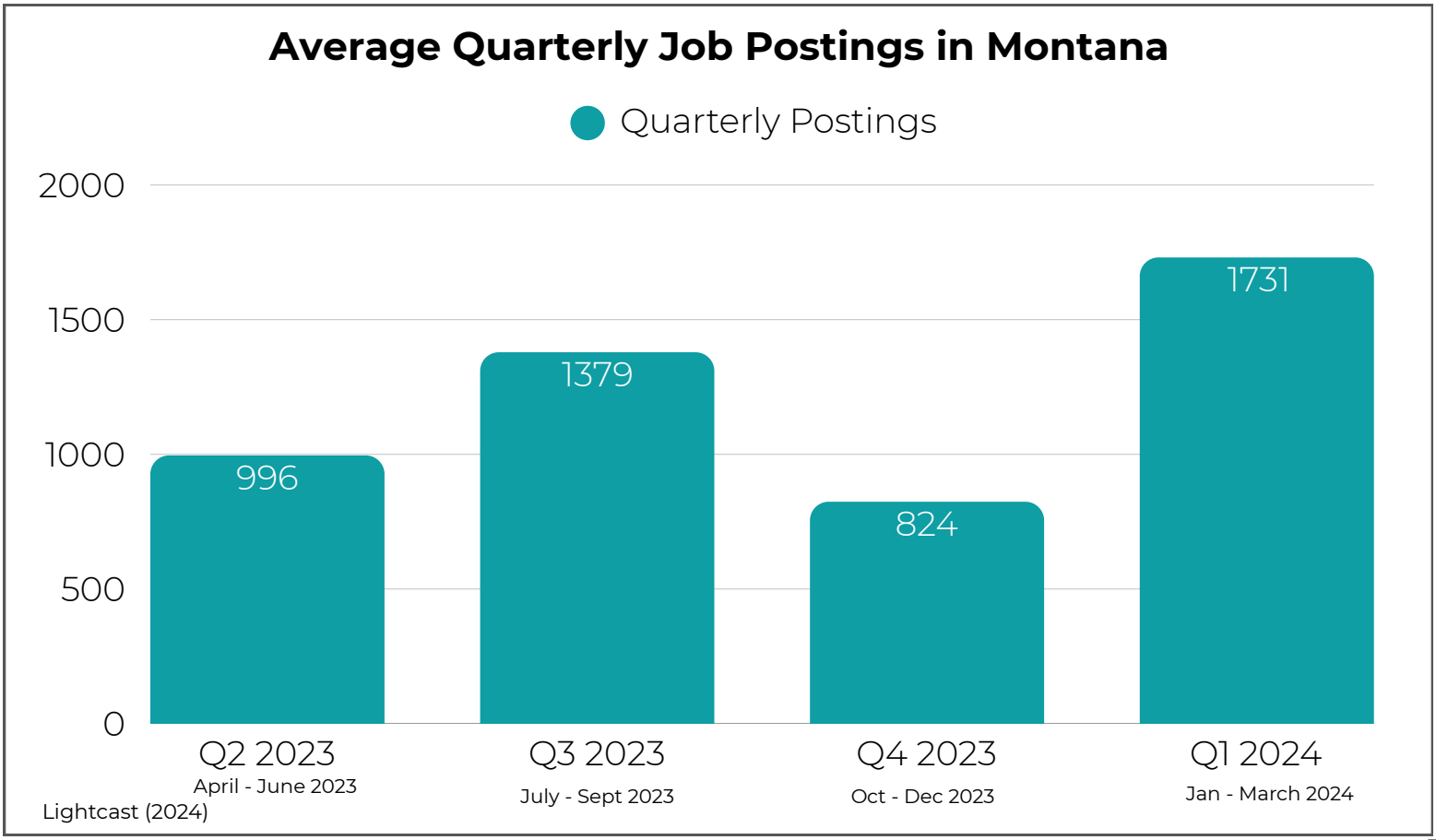
For educators, the message is simple: prepare students with strong, practical cyber skills. The roles stay in demand even when the posting volume is unpredictable.

One-Year Look Back

Average Statewide Quarterly Job Postings :

1,233

April 2023 - March 2024



Lightcast (2024)

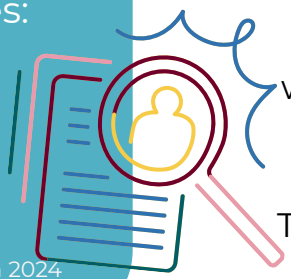
Note: Hiring data is ***estimated***, not quantified.

One-Year Look Back

Average Statewide Quarterly Hiring Estimates:

1,275

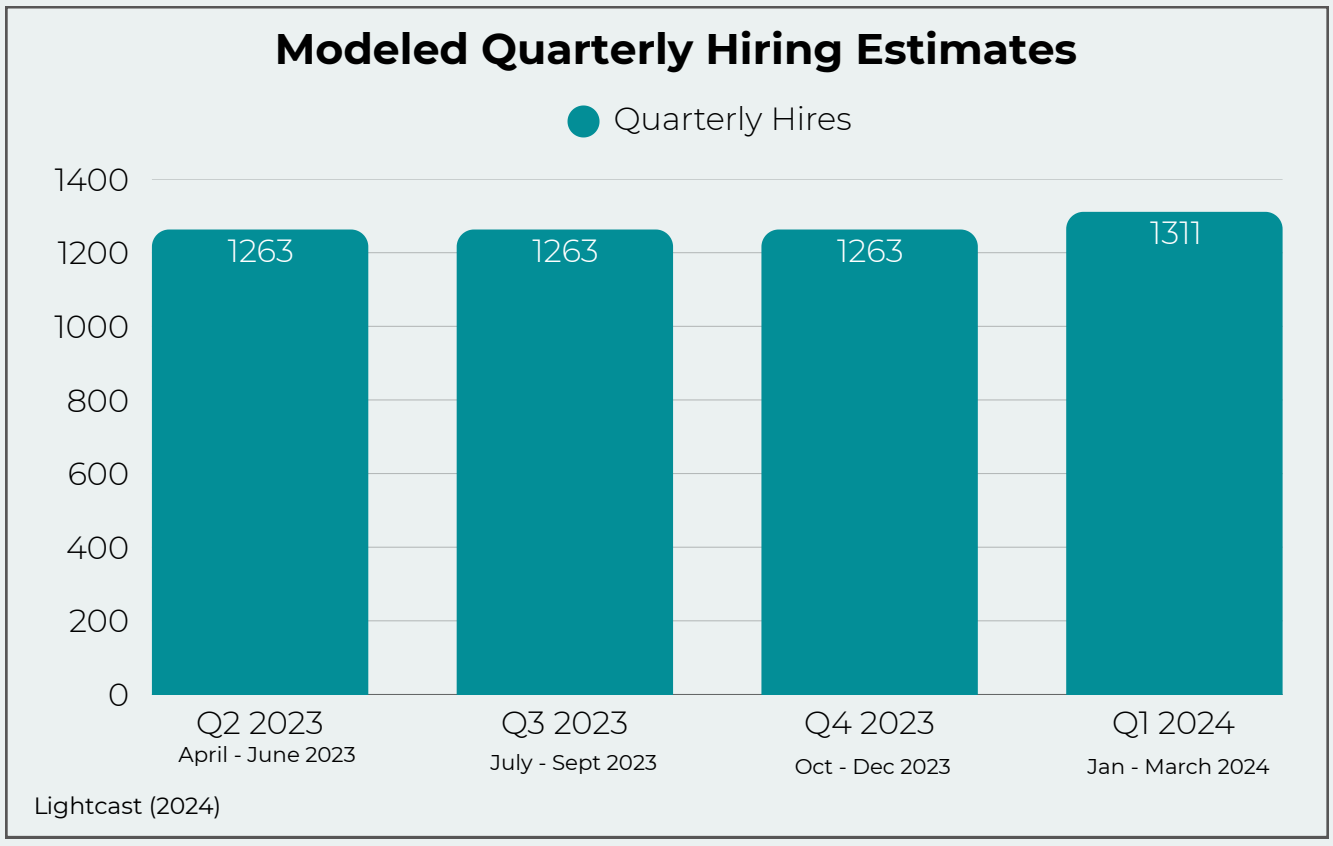
April 2023 - March 2024



Lightcast hiring estimates are modeled using annual data from job postings, BLS separation rates, and Census hiring patterns. Because the annual estimate is evenly divided across months, each quarter shows the same modeled hiring estimate.

On average, that's about **1,275 hires**, reflecting normal turnover, replacements, and role changes across the workforce. This helps show workforce scale and churn, not demand.

This data helps educators understand the scale of ongoing workforce replacement in cybersecurity, reinforcing the need for sustained, job-ready training pipelines rather than short-term or trend-driven program changes.



Companies hiring in the first quarter of 2024 focused on **Software Developers and Engineers**, with **44%** of job postings seeking employees to fill these exact occupations. Additionally, **22%** of those job postings listed **Python** programming language proficiency as a highly desired specialized skill.

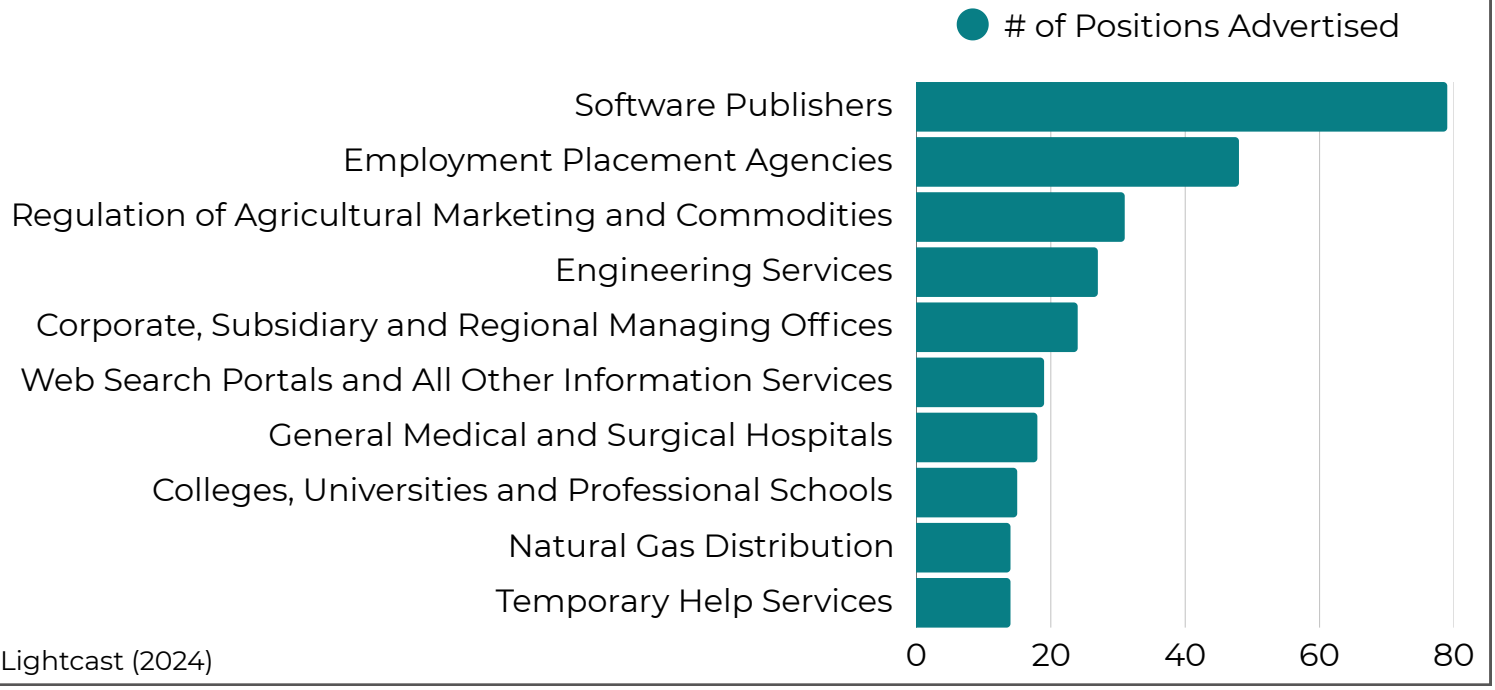
Top 10 Recruited Positions

1. Software Developer / Engineer
2. Network Engineer / Architect
3. Systems Analyst
4. Database Architect
5. Business Intelligence Analyst
6. Database Administrator
7. Cyber / Information Security Engineer / Analyst
8. Data / Data Mining Analyst
9. Data Scientist
10. UI / UX Designer / Developer

Lightcast (2024)

The chart below highlights the top industries hiring IT Professionals. Understanding which sectors are seeking talent can help educators guide students toward high-demand careers.

Top 10 Industries Hiring IT Professionals



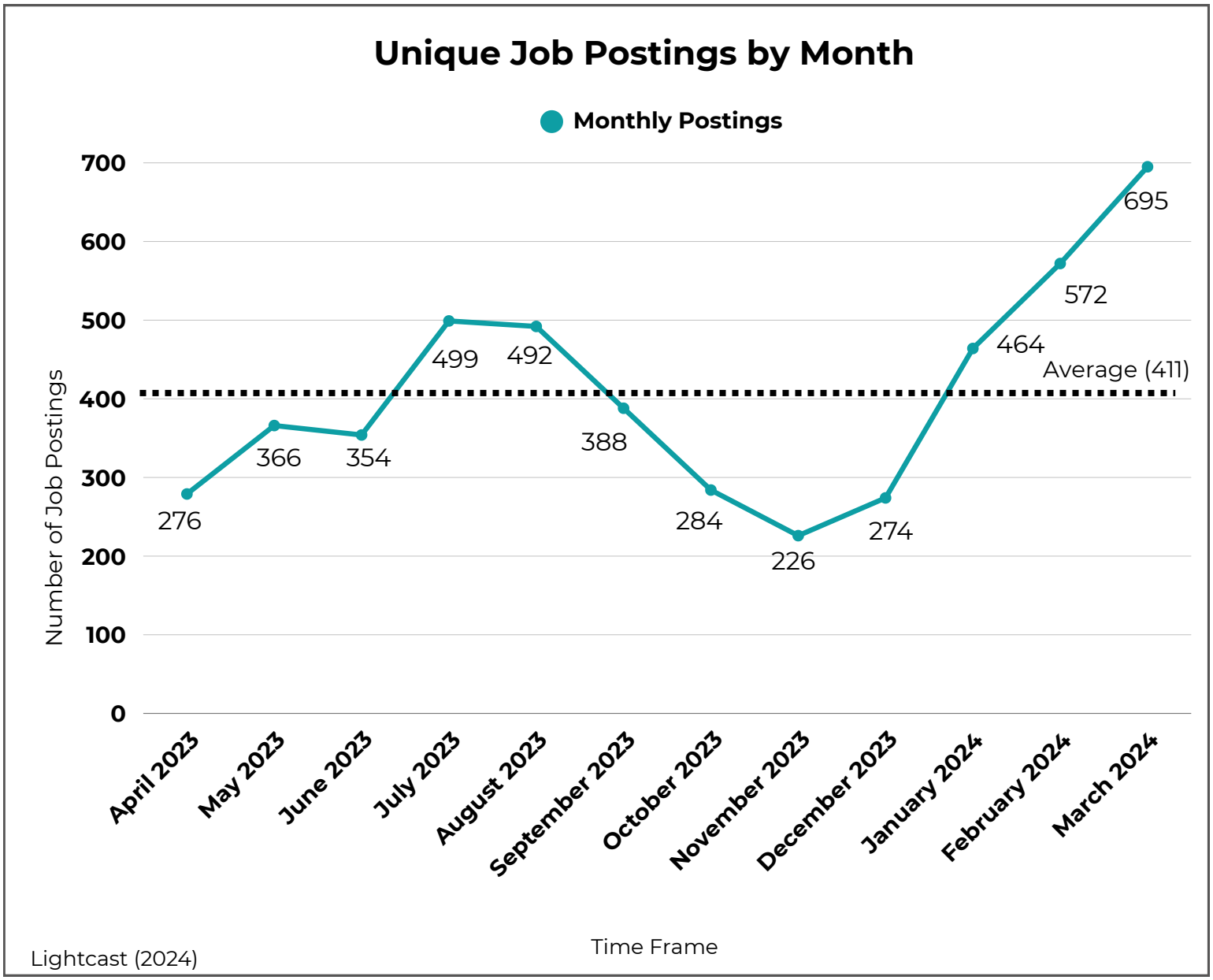
Lightcast (2024)

JOB MARKET

MONTANA

The CyberMontana team filtered online job postings to seek out 'new' or 'unique' postings in Montana to provide hiring agents and job seekers with a month-by-month insight on when new jobs might be hitting the market.

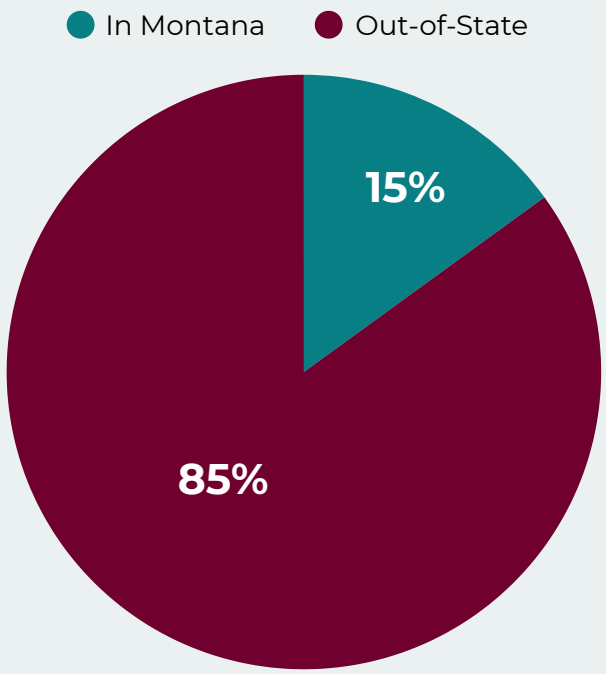
For educators, the swing from **226 postings in November 2023** to **695 in March 2024** shows how fast Montana's IT labor market moves. With an **average of 411 openings each month**, programs need to equip students with skills they can take straight into a consistently hungry job market.



Lightcast (2024)

WHERE ARE EMPLOYERS LOCATED?

Job Location In-State vs. Out-of-State (Q1)



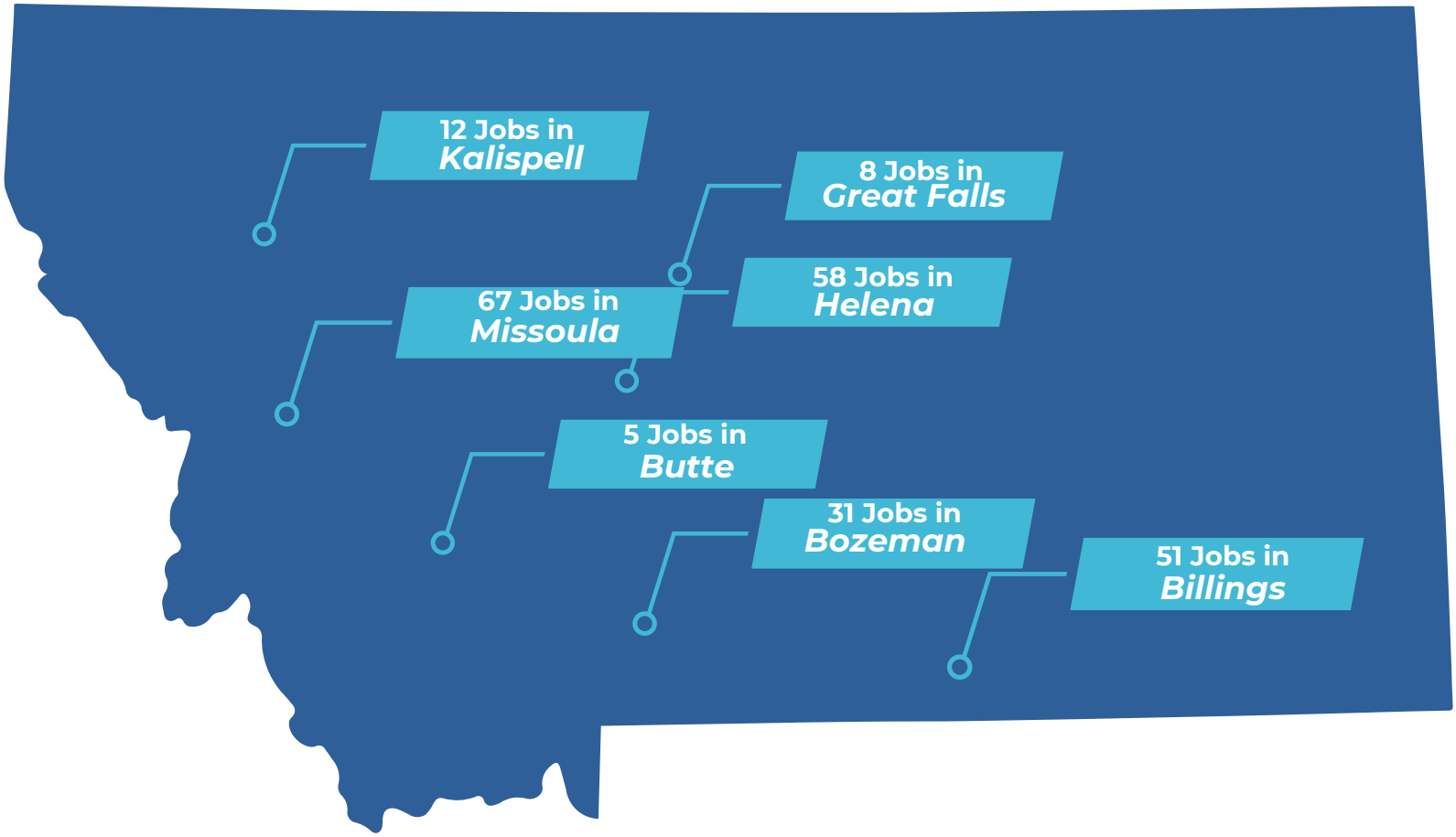
This chart shows the average percentage (%) of jobs posted by companies with a **physical location in Montana** compared to the average postings by companies with offices **out-of-state**. The current dominance of out-of-state job postings is consistent with long-term trends.

Helpful Tip!

Many out-of-state companies will advertise their fully remote jobs in Montana's largest cities to recruit local talent even when the position isn't tied to that location.

Educators can teach students how to review job postings with a critical eye and ensure they understand how to evaluate both the location and the skills needed to be successful when working remotely.

Of the 1,731 unique job postings for this quarter, 258 were physically in Montana. 90% of these jobs located in Montana were advertised in these 7 Montana cities:



Top 10 Montana Employers for Quarter 1

Providence (36 Jobs)- Billings and Missoula
State of Montana *(32 Jobs)- Helena*
Northwestern Energy *(14 Jobs)- Missoula*
Old Dominion Freight Line *(12 Jobs)- Billings*
First Interstate Bank *(12 Jobs) -Various*
Montana State University *(9 Jobs)- Bozeman*
Bozeman Health *(7 Jobs)- Bozeman*
Mountain, LTD *(5 Jobs)- Helena and Billings*
Benefis Health System *(5 Jobs)- Great Falls*
Sedgwick *(5 Jobs)- Missoula*

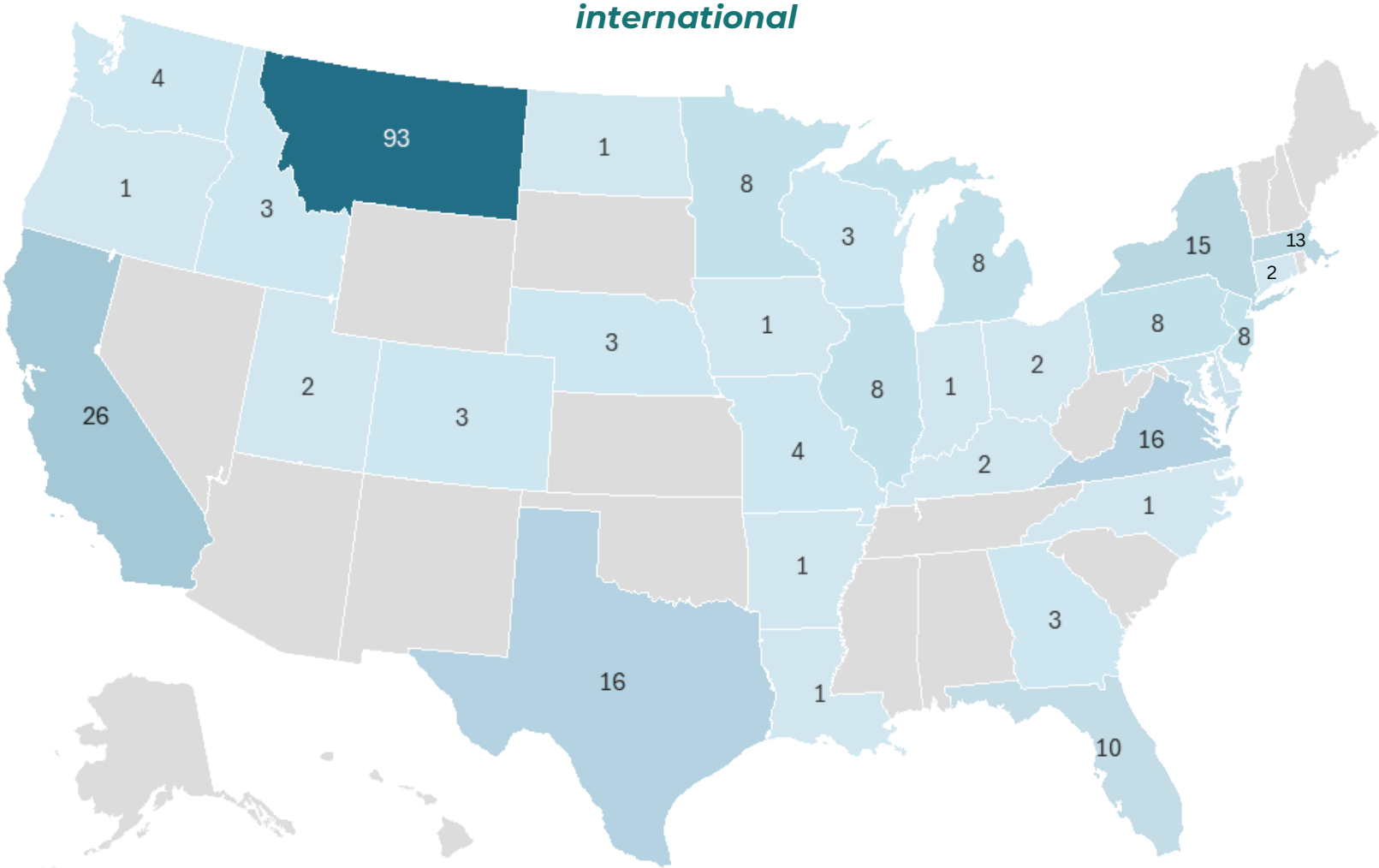
EMPLOYERS

Top Companies Hiring for Quarter 1

Oracle (407 Jobs)- Austin, TX
Meta (78 Jobs)- Menlo Park, CA
Ford (53 Jobs)- Dearborn, MI
GovCIO (44 Jobs)- Fair Oaks, VA
Prime Therapeutics (35 Job)- Eagan, MN
Intel (33 Jobs)- Santa Clara, CA
Humana (31 Jobs)- Louisville, KY
Deloitte (27 Jobs)- New York City, NY
Wolters Kluwer (22 Jobs)- Riverwoods, IL
Marriott International (22 Jobs)- Bethesda, MD

	Total	In-State	Out-Of-State
Employers	302	93	209
Job Postings	1,731	258	1,473

Of the 302 unique companies posting this quarter, 299 were U.S.-based (including 22 staffing agencies that did not list a location) and 3 were international



The total reflects all postings in Montana, though some positions are located outside the U.S and some staffing agencies do not specify the location.

BUILDING WORKFORCE-READY

CYBER TALENT

MONTANA

The Certified Information Systems Security Professional (CISSP) remains one of the most valued certifications in the field. Its prominence in Montana job postings reflects employers' expectations for strong, advanced security skill sets.

While students can take the CISSP exam as part of their studies, the full certification also requires several years of paid, full-time cybersecurity experience. Students can earn the **Associate of ISC2** designation as they gain this workforce experience.

For educators, this makes it important to build strong security fundamentals early so graduates are prepared to grow into those higher-level roles and eventually meet CISSP requirements.

Top Requested Certifications

# of postings with qualification

- Certified Information Systems Security Professional (CISSP)- **44**
- Cisco Certified Network Associate (CCNA)- **34**
- Cisco Certified Network Professional (CCNP)- **31**
- Certified Information Security Manager (CISM)- **24**
- Master Of Business Administration (MBA)- **18**
- Project Management Professional Certification (PMP)- **18**
- CompTIA Security+- **17**
- Internet And Computing Core Certification (IC3)- **16**
- Top Secret-Sensitive Compartmented Information (TS/SCI)- **16**

Lightcast (2024)

92,000 professionals in the U.S. hold the CISSP certification.

ISC2 (2024)

This reflects strong employer demand for advanced security skills, and teaching solid security fundamentals helps prepare students to pursue high-value credentials like the CISSP.

Top Requested Transferable Skills

% of Total Postings requesting the transferable skill

- Management- **32**
- Leadership- **26**
- Operations- **25**
- Troubleshooting (Problem Solving)- **21**
- Innovation- **16**
- Planning- **15**
- Customer Service- **15**
- Research- **14**
- Communication- **13**
- Information Technology- **12**

Lightcast (2024)

BUILDING

TRANSFERABLE SKILLS

Students often enter the workforce with more experience than they realize - through group projects, leadership roles, part-time work, internships, and volunteer activities. The challenge is that many don't know how to translate these experiences into language that resonates with employers. Educators play a key role in helping students recognize, articulate, and confidently present these transferable skills.

Recognize the skills they already have
Express them using employer-friendly language
Gain confidence in showcasing their abilities

Leadership

Create opportunities for collaboration, decision-making, and public speaking through group activities and class leadership roles.

Problem Solving

Use real-world challenges, group projects, simulations, or scenario-based tasks to help students practice identifying problems and developing solutions.

Communication

Strengthen communication through student-led discussions, presentations, debates, and peer instruction, giving students space to ask questions and engage across perspectives.

Educator Tip!

Encourage students to reflect on what they learned from their hands-on experiences, then teach them how to describe those skills clearly. This helps them market themselves confidently in resumes and interviews.

Artificial Intelligence

AI is reshaping cybersecurity faster than most organizations can adapt. As roles shift and new specialties emerge, educators play a critical role in preparing students for a workforce where AI skills are now expected. Teaching future-focused skills means using AI with your students: showing them how to question AI, validate outputs, and use generative tools to explore ideas. Doing so helps students stay competitive in a field that expects “of-the-age” skills.

How AI Can Be Integrated into a Cybersecurity Classroom:

AI-Assisted Threat Analysis

Students use AI tools to break down phishing emails, malware snippets, or logs and explain why something is suspicious - without giving them the answers.

Automated Labs and Simulations

AI can assist with practice environments, generating new attack scenarios, and adapting difficulty as students improve.

Secure Coding Practice

AI helps students spot vulnerabilities in their own code and suggests safer patterns. It’s like having a tireless code reviewer who never gets bored.

Incident-Response Practice

AI can role-play attackers or act as a “virtual SOC teammate” to help students practice triage, escalation, and documentation.

Personalized Learning

If a student struggles with networking basics or regex or Linux commands, AI can give targeted explanations and small drills so they don’t get left behind.

Research Boosts

AI helps students summarize threat reports, map MITRE ATT&CK techniques, or compare attack trends. It makes them faster, not lazier.

IN

SUMMARY

CyberMontana provides this job report which summarizes current and historical trends in cybersecurity job postings in the state of Montana. Educators can use these labor market insights to better prepare students for cybersecurity careers.

Key Takeaways for the 2024 Q1 Job Report:

- **1,731 jobs were posted in the first quarter (January–March).**
- Of these jobs **258 were physically located in the state. 90% of them were advertised in the largest 7 cities in Montana.**
- **302 employers advertised in Montana. 93 were physically located here and 209 were located elsewhere.**
- Between April 2023 and March 2024, there was a **quarterly statewide average of 1,275 hires**.

Additional Key Takeaways for Q1:

- **Software developers remain Montana's top IT need.** Strong programming and applied project work matter more than ever.
- **Transferable skills -** Communication, problem-solving, and teamwork show up in almost every posting.
- **AI skills are now baseline.** It benefits students to learn AI-assisted analysis, secure-coding support, and responsible use early.

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