Sarah Ogden
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NCL Spring 2024 Team Game Scouting Report

Dear Sarah Ogden (Team "NKU WiCys"),

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. You were in the Experienced Students Bracket, consisting of students enrolled in advanced degrees or hold extensive industry working experience.

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/XWGVKXFLLTJ6

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

POWERED BY CYBER SKYLINE

NATIONAL CYBER LEAGUE SCORE CARD

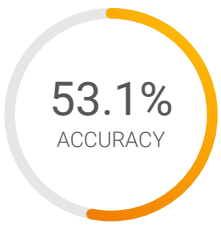
NCL SPRING 2024 TEAM GAME

EXPERIENCED STUDENTS RANK
136TH PLACE OUT OF 386

PERCENTILE
65TH

YOUR TOP CATEGORIES

NETWORK TRAFFIC ANALYSIS	WEB APPLICATION EXPLOITATION	LOG ANALYSIS
77TH PERCENTILE	71ST PERCENTILE	69TH PERCENTILE



Average: 74.5%

cyberskyline.com/report
ID: XWGVKXFLLTJ6

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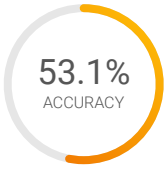
NCL Spring 2024 Team Game

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.

136 TH PLACE OUT OF 386
EXPERIENCED STUDENTS RANK

1445 POINTS OUT OF 3000
PERFORMANCE SCORE



65th Experienced Students Percentile

Average: 1821.5 Points

Average: 74.5%

Average: 64.2%

Cryptography

100 POINTS OUT OF 345

77.8% ACCURACY

COMPLETION: **63.6%**

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

Enumeration & Exploitation

160 POINTS OUT OF 300

55.6% ACCURACY

COMPLETION: **62.5%**

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

Forensics

100 POINTS OUT OF 300

22.2% ACCURACY

COMPLETION: **50.0%**

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

Log Analysis

315 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

210 POINTS OUT OF 300

75.0% ACCURACY

COMPLETION: **70.6%**

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

Open Source Intelligence

225 POINTS OUT OF 325

38.5% ACCURACY

COMPLETION: **83.3%**

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

105 POINTS OUT OF 300

75.0% ACCURACY

COMPLETION: **34.6%**

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

Scanning & Reconnaissance

120 POINTS OUT OF 300

66.7% ACCURACY

COMPLETION: **42.9%**

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

Web Application Exploitation

10 POINTS OUT OF 315

100.0% ACCURACY

COMPLETION: **11.1%**

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.

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Cryptography Module

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

153 RD PLACE OUT OF 386
EXPERIENCED STUDENTS RANK

100 POINTS OUT OF 345
PERFORMANCE SCORE

77.8% ACCURACY

63.6% COMPLETION

61 st Experienced Students Percentile

Average: 179.9 Points

Average: 81.4%

Average: 76.2%

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)

30 POINTS OUT OF 50

60.0% ACCURACY

COMPLETION: 75.0%

Analyze and obtain plaintext from messages encoded with common number bases

Decoding 3 (Medium)

25 POINTS OUT OF 50

100.0% ACCURACY

COMPLETION: 50.0%

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

Secure Communication (Medium)

0 POINTS OUT OF 100

0.0% ACCURACY

COMPLETION: 0.0%

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

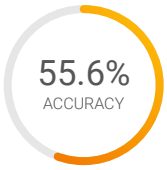
Identify actionable exploits and vulnerabilities and use them to bypass the security measures in code and compiled binaries.

133 RD PLACE OUT OF 386
EXPERIENCED STUDENTS RANK

160 POINTS OUT OF 300
PERFORMANCE SCORE

66th Experienced Students Percentile

Average: 178.6 Points



Average: 81.2%

Average: 76.5%

Gopher (Easy)

100 POINTS OUT OF 100

100.0% ACCURACY

COMPLETION: 100.0%

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

Drop (Medium)

60 POINTS OUT OF 100

75.0% ACCURACY

COMPLETION: 75.0%

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

Playground (Hard)

0 POINTS OUT OF 100

0.0% ACCURACY

COMPLETION: 0.0%

Exploit a binary program by using ROP gadgets and stack pivoting to gain command execution

Forensics Module

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

156 TH PLACE OUT OF 386
EXPERIENCED STUDENTS RANK

100 POINTS OUT OF 300
PERFORMANCE SCORE

60th Experienced Students Percentile

Average: 200.9 Points

Average: 82.7%

Average: 74.0%

Filesystem (Easy)

100 POINTS OUT OF 100

22.2% ACCURACY

COMPLETION: 100.0%

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

Word (Medium)

0 POINTS OUT OF 100

0.0% ACCURACY

COMPLETION: 0.0%

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

Analog (Hard)

0 POINTS OUT OF 100

0.0% ACCURACY

COMPLETION: 0.0%

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

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Log Analysis Module

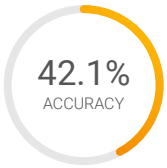
Utilize the proper tools and techniques to establish a baseline for normal operation and identify malicious activities using log files from various services.

123 RD PLACE OUT OF 386
EXPERIENCED STUDENTS RANK

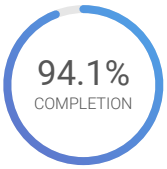
315 POINTS OUT OF 415
PERFORMANCE SCORE

69th Experienced Students Percentile

Average: 318.5 Points



Average: 61.9%



Average: 79.7%

Secure Shell (Easy)	100 POINTS OUT OF 100	22.7% ACCURACY	COMPLETION: 100.0%
Analyze a SSH server log to identify compromise attempts from threat actors			
NASA Servers (Medium)	145 POINTS OUT OF 145	61.5% ACCURACY	COMPLETION: 100.0%
Analyze a web server log and identify traffic patterns			
Employee Access (Hard)	70 POINTS OUT OF 170	100.0% ACCURACY	COMPLETION: 75.0%
Analyze data transfer logs to find anomalies and identify an insider threat			

Network Traffic Analysis Module

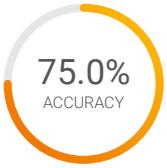
Identify malicious and benign network traffic to demonstrate an understanding of potential security breaches.

90 TH PLACE OUT OF 386
EXPERIENCED STUDENTS RANK

210 POINTS OUT OF 300
PERFORMANCE SCORE

77th Experienced Students Percentile

Average: 219.5 Points



Average: 73.8%

Average: 73.1%

Announcement (Easy)	100 POINTS OUT OF 100	60.0% 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)	10 POINTS OUT OF 100	100.0% ACCURACY	COMPLETION: 16.7%
Analyze the raw data from an IR remote capture to identify the behavior that occurred			

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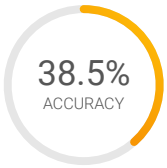
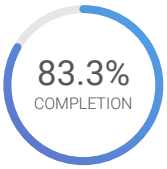
Open Source Intelligence Module

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

172 ND PLACE OUT OF 386
EXPERIENCED STUDENTS RANK

225 POINTS OUT OF 325
PERFORMANCE SCORE





56th Experienced Students Percentile

Average: 288.8 Points

Average: 84.6%

Average: 93.5%

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)

0 POINTS OUT OF 100

0.0% ACCURACY

COMPLETION: 0.0%

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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Password Cracking Module

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

145 TH PLACE OUT OF 386
EXPERIENCED STUDENTS RANK

105 POINTS OUT OF 300
PERFORMANCE SCORE

75.0% ACCURACY

34.6% COMPLETION

63rd Experienced Students Percentile

Average: 161.6 Points

Average: 91.3%

Average: 49.6%

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)

0 POINTS OUT OF 100

0.0% ACCURACY

COMPLETION: 0.0%

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

DOCX (Medium)

0 POINTS OUT OF 45

0.0% ACCURACY

COMPLETION: 0.0%

Crack the password for a protected Microsoft Word file

Fantasy (Hard)

30 POINTS OUT OF 80

100.0% ACCURACY

COMPLETION: 37.5%

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.

141 ST PLACE OUT OF 386
EXPERIENCED STUDENTS RANK

120 POINTS OUT OF 300
PERFORMANCE SCORE

66.7% ACCURACY

42.9% COMPLETION

64th Experienced Students Percentile

Average: 205.3 Points

Average: 76.4%

Average: 69.6%

Blocked (Easy)

70 POINTS OUT OF 100

80.0% ACCURACY

COMPLETION: 80.0%

Conduct reconnaissance on a server by identifying blocked IPs and ports

Scan (Medium)

50 POINTS OUT OF 100

50.0% ACCURACY

COMPLETION: 50.0%

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

Paper (Hard)

0 POINTS OUT OF 100

0.0% ACCURACY

COMPLETION: 0.0%

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.

115 TH PLACE OUT OF 386
EXPERIENCED STUDENTS RANK

10 POINTS OUT OF 315
PERFORMANCE SCORE

100.0% ACCURACY

11.1% COMPLETION

71 st Experienced Students Percentile

Average: 132.9 Points

Average: 65.1%

Average: 47.6%

Jojamart (Easy)

10 POINTS OUT OF 100

100.0% ACCURACY

COMPLETION: 50.0%

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

Records (Medium)

0 POINTS OUT OF 100

0.0% ACCURACY

COMPLETION: 0.0%

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