

Overview

- Cybersecurity has become one of the most critical professional fields due to the rapid increase in cyberattacks and their impact.
- To improve employability, students and early-career professionals often pursue certifications such as CompTIA Security+ and competitions such as Capture the Flag (CTF).
- Both paths require significant time and financial investment, motivating the central research question of this study: *is certification or competition more important in obtaining a first job?*

Results

CERTIFICATIONS VALUED BY HR/HIRING MANAGERS AND CERTIFICATIONS EMPLOYEES HAVE (COULD BE MORE THAN ONE).

Certification	HR/Hiring Managers %	Employees %
Global Information Assurance Certification (GIAC)	100.0%	53.8%
CompTIA Network+	71.4%	61.5%
CompTIA Security+	71.4%	69.2%
CompTIA A+	71.4%	53.8%
Certified Ethical Hacker (CEH)	57.1%	61.5%
Certified Information Systems Security Prof. (CISSP)	57.1%	15.4%
Certified Cloud Security Professional (CCSP)	57.1%	38.5%
Offensive Security Certified Professional (OSCP)	57.1%	46.2%
Other	14.3%	30.8%

IMPACT OF CYBERSECURITY CERTIFICATION ON GETTING CURRENT JOB.

Response	Percent
No, it did not matter	23.1%
It helped, but not significantly	15.4%
Yes, it was a key factor	61.5%

Certifications emerged as a dominant theme across both hiring managers and professionals.

- **100%** of the HR/hiring managers replied that having a cybersecurity certificate is very essential or essential for potential employees.
- **57.1%** of hiring managers preferred candidates with five or more certifications.
- GIAC certifications were valued by **100%** of hiring managers, while **CompTIA A+, Network+, and Security+** were each valued by approximately **71%**.
- **61.5%** of employees stated that their certification “was a key factor” in obtaining their current cybersecurity job.
- When asked to choose between certifications and work experience, **85.7%** of hiring managers selected both, and none selected certifications alone.

Cybersecurity Competitions were generally viewed as beneficial but not mandatory.

- **57.1%** of the respondents answered helpful but not necessary
- **42.9%** viewed competitions as essential.
- **100%** of respondents answered that their employer encouraged certifications, while none reported being encouraged to participate in competitions.

Methodology

Study was approved as exempt by IRB. Participants were required to be at least 18 years old and either:

- Actively seeking or working in an entry-level cybersecurity role, or
- Involved in hiring for entry-level cybersecurity positions.

Recruitment: LinkedIn, email, and social media platforms between February and April 2025.

Survey structured in two parts, separating hiring managers from non-hiring cybersecurity professionals, and collected data on demographics, education level, years of experience, certifications held, competition participation, hiring preferences, and perceptions of certification and competition value.

A total of 26 responses were collected:

- 24 identified as IT/Cybersecurity professionals
- 7 identified as both professionals and hiring managers

IMPORTANCE OF PARTICIPATION IN CYBERSECURITY COMPETITIONS.

Response	Percent
Unnecessary	0.0%
Helpful but not necessary	57.1%
Very Essential or Essential	42.9%

Discussion

- Findings suggest that certifications have become a baseline expectation rather than a competitive advantage.
- While competitions provide low-risk environments for practicing real-world cybersecurity skills, they may be undervalued by industry.
- Growing expectation for candidates to hold 5+ certifications may be contributing to the widening workforce gap.

Limitations

- Small sample size and potential sampling bias due to social media-based recruitment.
- Limit generalizability of the results.

Conclusion

- Certifications and competitions are beneficial but insufficient on their own.
- The most effective pathway into entry-level cybersecurity roles combines certifications, hands-on experience, and applied skill development.
- Certifications and competitions bolster a candidate but do not discern them over other candidates when being considered for a role.