



**CYBER
DEFENSE
CENTER**

CASE STUDY



MISSION

- To become a recognized center of excellence in cybersecurity, research, and education.
- To educate and train the future leaders of cybersecurity in academia, government, and industry.
- To become the first choice for government, industry, and general public in need of innovative research, technical insights, and guidance on cybersecurity.
- To address the fundamental gap in STEM education, which is the ability and opportunity to apply the concepts and theories taught in this quickly and ever-changing field.



VISION

To be an international leader in cybersecurity, training, and education that attracts and maintains a team of experts capable of researching, developing and implementing solutions for modern day cyber threats.

SUMMARY

Cyber Defense Center, a non-profit organization focused on addressing the gap in practical STEM education, offers a comprehensive program in cybersecurity. Recognizing the challenge of limited hands-on experience in the industry, Cyber Defense Center provides training, education, and practical skills through structured courses, industry collaborations, and hands-on labs. Since its inception, the program has successfully trained over **1,000** participants, with **80%** securing entry to mid-level jobs or internships in cybersecurity, thus bridging the gap between education and industry needs and empowering the next generation of cybersecurity professionals.





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BACKGROUND

Empowering Youth in Cybersecurity Through Hands-On Training

Our non-profit organization, Cyber Defense Center, was founded in 2011 with a mission to address the fundamental gap in STEM education, particularly focusing on the field of cybersecurity. We recognized that while many educational institutions offer theoretical knowledge in STEM subjects, there is often a lack of practical application and hands-on experience, especially in rapidly evolving fields like cybersecurity. Our target audience comprises individuals who are passionate about technology and eager to pursue careers in cybersecurity.

CHALLENGE

One of the key challenges we identified was the limited opportunities for young adults to gain practical skills and experience in the cybersecurity industry. Many entry-level positions require hands-on experience or specific certifications, making it challenging for newcomers to break into the field. Additionally, traditional education models often focus more on theoretical knowledge than practical application, leaving graduates ill-prepared for the demands of real-world cybersecurity roles.

SOLUTION

To address these challenges, Cyber Defense Center developed comprehensive programs that combine training, education, and hands-on experience in cybersecurity. Our programs are designed to equip participants with the practical skills and industry knowledge needed to secure entry-level to mid-level jobs in cybersecurity. We offer a range of courses and workshops covering topics such as network security, ethical hacking, digital forensics, and threat intelligence.





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IMPLEMENTATION

Our programs follow a structured approach to learning, starting with foundational courses for beginners and progressing to more advanced topics for experienced participants. We collaborate with industry experts and cybersecurity professionals to ensure our curriculum remains up-to-date with the latest trends and technologies. Participants have access to hands-on labs, simulations, and real-world case studies to apply their learning in practical scenarios.

IMPACT

Since launching our programs, Cyber Defense Center has had a significant impact on the lives of young adults interested in cybersecurity. We have trained over **1,000** participants, with **80%** of them successfully securing entry-level positions or other internships in cybersecurity firms, government agencies, and tech companies. Our alumni have gone on to pursue further education, earn industry certifications, and become leaders in the cybersecurity field. By bridging the gap between education and industry needs, we are empowering the next generation of cybersecurity professionals and contributing to a more secure digital future.



CONCLUSION

Cyber Defense Center continues to make a positive impact on the STEM education landscape by providing practical training and opportunities for young adults to excel in cybersecurity. Our holistic approach, industry partnerships, and focus on hands-on experience have set us apart as a leader in preparing the next generation of cybersecurity professionals.





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BLACKSWAN CYBERSECURITY MENTORSHIP PARTNER



BLACKSWAN
CYBERSECURITY

Background

In collaboration with Blackswan Cybersecurity, our non-profit organization offers an impactful mentorship program aimed at nurturing talent in the cybersecurity sector. The program, conducted twice a year over 8 weeks, provides a unique opportunity for participants to gain hands-on experience and valuable insights from industry experts at Blackswan Cybersecurity.

Partnership with Blackswan Cybersecurity

Our partnership with Blackswan Cybersecurity allows us to deliver an 8-week mentorship program twice a year, enhancing participants' understanding of Security Information and Event Management (SIEM) platforms utilized by Blackswan. We facilitate an application pairing process to ensure the program's success by aligning participants with suitable mentors.

Impact and Success

Since the inception of this program in 2020, Blackswan Cybersecurity has hired 11 program participants, showcasing the tangible impact and success of our mentorship initiative. These hires represent a testament to the program's effectiveness in preparing participants for cybersecurity roles and bridging the gap between education and industry needs.

By leveraging strategic partnerships and tailored mentorship experiences, our program continues to empower aspiring cybersecurity professionals and contribute to the growth and resilience of the cybersecurity workforce.





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PARTNERED PROGRAM STRUCTURE AND BENEFITS

During the 8-week mentorship, participants have the privilege of learning directly from a Security Operations Center (SOC) Analyst, engaging in a call with a cybersecurity engineer, and undergoing a practice interview. This hands-on approach not only enhances technical skills but also fosters a deeper understanding of industry practices and expectations.

1. SIEM Platform Training:

The program includes comprehensive training on Security Information and Event Management (SIEM) platforms utilized by Blackswan Cybersecurity. Participants gain proficiency in leveraging SIEM tools for log analysis, threat detection, correlation, and security incident management.

2. Learning from SOC Analysts:

Participants have the unique opportunity to directly learn from seasoned Security Operations Center (SOC) Analysts at Blackswan Cybersecurity. This hands-on experience allows participants to delve into real-world cybersecurity operations, threat detection, incident response, and security monitoring techniques.

3. Engaging with Cybersecurity Engineers:

In addition to SOC Analysts, participants engage in a call with a cybersecurity engineer from Blackswan. These sessions offer insights into cybersecurity infrastructure, network architecture, system hardening, and best practices for securing digital assets.

4. Practice Interviews:

To further prepare participants for the cybersecurity job market, the program incorporates mock interviews conducted by industry professionals. This practice interview session helps participants refine their communication skills, showcase their technical knowledge, and gain confidence in interview settings.

By combining direct mentorship from SOC Analysts and cybersecurity engineers with SIEM platform training and practice interviews, the program not only enhances participants' technical skills but also fosters a deeper understanding of industry practices, expectations, and professional etiquette. This holistic approach empowers participants to excel in cybersecurity roles and make meaningful contributions to the industry.



TESTIMONIALS



"This internship offered me the chance to transition into a role as a Security Operations Center (SOC) analyst. Through practical projects and guidance, I gained the skills needed for this position, marking a significant step forward in my career. The partnership between CDC and Blackswan Cybersecurity, enhanced the internship by granting interns access to authentic real-world data and scenarios. This exposure allowed interns to apply their skills in a practical setting, gaining valuable experience and insights that are directly applicable to their future careers."

- Jesus Quintero, Cyber Defense Center, Intern Alumni

"During the Internship, the lab environment allowed me to configure and test the concepts I have been taught in school. The presentations were excellent and provided insight into real scenarios, not just concepts. I gave presentations of my own during the internship which aided in my public speaking skills. Internships provide hands-on industry experience when it's difficult to get otherwise. Many jobs these days require some level of experience, especially in cybersecurity. This makes it hard to break into the field. I gained essential skills that will elevate my resume. It also helped me network with people for future jobs. I didn't expect to get a job at Blackswan Cybersecurity as a SOC Analyst, and I am grateful for the opportunity."

- Anderson Babcock, Cyber Defense Center, Intern Alumni

"This Program helped me gain knowledge of the field and gave me access to several trainings as well. I got to see how professionals in the field deal with cyber issues, and I really enjoyed contributing to the research and blogs since it gave me a chance to expand my knowledge. It has helped me gain real-world knowledge of the cybersecurity industry with a better understanding of the careers it offers. I have also identified certain aspects of the field that I am interested in (from the training) and will possibly consider pursuing."

- Neureka Kundu, Cyber Defense Center, High School Intern

"The intern program has provided multiple training opportunities through Partnered courses and weekly presentations. It also gave me some hands-on experience with OSINT. The program is helping me decide what area of cybersecurity will be the best fit for me. The program has provided great networking opportunities with interns and Blackswan employees. I enjoyed it because I got to see how professionals in the field deal with cyber issues."

- Jeffrey Wheeler, Cyber Defense Center, Intern Alumni

