



# NICE FRAMEWORK SUCCESS STORY

National Cyber League  
Cyber Skyline

Measure Skills

The voluntary [Workforce Framework for Cybersecurity](#) (NICE Framework) was developed through a collaborative process by industry, academia, and government stakeholders. It establishes a taxonomy and common lexicon that describes cybersecurity work and is intended for use in both the public and private sectors. NIST does not validate or endorse any individual organization or its approach to using the NICE Framework.

## ORGANIZATIONAL PROFILE

The National Cyber League (NCL) was founded as a 501(c)3 non-profit organization in 2011 by an alliance of public agencies dedicated to developing the next generation of cybersecurity professionals. The NCL student competition is hosted by Cyber Skyline, an industry-leading cybersecurity cloud platform. Cyber Skyline enables students, faculty, and professionals to practice, develop, and measure individual and team technical cybersecurity skills at all skill levels.

NCL is an online, performance-based, learning-centered collegiate cybersecurity competition held twice a year during the academic spring and fall semesters. Nine skills categories give students the ability to challenge themselves across critical areas of knowledge that are aligned to the NIST NICE Cybersecurity Workforce Framework. The categories are:

1. Open Source Intelligence
2. Cryptography
3. Log Analysis
4. Password Cracking
5. Network Traffic Analysis
6. Scanning & Reconnaissance
7. Web Application Exploitation
8. Enumeration & Exploitation
9. Forensics

NCL is both a competition and a community, with a dedicated Players Committee and Coaches Committee to provide student player and faculty coach support and learning resources.

## TIE-IN WITH THE NICE FRAMEWORK

Mapping the NCL challenges to the NICE Framework allows student players and faculty coaches to quickly and easily understand an individual's or a team's areas of strength and weakness. The mapping further provides a common lexicon for industry employers to understand the relevant skills of the NCL participants, enabling recruiters and hiring managers to rapidly identify candidate skills and strengths. Overall, this alignment provides a pathway into cybersecurity careers, addressing the ever-increasing demand for cybersecurity professionals.

## DRIVERS

The core goals of the NCL are to:

- **Bridge the gap between curriculum to career:** Providing a scalable and interactive environment for hands-on application of classroom knowledge.
- **Promote inclusivity:** Giving all students—no matter their knowledge level, background, or access to technology—the ability to demonstrate to prospective employers their mastery of cybersecurity concepts and skills.
- **Ensure industry relevancy:** Providing usable and simple reporting to help employers hire collegiate cybersecurity talent more easily.

We recognized that using the NICE Framework as part of the competition would help us to achieve these goals.

## PROCESS

Every challenge in the NCL is created to meet the skills requirements of the modern cybersecurity industry by observing trends in recent cybersecurity events and analyzing the latest threat feeds. As a result, challenges created for the NCL are inherently skills-based and require the student players to perform technical action to solve the challenge. Each challenge is mapped to the relevant NICE Framework Skills statements, which not only further emphasizes the skill-based approach but connects the challenge to a national framework of community-recognized cybersecurity skills.

In addition, the main mapping spreadsheet also shows the relationship between the identified NICE Framework Skill statements and NICE Framework Work Roles—establishing a connection between the challenges and the real-world work that employers require. These connections are shared with the players and employers on the NCL Scouting Report, as shown in Figure 1.

## BENEFITS & IMPACT

- The mapping of NCL challenges to the NICE Framework gives student players and their faculty coaches a new tool to focus on areas of strength or weakness.
- The mapping helps reinforce the relevancy the NCL challenges to real-world cybersecurity work. Students can utilize the mapping to explore career opportunities and see how their skills translate to real-world work roles.
- Using the NICE Framework helps the NCL team identify challenge areas lacking skill coverage, so that new challenges can be developed and incorporated to cover a wider range of cybersecurity skills.
- Employers who already leverage the NICE Framework can plug the NCL Scouting Report results into their existing workflow and hire qualified candidates more rapidly

## CONTACT INFORMATION & RESOURCES

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Websites:

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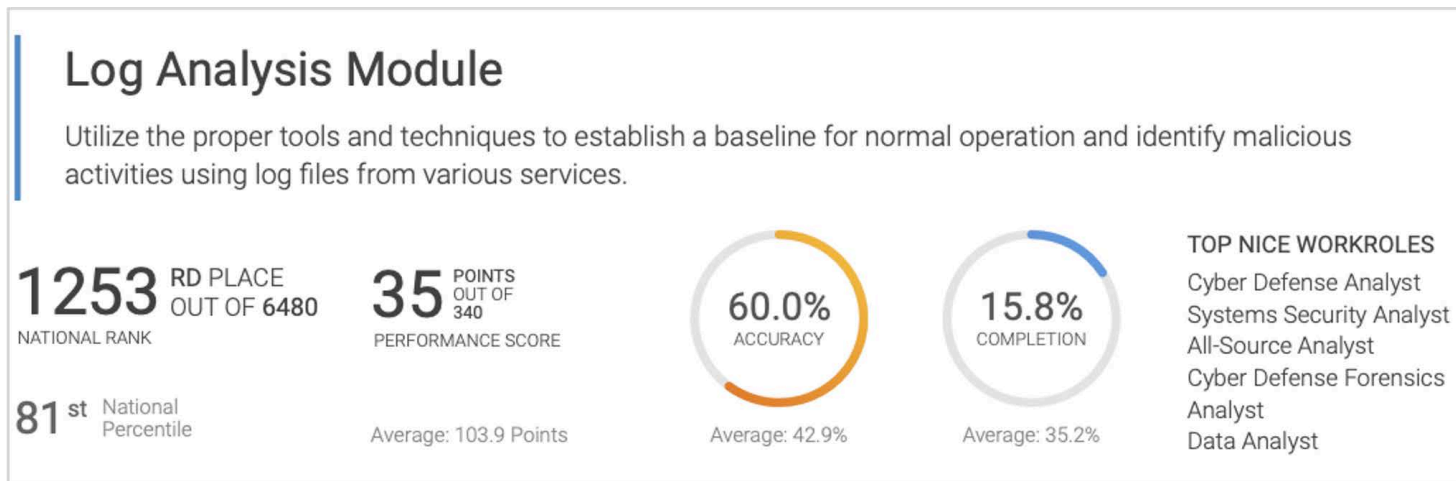


Figure 1: Excerpt from a NCL Scouting Report—module performance with top NICE Work Roles.

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