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CYBER SKYLINE

The National Cyber League
A Community Where Cybersecurity Is a Passion

Danial Waseem
danialwaseem516@gmail.com

NCL Spring 2024 Team Game Scouting Report

Dear Danial Waseem (Team "Q3lwdG9ncmFwaGljIEJ5dGVz {DVU}"),

Thank you for participating in the National Cyber League (NCL) Spring 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 Spring 2024 Season had 8,020 students/players and 584 faculty/coaches from more than 480 two- and four-year schools & 240 high schools across all 50 U.S. states registered to play. The Individual Game Capture the Flag (CTF) event took place from April 5 through April 7. The Team Game CTF event took place from April 19 through April 21. 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/B2PAEF2RR510

Congratulations for your participation in the NCL Spring 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!
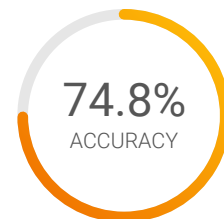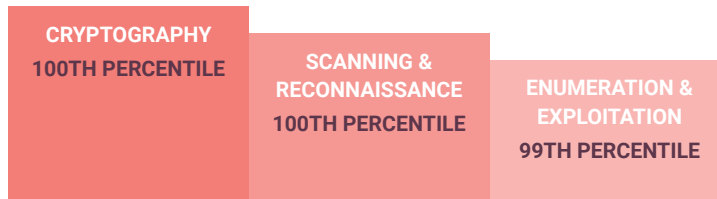
Dr. David Zeichick
NCL Commissioner

NATIONAL CYBER LEAGUE SCORE CARD

NCL SPRING 2024 TEAM GAME

YOUR TOP CATEGORIES

CRYPTOGRAPHY
100TH PERCENTILE

SCANNING & RECONNAISSANCE
100TH PERCENTILE

ENUMERATION & EXPLOITATION
99TH PERCENTILE

74.8%
ACCURACY

Average: 65.4%

cyberskyline.com/report
ID: B2PAEF2RR510

NATIONAL RANK
38TH PLACE
OUT OF 4199

PERCENTILE
100TH

Learn more at nationalcyberleague.org

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NCL Spring 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.

38 TH PLACE OUT OF **4199**
NATIONAL RANK

100th National Percentile

2585 POINTS OUT OF 3000
PERFORMANCE SCORE
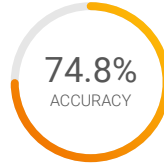
Average: 1074.1 Points

74.8% ACCURACY

Average: 65.4%
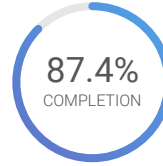
87.4% COMPLETION

Average: 40.2%

Cryptography
245 POINTS OUT OF 345 — **100.0%** ACCURACY — COMPLETION: **90.9%**

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

Enumeration & Exploitation
210 POINTS OUT OF 300 — **100.0%** ACCURACY — COMPLETION: **87.5%**

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

Forensics
300 POINTS OUT OF 300 — **100.0%** ACCURACY — COMPLETION: **100.0%**

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

Log Analysis
395 POINTS OUT OF 415 — **42.1%** 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 — **60.7%** ACCURACY — COMPLETION: **100.0%**

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

Open Source Intelligence
325 POINTS OUT OF 325 — **100.0%** ACCURACY — COMPLETION: **100.0%**

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
210 POINTS OUT OF 300 — **94.4%** ACCURACY — COMPLETION: **65.4%**

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

Scanning & Reconnaissance
300 POINTS OUT OF 300 — **93.3%** 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
200 POINTS OUT OF 315 — **100.0%** ACCURACY — COMPLETION: **66.7%**

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

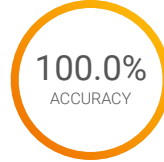Note: Survey module (100 points) was excluded from this report.

Cryptography Module

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

15 TH PLACE OUT OF **4199**
NATIONAL RANK

100th National Percentile

245 POINTS OUT OF 345
PERFORMANCE SCORE

Average: 132.3 Points

100.0% ACCURACY

Average: 74.5%

90.9% COMPLETION

Average: 64.7%

Decoding 1 (Easy)
45 POINTS OUT OF 45   **100.0%** ACCURACY   COMPLETION: **100.0%**

Analyze and obtain plaintext from messages encrypted with a shift cipher

Decoding 2 (Easy)
50 POINTS OUT OF 50   **100.0%** ACCURACY   COMPLETION: **100.0%**

Analyze and obtain plaintext from messages encoded with common number bases

Decoding 3 (Medium)
50 POINTS OUT OF 50   **100.0%** ACCURACY   COMPLETION: **100.0%**

Analyze and obtain plaintext from messages encrypted with the Rail Fence transposition cipher

Secure Communication (Medium)
100 POINTS OUT OF 100   **100.0%** ACCURACY   COMPLETION: **100.0%**

Decrypt and encrypt PGP messages using the provided public and private keys

Message (Hard)
0 POINTS OUT OF 100   **0.0%** ACCURACY   COMPLETION: **0.0%**

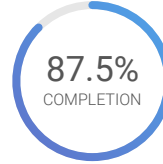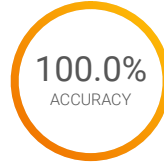Analyze and decode a message by using frequency analysis

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Enumeration & Exploitation Module

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

47 TH PLACE OUT OF **4199**
NATIONAL RANK

99th National Percentile

210 POINTS OUT OF 300
PERFORMANCE SCORE

Average: 122.3 Points

100.0% ACCURACY

Average: 61.4%

87.5% COMPLETION

Average: 56.6%

Gopher (Easy)

Analyze Go source code to exploit an insecurely-stored secret that uses an XOR cipher

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

Drop (Medium)

Analyze a sample of malware written in Powershell to identify its behavior

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

Playground (Hard)
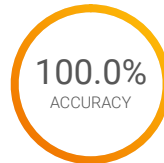
Exploit a binary program by using ROP gadgets and stack pivoting to gain command execution

10 POINTS OUT OF 100 | **100.0%** ACCURACY | COMPLETION: **50.0%**

Forensics Module

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

69 TH PLACE OUT OF **4199**
NATIONAL RANK

99th National Percentile

300 POINTS OUT OF 300
PERFORMANCE SCORE

Average: 126.7 Points

100.0% ACCURACY

Average: 67.6%

100.0% COMPLETION

Average: 51.4%

Filesystem (Easy)

Analyze a filesystem image and utilize forensic tools to extract a sensitive file

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

Word (Medium)

Extract hidden data from Word documents and reassemble the data to form a viewable image

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

Analog (Hard)

Recover an image by programmatically converting raw VGA voltages to RGB pixel values

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

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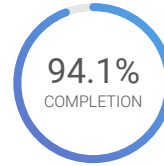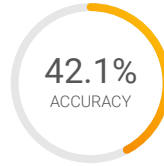CYBER SKYLINE

Danial Waseem
danialwaseem516@gmail.com

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.

221 ST PLACE OUT OF 4199
NATIONAL RANK

95th National Percentile

395 POINTS OUT OF 415
PERFORMANCE SCORE

Average: 205.9 Points

42.1% ACCURACY

Average: 44.2%

94.1% COMPLETION

Average: 52.8%

Secure Shell (Easy)
80 POINTS OUT OF 100 | **18.2%** ACCURACY | COMPLETION: 80.0%

Analyze a SSH server log to identify compromise attempts from threat actors

NASA Servers (Medium)
145 POINTS OUT OF 145 | **66.7%** ACCURACY | COMPLETION: 100.0%

Analyze a web server log and identify traffic patterns

Employee Access (Hard)
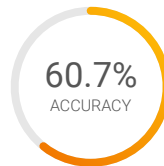**170** POINTS OUT OF 170 | **100.0%** ACCURACY | COMPLETION: 100.0%

Analyze data transfer logs to find anomalies and identify an insider threat

Network Traffic Analysis Module

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

56 TH PLACE OUT OF 4199
NATIONAL RANK

99th National Percentile

300 POINTS OUT OF 300
PERFORMANCE SCORE

Average: 172.2 Points

60.7% ACCURACY

Average: 65.6%

100.0% COMPLETION

Average: 57.6%

Announcement (Easy)
100 POINTS OUT OF 100 | **100.0%** ACCURACY | COMPLETION: 100.0%

Analyze a network packet capture of SSDP traffic to identify devices on a network

Wire (Medium)
100 POINTS OUT OF 100 | **100.0%** ACCURACY | COMPLETION: 100.0%

Dissect the raw binary of an ARP packet

Kickback (Hard)
100 POINTS OUT OF 100 | **35.3%** ACCURACY | COMPLETION: 100.0%

Analyze the raw data from an IR remote capture to identify the behavior that occurred

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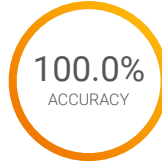Danial Waseem
danialwaseem516@gmail.com

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.

88 TH PLACE OUT OF **4199**
NATIONAL RANK

98th National Percentile

325 POINTS OUT OF 325
PERFORMANCE SCORE

Average: 230.4 Points

100.0% ACCURACY

Average: 77.0%

100.0% COMPLETION

Average: 82.8%

Rules of Conduct (Easy)

25 POINTS OUT OF 25

100.0% ACCURACY

COMPLETION: 100.0%

Introductory challenge on acceptable conduct during NCL

Lucky Charms (Easy)

100 POINTS OUT OF 100

100.0% ACCURACY

COMPLETION: 100.0%

Locate a physical location by performing conversions between different coordinate systems

Hidden in Plain Sight (Medium)

100 POINTS OUT OF 100

100.0% ACCURACY

COMPLETION: 100.0%

Utilize open source tools to identify and decode a message encoded using an esoteric language

Lost (Hard)

100 POINTS OUT OF 100

100.0% ACCURACY

COMPLETION: 100.0%

Utilize open source tools to perform an analysis on a slightly redacted photo and geolocate the subject of the image

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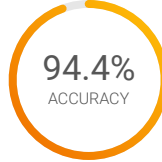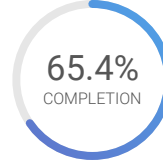danialwaseem516@gmail.com

Password Cracking Module

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

51 ST PLACE OUT OF **4199**
NATIONAL RANK

99th National Percentile

210 POINTS OUT OF 300
PERFORMANCE SCORE

Average: 107.7 Points

94.4% ACCURACY
Average: 86.4%

65.4% COMPLETION
Average: 33.0%

Hashing (Easy)
30 POINTS OUT OF 30   **100.0%** ACCURACY   COMPLETION: **100.0%**

Generate password hashes for MD4, MD5, SHA512

Rockyou (Easy)
45 POINTS OUT OF 45   **100.0%** ACCURACY   COMPLETION: **100.0%**

Crack SHA1 password hashes for password found in the rockyou breach

Defaults (Medium)
50 POINTS OUT OF 100   **83.3%** ACCURACY   COMPLETION: **50.0%**

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

DOCX (Medium)
45 POINTS OUT OF 45   **100.0%** ACCURACY   COMPLETION: **100.0%**

Crack the password for a protected Microsoft Word file

Fantasy (Hard)
40 POINTS OUT OF 80   **100.0%** ACCURACY   COMPLETION: **50.0%**

Build a custom wordlist to crack passwords not found in common wordlists and augment with rules for special characters
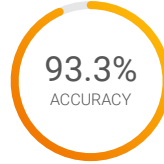
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Scanning & Reconnaissance Module

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

23 RD PLACE
OUT OF **4199**
NATIONAL RANK

100th National Percentile

300 POINTS OUT OF 300
PERFORMANCE SCORE

Average: 140.5 Points

93.3% ACCURACY

Average: 60.0%

100.0% COMPLETION

Average: 48.3%

| Blocked (Easy) | 100 POINTS OUT OF 100 | 100.0% ACCURACY | COMPLETION: | 100.0% |

Conduct reconnaissance on a server by identifying blocked IPs and ports

| Scan (Medium) | 100 POINTS OUT OF 100 | 100.0% ACCURACY | COMPLETION: | 100.0% |

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

| Paper (Hard) | 100 POINTS OUT OF 100 | 83.3% ACCURACY | COMPLETION: | 100.0% |

Conduct reconnaissance on an LDAP server to identify the users within an organization

Web Application Exploitation Module

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

47 TH PLACE
OUT OF **4199**
NATIONAL RANK

99th National Percentile

200 POINTS OUT OF 315
PERFORMANCE SCORE
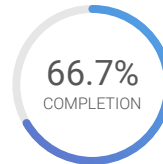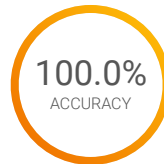
Average: 75.7 Points

100.0% ACCURACY

Average: 50.1%

66.7% COMPLETION

Average: 29.3%

| Jojamart (Easy) | 100 POINTS OUT OF 100 | 100.0% ACCURACY | COMPLETION: | 100.0% |

Identify and exploit a SQL injection vulnerability to gain unauthorized access to sensitive data

| Records (Medium) | 100 POINTS OUT OF 100 | 100.0% ACCURACY | COMPLETION: | 100.0% |

Conduct an automated attack to crawl a web server and obtain sensitive information

| File Share (Hard) | 0 POINTS OUT OF 115 | 0.0% ACCURACY | COMPLETION: | 0.0% |

Identify and exploit a NoSQL injection vulnerability to gain unauthorized access to a web server database

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