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CYBER SKYLINE

The National Cyber League
A Community Where Cybersecurity Is a Passion

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NCL Fall 2024 Team Game Scouting Report

Dear Eli Johnson (Team "WeOwnAnAirFrier"),

Thank you for participating in the National Cyber League (NCL) Fall 2024 Season! Our goal is to prepare the next generation of cybersecurity professionals, and your participation is helping achieve that goal.

The NCL was founded in May 2011 to provide an ongoing virtual training ground for collegiate students to develop, practice, and validate their cybersecurity skills in preparation for further learning, industry certifications, and career readiness. The NCL scenario-based challenges were designed around performance-based exam objectives of CompTIA certifications and are aligned to the National Initiative for Cybersecurity Education (NICE) Cybersecurity Workforce Framework published by the National Institute of Standards and Technology (NIST).

As you look to a future career in cybersecurity, we hope you find this report to be valuable in both validating skills and identifying areas for improvement across the nine NCL skills categories. You can use this NCL Scouting Report to:

- Validate your skills to employers in any job application or professional portfolio;
- Show case your achievements and strengths by including the Score Card view of your performance as part of your résumé or simply sharing the validation link so that others may view the detailed version of this report.

The NCL Fall 2024 Season had 9,260 students/players and 573 faculty/coaches from more than 540 two- and four-year schools & 230 high schools across all 50 U.S. states registered to play. The Individual Game Capture the Flag (CTF) event took place from October 25 through October 27. The Team Game CTF event took place from November 8 through November 10. The games were conducted in real-time for students across the country.

NCL is powered by Cyber Skyline's cloud-based skills evaluation platform. Cyber Skyline hosted the scenario-driven cybersecurity challenges for players to compete and track their progress in real-time.



To validate this report, please access: cyberskyline.com/report/AB4J8PPG314E

Congratulations for your participation in the NCL Fall 2024 Team Game! We hope you will continue to develop your knowledge and skills and make meaningful contributions as part of the Information Security workforce!

Dr. David Zeichick
NCL Commissioner

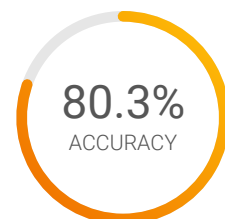


NATIONAL CYBER LEAGUE SCORE CARD

NCL FALL 2024 TEAM GAME

YOUR TOP CATEGORIES

NATIONAL RANK
152ND PLACE
OUT OF 4893
PERCENTILE
97TH



Average: 63.2%

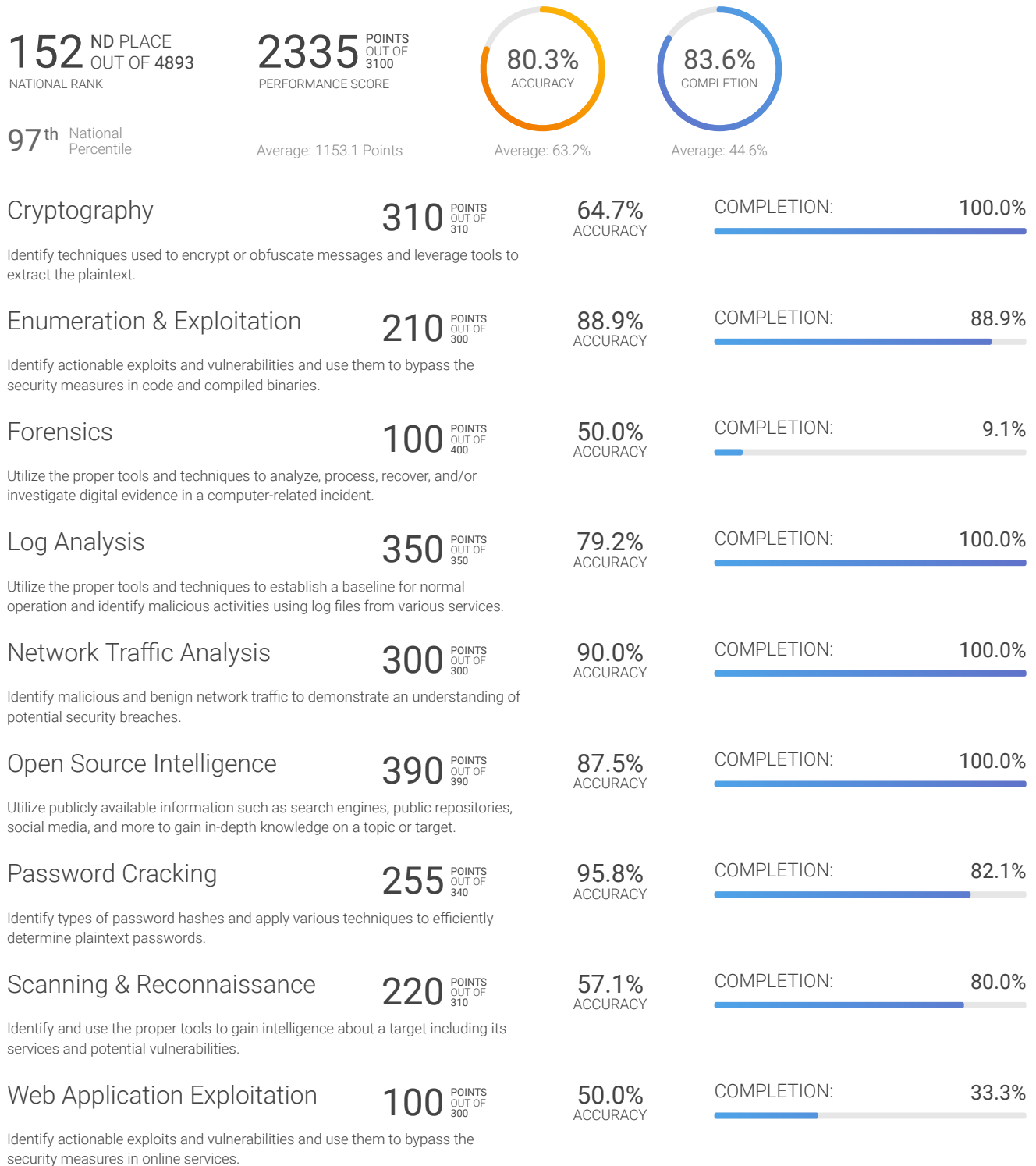
cyberskyline.com/report/AB4J8PPG314E

Learn more at nationalcyberleague.org



NCL Fall 2024 Team Game

The NCL Team Game is designed for student players nationwide to compete in realtime in the categories listed below. The Team Game promotes camaraderie and evaluates the collective technical cybersecurity skills of the team members.



Note: Survey module (100 points) was excluded from this report.



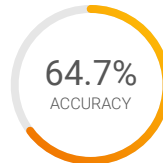


Cryptography Module

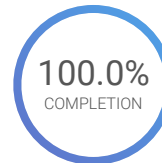
Identify techniques used to encrypt or obfuscate messages and leverage tools to extract the plaintext.

61 ST PLACE
OUT OF 4893
NATIONAL RANK

310 POINTS
OUT OF 310
PERFORMANCE SCORE



Average: 46.9%



Average: 47.1%

99th National
Percentile

Average: 115.8 Points

Bases (Easy)

45 POINTS
OUT OF 45

66.7%
ACCURACY

COMPLETION: **100.0%**

Decode messages that have been encoded one or more times using different number bases.

Shady Shapes (Easy)

50 POINTS
OUT OF 50

100.0%
ACCURACY

COMPLETION: **100.0%**

Decode a morse code message encoded using shapes for dots and dashes.

Jefferson (Easy)

60 POINTS
OUT OF 60

100.0%
ACCURACY

COMPLETION: **100.0%**

Find and use the correct Jefferson cipher wheel to decode a message.

Secure Flag Share (Medium)

80 POINTS
OUT OF 80

50.0%
ACCURACY

COMPLETION: **100.0%**

Perform a known plaintext attack on an XOR-encrypted message.

Scheming (Hard)

75 POINTS
OUT OF 75

50.0%
ACCURACY

COMPLETION: **100.0%**

Perform a known plaintext attack on a homophonic cipher.



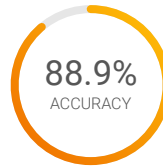


Enumeration & Exploitation Module

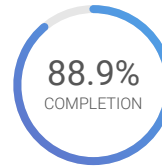
Identify actionable exploits and vulnerabilities and use them to bypass the security measures in code and compiled binaries.

74TH PLACE
OUT OF 4893
NATIONAL RANK

210 POINTS
OUT OF 300
PERFORMANCE SCORE



Average: 57.1%



Average: 45.4%

99th National
Percentile

Average: 109.7 Points

Break-Fast (Easy)

100 POINTS
OUT OF 100

100.0%
ACCURACY

COMPLETION: **100.0%**

Analyze a Ruby script and bypass its insecure implementation of AES and XOR cryptography.

Trojan (Medium)

100 POINTS
OUT OF 100

83.3%
ACCURACY

COMPLETION: **100.0%**

Decompile and explore a Powershell file that has been compiled to a Windows executable file.

Industry Guidelines (Hard)

10 POINTS
OUT OF 100

100.0%
ACCURACY

COMPLETION: **50.0%**

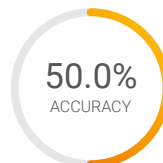
Find a vulnerability in a custom architecture VM and exploit it.

Forensics Module

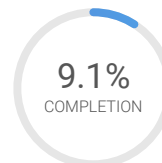
Utilize the proper tools and techniques to analyze, process, recover, and/or investigate digital evidence in a computer-related incident.

512TH PLACE
OUT OF 4893
NATIONAL RANK

100 POINTS
OUT OF 400
PERFORMANCE SCORE



Average: 62.1%



Average: 44.5%

90th National
Percentile

Average: 204.0 Points

Registry (Easy)

0 POINTS
OUT OF 100

0.0%
ACCURACY

COMPLETION: **0.0%**

Explore a Windows registry file to identify system information.

Jammed (Medium)

100 POINTS
OUT OF 200

100.0%
ACCURACY

COMPLETION: **50.0%**

Fixed a corrupted header in a zip file to extract lost information.

Dump (Hard)

0 POINTS
OUT OF 100

0.0%
ACCURACY

COMPLETION: **0.0%**

Explore a memory dump using analysis tools like Volatility to extract information from running programs.



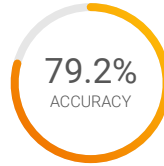


Log Analysis Module

Utilize the proper tools and techniques to establish a baseline for normal operation and identify malicious activities using log files from various services.

106TH PLACE
OUT OF 4893
NATIONAL RANK

350 POINTS
OUT OF 350
PERFORMANCE SCORE



Average: 60.5%



Average: 69.7%

98th National
Percentile

Average: 236.6 Points

Web (Easy)

110 POINTS
OUT OF 110

87.5%
ACCURACY

COMPLETION: **100.0%**

Analyze an access log from a WordPress site to identify trends.

Activity (Medium)

120 POINTS
OUT OF 120

66.7%
ACCURACY

COMPLETION: **100.0%**

Analyze a log of JSON data and identify trends of device activity on a network.

Monitor (Hard)

120 POINTS
OUT OF 120

85.7%
ACCURACY

COMPLETION: **100.0%**

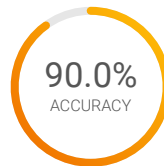
Analyze a Sysmon log to calculate statistics and network trends.

Network Traffic Analysis Module

Identify malicious and benign network traffic to demonstrate an understanding of potential security breaches.

64TH PLACE
OUT OF 4893
NATIONAL RANK

300 POINTS
OUT OF 300
PERFORMANCE SCORE



Average: 63.4%



Average: 75.5%

99th National
Percentile

Average: 176.2 Points

Stream'n (Easy)

100 POINTS
OUT OF 100

100.0%
ACCURACY

COMPLETION: **100.0%**

Extract a transmitted file from a packet capture.

Net (Medium)

100 POINTS
OUT OF 100

75.0%
ACCURACY

COMPLETION: **100.0%**

Analyze a packet capture to inspect the behavior of a load balancer.

Testing (Hard)

100 POINTS
OUT OF 100

100.0%
ACCURACY

COMPLETION: **100.0%**

Extract data that was exfiltrated from a network using the reserved bits of a TCP header.



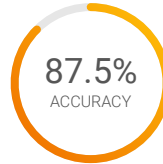


Open Source Intelligence Module

Utilize publicly available information such as search engines, public repositories, social media, and more to gain in-depth knowledge on a topic or target.

174TH PLACE
OUT OF 4893
NATIONAL RANK

390 POINTS
OUT OF 390
PERFORMANCE SCORE



Average: 75.9%



Average: 80.9%

97th National
Percentile

Average: 266.8 Points

Rules of Conduct (Easy)

25 POINTS
OUT OF 25

100.0%
ACCURACY

COMPLETION: **100.0%**

Introductory challenge on acceptable conduct during NCL.

Van Life (Easy)

125 POINTS
OUT OF 125

100.0%
ACCURACY

COMPLETION: **100.0%**

Apply OSINT techniques to identify and track the locations of vehicles using VINs.

Airport (Medium)

70 POINTS
OUT OF 70

50.0%
ACCURACY

COMPLETION: **100.0%**

Determine the geolocation of an image solely by analyzing visual clues, without relying on metadata.

Nostalgia (Medium)

70 POINTS
OUT OF 70

100.0%
ACCURACY

COMPLETION: **100.0%**

Conduct reconnaissance on a website by performing a WHOIS lookup.

Insider Threat (Hard)

100 POINTS
OUT OF 100

100.0%
ACCURACY

COMPLETION: **100.0%**

Conduct a reverse image search to find sources or profiles that match an AI-generated person.



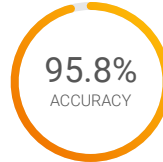


Password Cracking Module

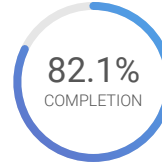
Identify types of password hashes and apply various techniques to efficiently determine plaintext passwords.

58TH PLACE
OUT OF 4893
NATIONAL RANK

255 POINTS
OUT OF 340
PERFORMANCE SCORE



Average: 82.0%



Average: 34.5%

99th National
Percentile

Average: 94.4 Points

Hashing (Easy)

15 POINTS
OUT OF 15

100.0%
ACCURACY

COMPLETION: **100.0%**

Generate password hashes for MD4, Whirlpool, and SHA512.

Common Passwords (Easy)

20 POINTS
OUT OF 30

66.7%
ACCURACY

COMPLETION: **66.7%**

Crack MD5 password hashes for common passwords.

Windows (Easy)

30 POINTS
OUT OF 30

100.0%
ACCURACY

COMPLETION: **100.0%**

Crack Windows NTLM password hashes that may not be found in common rainbow tables.

Combination (Medium)

45 POINTS
OUT OF 45

100.0%
ACCURACY

COMPLETION: **100.0%**

Build a wordlist or pattern config to crack password hashes of a known pattern.

PDF (Medium)

50 POINTS
OUT OF 50

100.0%
ACCURACY

COMPLETION: **100.0%**

Crack the insecure password for a protected PDF file.

Wordlist (Hard)

15 POINTS
OUT OF 65

100.0%
ACCURACY

COMPLETION: **50.0%**

Build a wordlist to crack passwords not found in common wordlists.

Prog Rock (Hard)

80 POINTS
OUT OF 105

100.0%
ACCURACY

COMPLETION: **87.5%**

Create a custom wordlist to crack passwords by creating permutations based on password complexity requirements.





Scanning & Reconnaissance Module

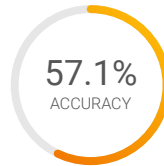
Identify and use the proper tools to gain intelligence about a target including its services and potential vulnerabilities.

231 ST PLACE
OUT OF 4893
NATIONAL RANK

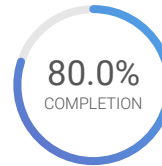
220 POINTS
OUT OF 310
PERFORMANCE SCORE

96th National
Percentile

Average: 194.4 Points



Average: 53.1%



Average: 70.9%

Storytime (Easy)

100 POINTS
OUT OF 100

50.0%
ACCURACY

COMPLETION: 100.0%

Perform a scan on an FTP server and access shared files.

Vuln Recon (Medium)

110 POINTS
OUT OF 110

100.0%
ACCURACY

COMPLETION: 100.0%

Scan a system and identify vulnerable services and their associated CVEs.

Feed (Hard)

10 POINTS
OUT OF 100

25.0%
ACCURACY

COMPLETION: 33.3%

Perform a remote scan of an insecurely configured MQTT server and access its sensitive information.

Web Application Exploitation Module

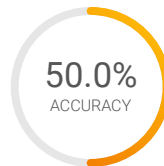
Identify actionable exploits and vulnerabilities and use them to bypass the security measures in online services.

382 ND PLACE
OUT OF 4893
NATIONAL RANK

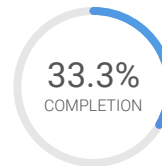
100 POINTS
OUT OF 300
PERFORMANCE SCORE

93rd National
Percentile

Average: 100.9 Points



Average: 74.5%



Average: 33.6%

Service Up (Easy)

100 POINTS
OUT OF 100

50.0%
ACCURACY

COMPLETION: 100.0%

Bypass user-agent filtering in a web application to leak sensitive information.

Flag Dispenser (Medium)

0 POINTS
OUT OF 100

0.0%
ACCURACY

COMPLETION: 0.0%

Exploit a flaw with a custom session checksum.

Book (Hard)

0 POINTS
OUT OF 100

0.0%
ACCURACY

COMPLETION: 0.0%

Perform an XML injection attack and bypass input sanitization on a web application.

