Addressing the Cyber Talent Crisis

Scalable Programs to Build a Resilient Workforce and Safer World

An Impact Report on What Works

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Executive Summary

The United States faces a crisis in cybersecurity. The cost of cybercrime is predicted to hit $9.5 trillion in 2024 and will grow to $10.5 trillion by 2025*. Cybercriminals can already penetrate 93% of company networks*.

Yet there are more than 457,000 unfilled cybersecurity positions in the U.S.* and, it is estimated that roughly four million cybersecurity professionals are needed in the global workforce.[†]

Our ability — and willingness — to ensure our nation's security from cyber threats will profoundly impact America's future. A talented, expanding, and highly skilled cybersecurity workforce is our best defense.

SANS Institute is the most trusted and largest source for information security training and security certification in the world.

Over the past 10 years, SANS has partnered with a myriad of organizations to hone a proven talent development model that enables under-resourced career changers from around the globe to thrive and grow within the industry. Our programs upskill and reskill workers with immediately useful knowledge and skills, empowering the next generation of cybersecurity professionals to build a safer world.

Together with our many partners and thanks to the contributions from our 2024 premier sponsors, Cisco and Amazon, we have developed and refined a training model that aligns with the strategic national security objectives of the United States and our allies. SANS now trains approximately 50,000 cybersecurity professionals each year and 99 of the Fortune 100 companies use SANS for training. We know what works.

2024 Premier Sponsors

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*2024 Cybersecurity Workforce Supply and Demand Report, Page 16, Table 5
† 2024 ISC2 Cybersecurity Workforce

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How SANS is Hacking the Cybersecurity Skills Shortage

6,275+
new aspiring cyber professionals trained since 2015 via reskilling academies and related programs

87%
of academy graduates have landed cybersecurity jobs within 12 months

91%
of academy participants successfully attain Global Information Assurance Certification (GIAC)

$85-90k
approximate salary range of reskilling academy graduates at major employers

"
I felt overwhelmed that I would never land a job. However, after completing the program, I received job offers and employers took me seriously. It was incredible.

Hudson Woomer, SANS Alumni

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Academy Alumni: Hired by Hundreds of Employers

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Investing in a Stronger Cybersecurity Workforce

SANS and our partners are directly aligned to the national security objectives of the United States and our allies for cyber education and workforce development. SANS collaborates with organizations across the public, private, and nonprofit sectors to engage under-resourced career changers and provide them with pathways into cybersecurity jobs, fostering a more resilient industry and driving economic development.

SANS supports strategic efforts to collaborate with key stakeholders and leaders across the nation, pursuing a shared goal that strengthens the cyber workforce and national security. We tackle the lack of talent in the field head-on. We are committed to reducing the skills shortage by growing the incoming cyber talent pipeline, plus ensuring careers in cybersecurity are well within reach for far more Americans.

SANS Programs Reach Untapped Talent

SANS Academies provide scalable, online training and skills development programs that are **100% scholarship-based.**

The programs are designed to meet the needs of those entering cybersecurity and offer participants:

- Advanced Technical Training

- Industry-recognized GIAC certifications

- Connections to leading employers in cybersecurity

2024 Premier Sponsors Include:

- Amazon

- Cisco

Additional organizations providing support for partnerships include Mission43, NICE, Ford, Bloomberg, Okta, Craig Newmark Philanthropies, Google, and the Maryland Department of Labor, among others.

International programs leveraging the Academy model are active in nations such as Canada, Germany, the United Kingdom, Denmark, and the Netherlands, among others.

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SANS Mission Partners Help Build the Talent Pipeline

To grow the cybersecurity talent pool, we strive to engage all communities and a myriad of stakeholder organizations through our robust partner ecosystem that promotes applications to our reskilling and upskilling programs. Annually, SANS Cyber Academies in the U.S. have over 9,000 applicants. Establishing strong partnerships is essential to getting the word out to the nation's under-resourced career changers.

Why the Best Cybersecurity Training Comes from Active Practitioners

Cybersecurity skills, tools, and threats develop and emerge at an alarming pace. Traditional academic faculty may be able to instruct on basic, foundational concepts but there is simply no way for most of them to stay current on all cutting-edge practices. The way forward, and the technique used by SANS, is to utilize active practitioners as part-time instructors, so they can impart their real-world skills to the next generation of cybersecurity professionals.

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Focus On: WiCyS

Empowering Women in Cybersecurity

Women in Cybersecurity (WiCyS) is a community of women, allies and advocates dedicated to the recruitment, retention and advancement of women in cybersecurity. The WiCyS Security Training Scholarship is a partnership between WiCyS, SANS, and key supporters, including Google, Bloomberg, Okta, Center for Internet Security, and Craig Newmark Philanthropies, among others. Founded in 2020, this program empowers participants by finding hidden talent and elevating those with the aptitude and determination to launch cyber careers.

Results to Date

4,800+
introductory learners

1,462
gamified learning scholars

255+
academy Scholarships

92%
career placement within 12 months of academy completion

Alumni Spotlight:
Christine Morency

Christine Morency is a 2020-21 Women in Cybersecurity (WiCyS) SANS scholarship graduate who transitioned from a career as a physical therapist to cybersecurity. During the pandemic, Christine re-evaluated her career and determined she wanted to pivot to cyber. After applying for the WiCyS program, she excelled at the Capture the Flag (CTF) exercises, in which participants try to find text strings, called "flags," which are secretly hidden in purposefully vulnerable programs or websites.

"I chose to pursue a career in cybersecurity after evaluating myself and my life," says Christine."I wanted to try my hand at something new. I was inspired by close family members to pursue tech, and I was innately curious about the world of technology."

Upon being selected for the WiCyS Academy, Christine achieved three SANS GIAC certifications: GFACT, GSEC, and GCLD. And she accomplished this while working full-time as a PT, with family and kids at home! After job searching, Christine received and accepted an offer from Booz Allen Hamilton as a Cloud Security Analyst. She has since moved into a more advanced Cloud Security Engineer position at Merck — and sees no end to what else she can achieve.

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Focus On:
Rogers Cybersecure Catalyst

Enabling High-Potential Talent to Strengthen Cybersecurity in Canada

Additional tracks of the proven Catalyst cybersecurity training programs have been added over the past five years to upskill professionals in specialized areas and create leaders ready to shape the future of the field.

Results to Date

1,209+
students trained

4
talent development programs

87%
GIAC certified graduates

Alumni Spotlight:
Dar Solman

Dar is a graduate of the Accelerated Cybersecurity Training Program (ACTP) made possible by the partnership between SANS and Rogers Cybersecure Catalyst. She came to cybersecurity with a background in digital marketing, eager for the opportunity to make a hands-on impact with her unique perspective and diversified skill set. After graduating from the ACTP in 2020, Dar joined Arctic Wolf as a Security Analyst and now works as a Triage Security Engineer Level 3.

The ACTP gave Dar everything she needed to activate her abilities as a resourceful problem solver and critical thinker with a track record of high performance, accuracy and results. In just a few years since joining the cybersecurity field, she's been promoted three times!

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Focus On: The Cyber Workforce Academy – Maryland

Bridging the Local Skills Gap and Driving Career Growth

The Cyber Workforce Academy – Maryland, funded by the Maryland Department of Labor's EARN program and SANS Institute, trains under-resourced career changers in Maryland to launch careers in cybersecurity. Launched in 2018, this academy provides job seekers with advanced technical training, industry-recognized GIAC certifications, and the hands-on cybersecurity skills that Maryland employers seek in new hires.

Results to Date

310+
scholarships awarded and students trained since 2018

38
employer partners providing hiring consideration of students

87%
SANS GIAC certified

89%
of past graduates have secured cyber/IT employment

$45K/year ⬆
average salary **increase** for program graduates*

Alumni Spotlight:
Hudson Woomer

Hudson Woomer is a former officer in the Marine Corps with past civilian roles in project management, administration, real estate, operations, and sales. He had an intense desire to work in a mission-oriented field where he could make a meaningful contribution to the betterment of our nation. Hudson was exposed to the field of cybersecurity after speaking with individuals who worked in digital forensics and hearing their powerful stories of how the internet can be exploited for negative purposes.

Hudson decided to pursue a career in cybersecurity and was accepted to the SANS Cyber Workforce Academy – Maryland. After graduating from the program with two SANS GIAC certifications, he successfully landed employment as a Cyber Threat Specialist at Booz Allen Hamilton, earning more than four times his previous salary.

"As I was looking for a new job and trying to get into the industry, I felt overwhelmed that I would never land a job. However, after completing the program, I received job offers and employers took me seriously. It was incredible. I have hope for my future and now am looking at opportunities for further career growth, when just a few short years ago I was wondering if I would ever be able to break into the industry. I would not be where I am today without the program!"

*EARN Maryland Grant 0621-3 and 0621-11

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It's Time to Scale What Works

Many organizations are busy signaling their support for closing the talent gap and their desire to make an impact. Intent is necessary — but it is insufficient.

Since the launch of SANS Cyber Academies, our focus has been on taking actions that make an impact. SANS Cyber Academies upskill and reskill under-resourced career changers from communities around the nation to develop new, talented cyber professionals who can make an immediate contribution in their jobs.

At the heart of SANS Academies are non-profits, foundations, employers, government partners, and other institutions working together to grow and strengthen the global cybersecurity community. This work is paying dividends in the exceptional results described in this Impact Report — and in the powerful testimonials of our graduates.

We know what works, and we have the track record to prove it.

But to continue this work, we need your support.

We invite you to join us in reaching that goal — and beyond — by scaling what works.

Our goal is to
reskill and upskill

over 500

**additional individuals
by 2026 with**

over $11.5 million

in scholarships,
adding their many talents,
hands-on skills, and passion to
the cybersecurity profession to
make a safer world.

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To discover how you can help, please email mission@sans.org or reach out to **Kajal Shelat,** Director, Mission Business Development & Strategic Partnerships at SANS: KShelat@sans.org

To learn more about SANS, please visit us at
https://www.sans.org/cyber-academy/

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