# NCL Spring 2025 Individual Game Scouting Report

Dear Ji Fu Aaron Ng,

Thank you for participating in the National Cyber League (NCL) Spring 2025 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 Spring 2025 Season had 9,216 students/players and 596 faculty/coaches from 510 two- and four-year schools & 288 high schools across all 50 U.S. states registered to play. The Individual Game Capture the Flag (CTF) event took place from April 11 through April 13. The Team Game CTF event took place from April 25 through April 27. 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/L9G66PVCKYEF

CompTIA

Based on the performance detailed in this NCL Scouting Report, you have earned **16 hours** of Continuing Education Units (CEUs) as approved by CompTIA. You can learn more about the NCL - CompTIA alignment via nationalcyberleague.org/partners.

Congratulations for your participation in the NCL Spring 2025 Individual 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

POWERED BY CYBER SKYLINE

## NATIONAL CYBER LEAGUE SCORE CARD

NCL SPRING 2025 INDIVIDUAL GAME

**NATIONAL RANK**
**186TH PLACE OUT OF 8573**

**PERCENTILE**
**98TH**

**YOUR TOP CATEGORIES**

| NETWORK TRAFFIC ANALYSIS | PASSWORD CRACKING | ENUMERATION & EXPLOITATION |
|---|---|---|
| 100TH PERCENTILE | 99TH PERCENTILE | 99TH PERCENTILE |


Average: 66.8%

cyberskyline.com/report
ID: L9G66PVCKYEF

# NCL Spring 2025 Individual Game

The NCL Individual Game is designed for student players nationwide to compete in realtime in the categories listed below. The Individual Game evaluates the technical cybersecurity skills of the individual, without the assistance of others.

**186** TH PLACE OUT OF 8573
NATIONAL RANK

**2465** POINTS OUT OF 3000
PERFORMANCE SCORE

77.8% ACCURACY

86.2% COMPLETION

**98**th National Percentile

Average: 995.3 Points

Average: 66.8%

Average: 37.7%

## Cryptography

**265** POINTS OUT OF 385

84.2% ACCURACY

COMPLETION: 84.2%

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

## Enumeration & Exploitation

**270** POINTS OUT OF 365

62.5% ACCURACY

COMPLETION: 78.9%

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

## Forensics

**230** POINTS OUT OF 305

100.0% ACCURACY

COMPLETION: 85.7%

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

## Log Analysis

**285** POINTS OUT OF 300

64.0% ACCURACY

COMPLETION: 94.1%

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

## Network Traffic Analysis

**300** POINTS OUT OF 300

85.7% ACCURACY

COMPLETION: 100.0%

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

## Open Source Intelligence

**285** POINTS OUT OF 310

81.0% ACCURACY

COMPLETION: 94.4%

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

## Password Cracking

**250** POINTS OUT OF 335

100.0% ACCURACY

COMPLETION: 73.7%

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

## Scanning & Reconnaissance

**300** POINTS OUT OF 300

81.0% ACCURACY

COMPLETION: 100.0%

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

## Web Application Exploitation

**180** POINTS OUT OF 300

62.5% ACCURACY

COMPLETION: 55.6%

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

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.

416 TH PLACE OUT OF 8573
NATIONAL RANK

265 POINTS OUT OF 385
PERFORMANCE SCORE

84.2% ACCURACY

84.2% COMPLETION

96th National Percentile

Average: 143.1 Points

Average: 65.0%

Average: 44.2%

## The Bases (Easy)

45 POINTS OUT OF 45

100.0% ACCURACY

COMPLETION: 100.0%

Analyze and obtain the plaintext from messages encoded with common number bases

## Super Shifty (Easy)

55 POINTS OUT OF 55

100.0% ACCURACY

COMPLETION: 100.0%

Analyze and obtain the plaintext for a message encrypted with a shift cipher

## Pizza Time (Easy)

50 POINTS OUT OF 50

100.0% ACCURACY

COMPLETION: 100.0%

Analyze and obtain the plaintext for a message encrypted with the rail fence cipher

## Signed (Medium)

60 POINTS OUT OF 60

80.0% ACCURACY

COMPLETION: 100.0%

Identify tampered files by verifying PGP signatures

## Altered Clouds (Medium)

55 POINTS OUT OF 55

100.0% ACCURACY

COMPLETION: 100.0%

Verify the integrity of files by computing HMAC values

## Zugzwang (Medium)

0 POINTS OUT OF 60

0.0% ACCURACY

COMPLETION: 0.0%

Decode a hidden file by implementing a decoder for a custom encoding scheme

## Kracken (Hard)

0 POINTS OUT OF 60

0.0% ACCURACY

COMPLETION: 0.0%

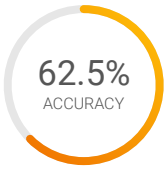
Break XOR encryption using a bruteforce attack with a known crib

# Enumeration & Exploitation Module

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

160 TH PLACE OUT OF 8573
NATIONAL RANK

270 POINTS OUT OF 365
PERFORMANCE SCORE





99th National Percentile

Average: 111.7 Points

Average: 67.9%

Average: 41.6%

## Not Affine (Easy)

75 POINTS OUT OF 75

85.7% ACCURACY

COMPLETION: 100.0%

Perform code analysis on C source code to reverse a series of bitwise operations

## CrackMe (Medium)

90 POINTS OUT OF 90

100.0% ACCURACY

COMPLETION: 100.0%

Perform static analysis on a binary program and extract an image encoded within the binary

## Hardware Discovery (Hard)

75 POINTS OUT OF 100

27.3% ACCURACY

COMPLETION: 75.0%

Follow a hardware schematic to interpret raw signal data that is encoded using pulse width modulation

## Escalate (Hard)

30 POINTS OUT OF 100

100.0% ACCURACY

COMPLETION: 40.0%

Identify and exploit a vulnerability in a compiled C binary to read data from unclosed file descriptors

## Forensics Module

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

**579** TH PLACE OUT OF 8573
NATIONAL RANK

**230** POINTS OUT OF 305
PERFORMANCE SCORE

**100.0%** ACCURACY

**85.7%** COMPLETION

**94th** National Percentile

Average: 144.7 Points

Average: 58.4%

Average: 48.4%

| | | | |
|---|---|---|---|
| Overused (Easy) | 105 POINTS OUT OF 105 | 100.0% ACCURACY | COMPLETION: 100.0% |
| Use Binwalk or other file carving tools to analyze and extract embedded files | | | |
| Oops (Medium) | 25 POINTS OUT OF 100 | 100.0% ACCURACY | COMPLETION: 50.0% |
| Utilize forensics tools to perform file recovery on a deleted image | | | |
| Absence (Hard) | 100 POINTS OUT OF 100 | 100.0% ACCURACY | COMPLETION: 100.0% |
| Recover a corrupted G-code file by correcting errors and fixing gaps within the file | | | |

## 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.

**348** TH PLACE OUT OF 8573
NATIONAL RANK

**285** POINTS OUT OF 300
PERFORMANCE SCORE

**64.0%** ACCURACY

**94.1%** COMPLETION

**96th** National Percentile

Average: 164.5 Points

Average: 56.8%

Average: 59.9%

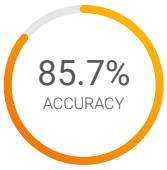
| | | | |
|---|---|---|---|
| Ancient History (Easy) | 85 POINTS OUT OF 100 | 46.2% ACCURACY | COMPLETION: 85.7% |
| Analyze HTTP access logs to calculate statistics and identify trends in web traffic | | | |
| Leaked (Medium) | 100 POINTS OUT OF 100 | 83.3% ACCURACY | COMPLETION: 100.0% |
| Analyze a SQL backup log file and calculate statistics on user data | | | |
| Logins (Hard) | 100 POINTS OUT OF 100 | 83.3% ACCURACY | COMPLETION: 100.0% |
| Parse a binary log and perform anomaly detection to identify a compromised user based on GeoIP data | | | |

# Network Traffic Analysis Module

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

**74** TH PLACE OUT OF **8573**
NATIONAL RANK

**300** POINTS OUT OF 300
PERFORMANCE SCORE





**100**th National Percentile

Average: 124.6 Points

Average: 66.3%

Average: 56.9%

## Lost in Resolution (Easy)

**100** POINTS OUT OF 100

**75.0%** ACCURACY

COMPLETION: **100.0%**

Analyze a packet capture with DNS traffic to identify DNS queries and responses

## Wifi (Medium)

**100** POINTS OUT OF 100

**100.0%** ACCURACY

COMPLETION: **100.0%**

Analyze a packet capture of WiFi network traffic and crack the password to the WiFi network

## Exfil (Hard)

**100** POINTS OUT OF 100

**100.0%** ACCURACY

COMPLETION: **100.0%**

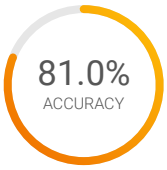
Analyze a packet capture to identify and extract exfiltrated data that was encoded within x.509 certificate SAN fields

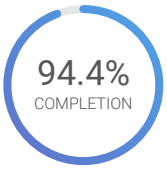
# Open Source Intelligence Module

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

165 TH PLACE OUT OF 8573
NATIONAL RANK

285 POINTS OUT OF 310
PERFORMANCE SCORE




99th National Percentile

Average: 196.4 Points

Average: 70.9%

Average: 66.8%

## Rules of Conduct (Easy)

100 POINTS OUT OF 100

100.0% ACCURACY

COMPLETION: 100.0%

Introductory challenge on acceptable conduct during NCL

## Honor (Easy)

30 POINTS OUT OF 30

100.0% ACCURACY

COMPLETION: 100.0%

Analyze an image to obtain data from metadata and file properties

## Controversial Challenge (Medium)

30 POINTS OUT OF 30

100.0% ACCURACY

COMPLETION: 100.0%

Perform a reverse image search to discover open-source information about a subject

## Nostalgia (Hard)

50 POINTS OUT OF 50

100.0% ACCURACY

COMPLETION: 100.0%

Utilize open source tools to analyze and geolocate a photo

## Meow Meow Meow (Hard)

25 POINTS OUT OF 50

20.0% ACCURACY

COMPLETION: 50.0%

Extract an image from an EML file and then perform a reverse image search to discover information about a target

## GitHub in Action (Hard)

50 POINTS OUT OF 50

100.0% ACCURACY

COMPLETION: 100.0%

Investigate public GitHub repositories to trace connections between user actions and their social media accounts

# Password Cracking Module

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

119 TH PLACE OUT OF 8573
NATIONAL RANK

250 POINTS OUT OF 335
PERFORMANCE SCORE

100.0% ACCURACY

73.7% COMPLETION

99th National Percentile

Average: 165.3 Points

Average: 86.9%

Average: 50.0%

## Hash me outside! (Easy)

50 POINTS OUT OF 50

100.0% ACCURACY

COMPLETION: 100.0%

Generate password hashes using MD5, SHA1, and SHA256

## We Will Rockyou (Easy)

50 POINTS OUT OF 50

100.0% ACCURACY

COMPLETION: 100.0%

Crack MD5 password hashes for password found in the RockYou breach

## Oph the Grid (Medium)

50 POINTS OUT OF 50

100.0% ACCURACY

COMPLETION: 100.0%

Crack Windows NTLM password hashes using rainbow tables

## Totally Safe PDF (Medium)

50 POINTS OUT OF 50

100.0% ACCURACY

COMPLETION: 100.0%

Crack the insecure password on a protected PDF file

## put 0n th3 ma5k (Medium)

50 POINTS OUT OF 50

100.0% ACCURACY

COMPLETION: 100.0%

Build a wordlist or pattern rule to crack password hashes of a known pattern

## Dice (Hard)

0 POINTS OUT OF 85

0.0% ACCURACY

COMPLETION: 0.0%

Build a custom wordlist to crack passwords by augmenting permutation rules using known password complexity requirements

## Scanning & Reconnaissance Module

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

**324** TH PLACE OUT OF 8573
NATIONAL RANK

**300** POINTS OUT OF 300
PERFORMANCE SCORE

81.0% ACCURACY
Average: 72.8%

100.0% COMPLETION
Average: 54.2%

**97**th National Percentile
Average: 171.8 Points

### Portscan (Easy)

100 POINTS OUT OF 100 | 66.7% ACCURACY | COMPLETION: 100.0%

Perform a port scan and identify services running on a remote host

### Dig (Medium)

100 POINTS OUT OF 100 | 87.5% ACCURACY | COMPLETION: 100.0%

Utilize DNS services to gain information about an organization's Intranet resources

### School Directory (Hard)

100 POINTS OUT OF 100 | 85.7% ACCURACY | COMPLETION: 100.0%

Conduct reconnaissance on an LDAP server

## Web Application Exploitation Module

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

**584** TH PLACE OUT OF 8573
NATIONAL RANK

**180** POINTS OUT OF 300
PERFORMANCE SCORE

62.5% ACCURACY
Average: 61.9%

55.6% COMPLETION
Average: 39.4%

**94**th National Percentile
Average: 123.1 Points

### Liber8Dogs (Easy)

100 POINTS OUT OF 100 | 66.7% ACCURACY | COMPLETION: 100.0%

Find and exploit a path traversal vulnerability in a web application

### Liber8tion_Login (Medium)

70 POINTS OUT OF 100 | 50.0% ACCURACY | COMPLETION: 66.7%

Manipulate headers to exploit improper authorization checks in middleware found in CVE-2025-29927

### dogstagram (Hard)

10 POINTS OUT OF 100 | 100.0% ACCURACY | COMPLETION: 25.0%

Bypass data sanitization on a login form and exploit a server side request forgery vulnerability