



# NCL Fall 2020 Individual Game Scouting Report

Dear Shawn Duong,

Congratulations on a great NCL 2020 Fall Individual Game!

## National Cyber League (NCL)

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. The NCL is a next-generation learning and gaming environment using high-fidelity and scenario-based challenges from Cyber Skyline. The challenges are designed around industry recognized and performance-based exam objectives to further develop student skills. Learn more about the NCL at [www.nationalcyberleague.org](http://www.nationalcyberleague.org). If you have any questions regarding the information in this report please inquire at [info@nationalcyberleague.org](mailto:info@nationalcyberleague.org).

## NCL 2020 Fall Season

The NCL 2020 Fall Season was designed to develop and validate player knowledge and skills in preparation for further learning, career readiness, industry certifications, and other cybersecurity competitions. Hosted challenges in the NCL Gymnasium were made available to all players and coaches and aligned to the games. The games were designed around performance-based exam objectives of the CompTIA Security+™ certification and the National Initiative for Cybersecurity Education (NICE) Cybersecurity Workforce Framework published by the National Institute of Standards and Technology (NIST).

The NCL 2020 Fall Season began with the Preseason round to group players into one of three competition brackets based on skill level: Gold (top 15% of all players nationally - 680 players), Silver (the next 35% of all players nationally - 1601 players) or Bronze (the next 50% of all players nationally - 2284 players). Players who did not participate in the Preseason were not bracketed or ranked. This made the Individual Game more engaging by grouping players with similar knowledge and skill levels.

At the beginning of the NCL 2020 Fall Season, 6610 students/players and 443 faculty/coaches from more than 530 two- and four-year schools across all 50 U.S. states registered to play.

The Individual Game Capture the Flag (CTF) event took place from October 23 through October 25. The Team Game CTF event took place from November 6 through November 8. The games were conducted in real-time for students across the country.

The NCL 2020 Fall Season was powered by Cyber Skyline's cloud-based skills evaluation platform. Cyber Skyline hosted the scenario-driven cybersecurity challenges for all players to compete and track their progress in real-time.



To validate this report, please access: [cyberskyline.com/report/Y8EKVURW572B](https://cyberskyline.com/report/Y8EKVURW572B)

Thank you for your participation in the NCL 2020 Fall 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. Dan Manson  
NCL Commissioner





## NCL Scouting Report

What follows is a customized NCL Scouting Report of your performance in the NCL 2020 Fall Individual Game. We hope you find it to be valuable in both confirming your skills and identifying areas for improvement. In addition, the NCL Scouting Report can be used as part of any job application, as it provides an external validation of skills as demonstrated in competitive gameplay based on industry-recognized certification exam and framework objectives.

The following definitions apply to your performance across a range of cybersecurity scenarios

- **National Rank:** overall place with respect to all players, across all Brackets
- **Bracket Rank:** overall place within the Bracket
- **Performance Score:** total points earned; the higher the score, the higher the ranking
- **Accuracy:** percentage of flag submissions that were correct (total flag captures divided by total flag attempts).
- **Completion:** percentage of possible flags submitted (total flag captures divided by total possible flags).

The following are the categories of cybersecurity scenarios that you were evaluated against:

1. **Cryptography**

Information is key, but it's not going to be easy to get it. Decipher these hidden messages to learn what is really going on.

2. **Enumeration and Exploitation**

Hacking isn't just for the malicious actors, all cybersecurity professionals need to know it. Try to break some training programs and some of the hackers' software. You might even be able to secure your own programs.

3. **Forensics**

Do you know where to look for the evidence? Help find the forensic trail that malicious actors leave behind.

4. **Log Analysis**

Logs hold a ton of information. The hard part is using them to learn what happened. Analyze these logs to determine what the hackers have been up to.

5. **Network Traffic Analysis**

Determine what happened and exactly when it happened by looking at network traffic captures.

6. **Open Source Intelligence**

Obtain information using publicly available data and tools.

7. **Password Cracking**

Try your hand at cracking these passwords.

8. **Scanning & Reconnaissance**

Before you catch the hackers, you need to find them. Put your tracking skills to the test and find out what the hackers are up to.

9. **Web Application Exploitation**

Find and demonstrate vulnerabilities in various city systems.

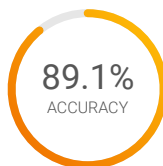
## NCL Fall 2020 Preseason

**15<sup>TH</sup> PLACE**  
OUT OF 6070  
NATIONAL RANK

**100<sup>th</sup>**  
National Percentile

**1865** POINTS  
OUT OF 1865  
PERFORMANCE SCORE

Averages  
National: 566.4



National: 61.9%



National: 44.5%

Based on Preseason performance, **Shawn Duong** was placed into the **Gold Bracket** for the Individual Game.





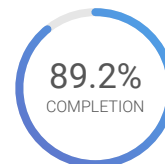
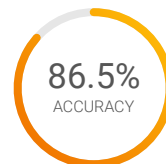
## NCL Fall 2020 Individual Game

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.

**25<sup>TH</sup> PLACE**  
OUT OF 6011  
NATIONAL RANK

**23<sup>RD</sup> PLACE**  
OUT OF 680  
GOLD BRACKET RANK

**2445** POINTS  
OUT OF 3000  
PERFORMANCE SCORE



**100<sup>th</sup>**  
National Percentile

**97<sup>th</sup>**  
Gold Bracket Percentile

Averages  
National: 634.9  
Gold Bracket: 1399.5

National: 62.7%  
Gold Bracket: 70.2%

National: 24.6%  
Gold Bracket: 53.9%

Cryptography	<b>275</b> POINTS OUT OF 310	<b>91.7%</b> ACCURACY	COMPLETION: <b>91.7%</b>
Enumeration and Exploitation	<b>155</b> POINTS OUT OF 315	<b>90.0%</b> ACCURACY	COMPLETION: <b>64.3%</b>
Forensics	<b>310</b> POINTS OUT OF 335	<b>83.3%</b> ACCURACY	COMPLETION: <b>93.8%</b>
Log Analysis	<b>320</b> POINTS OUT OF 340	<b>79.5%</b> ACCURACY	COMPLETION: <b>93.9%</b>
Network Traffic Analysis	<b>330</b> POINTS OUT OF 355	<b>76.9%</b> ACCURACY	COMPLETION: <b>93.8%</b>
Open Source Intelligence	<b>245</b> POINTS OUT OF 245	<b>100.0%</b> ACCURACY	COMPLETION: <b>100.0%</b>
Password Cracking	<b>230</b> POINTS OUT OF 355	<b>100.0%</b> ACCURACY	COMPLETION: <b>77.3%</b>
Scanning & Reconnaissance	<b>315</b> POINTS OUT OF 315	<b>95.0%</b> ACCURACY	COMPLETION: <b>100.0%</b>
Web Application Exploitation	<b>165</b> POINTS OUT OF 330	<b>100.0%</b> ACCURACY	COMPLETION: <b>66.7%</b>

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





## Cryptography Module

Information is key, but it's not going to be easy to get it. Decipher these hidden messages to learn what is really going on.

**14<sup>TH</sup> PLACE**  
OUT OF 6011  
NATIONAL RANK

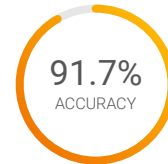
**100<sup>th</sup>**  
National Percentile

**13<sup>TH</sup> PLACE**  
OUT OF 680  
GOLD BRACKET RANK

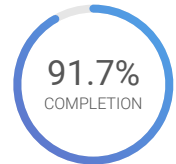
**99<sup>th</sup>**  
Gold Bracket Percentile

**275** POINTS  
OUT OF 310  
PERFORMANCE SCORE

Averages  
National: 97.3  
Gold Bracket: 142.7



National: 84.2%  
Gold Bracket: 87.4%



National: 50.1%  
Gold Bracket: 63.2%

Decoding 1 (Easy)	<b>30</b> POINTS OUT OF 30	<b>100.0%</b> ACCURACY	COMPLETION:	<b>100.0%</b>
Decoding 2 (Easy)	<b>30</b> POINTS OUT OF 30	<b>100.0%</b> ACCURACY	COMPLETION:	<b>100.0%</b>
Decoding 3 (Medium)	<b>25</b> POINTS OUT OF 25	<b>100.0%</b> ACCURACY	COMPLETION:	<b>100.0%</b>
Decoding 4 (Medium)	<b>0</b> POINTS OUT OF 35	<b>0.0%</b> ACCURACY	COMPLETION:	<b>0.0%</b>
Decoding 5 (Hard)	<b>35</b> POINTS OUT OF 35	<b>100.0%</b> ACCURACY	COMPLETION:	<b>100.0%</b>
Decoding 6 (Hard)	<b>75</b> POINTS OUT OF 75	<b>100.0%</b> ACCURACY	COMPLETION:	<b>100.0%</b>
Steg (Easy)	<b>30</b> POINTS OUT OF 30	<b>100.0%</b> ACCURACY	COMPLETION:	<b>100.0%</b>
Secure Comms (Medium)	<b>50</b> POINTS OUT OF 50	<b>50.0%</b> ACCURACY	COMPLETION:	<b>100.0%</b>





## Enumeration and Exploitation Module

Hacking isn't just for the malicious actors, all cybersecurity professionals need to know it. Try to break some training programs and some of the hackers' software. You might even be able to secure your own programs.

**120<sup>TH</sup> PLACE**  
OUT OF 6011  
NATIONAL RANK

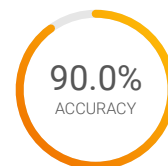
**99<sup>th</sup>**  
National Percentile

**108<sup>TH</sup> PLACE**  
OUT OF 680  
GOLD BRACKET RANK

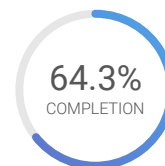
**85<sup>th</sup>**  
Gold Bracket Percentile

**155** POINTS  
OUT OF 315  
PERFORMANCE SCORE

Averages  
National: 43.9  
Gold Bracket: 96.9



National: 53.2%  
Gold Bracket: 66.6%



National: 18.4%  
Gold Bracket: 36.1%

Heckin Snek (Easy)

**60** POINTS  
OUT OF 60

**100.0%**  
ACCURACY

COMPLETION: **100.0%**

Dotinator (Medium)

**35** POINTS  
OUT OF 70

**100.0%**  
ACCURACY

COMPLETION: **66.7%**

Core Fault (Medium)

**45** POINTS  
OUT OF 75

**75.0%**  
ACCURACY

COMPLETION: **60.0%**

Trivia Game (Hard)

**15** POINTS  
OUT OF 110

**100.0%**  
ACCURACY

COMPLETION: **50.0%**

## Forensics Module

Do you know where to look for the evidence? Help find the forensic trail that malicious actors leave behind.

**99<sup>TH</sup> PLACE**  
OUT OF 6011  
NATIONAL RANK

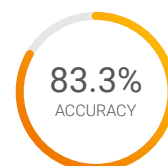
**99<sup>th</sup>**  
National Percentile

**86<sup>TH</sup> PLACE**  
OUT OF 680  
GOLD BRACKET RANK

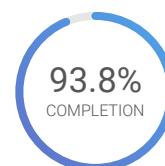
**88<sup>th</sup>**  
Gold Bracket Percentile

**310** POINTS  
OUT OF 335  
PERFORMANCE SCORE

Averages  
National: 95.3  
Gold Bracket: 177.0



National: 47.3%  
Gold Bracket: 64.8%



National: 31.2%  
Gold Bracket: 56.9%

Offer Letter (Easy)

**45** POINTS  
OUT OF 70

**75.0%**  
ACCURACY

COMPLETION: **75.0%**

Coffee Break (Medium)

**75** POINTS  
OUT OF 75

**66.7%**  
ACCURACY

COMPLETION: **100.0%**

Character Traits (Medium)

**90** POINTS  
OUT OF 90

**100.0%**  
ACCURACY

COMPLETION: **100.0%**

Firmware (Hard)

**100** POINTS  
OUT OF 100

**83.3%**  
ACCURACY

COMPLETION: **100.0%**





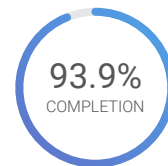
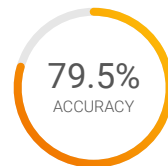
## Log Analysis Module

Logs hold a ton of information. The hard part is using them to learn what happened. Analyze these logs to determine what the hackers have been up to.

**58<sup>TH</sup> PLACE**  
OUT OF 6011  
NATIONAL RANK

**56<sup>TH</sup> PLACE**  
OUT OF 680  
GOLD BRACKET RANK

**320** POINTS  
OUT OF 340  
PERFORMANCE SCORE



**100<sup>th</sup>**  
National Percentile

**92<sup>nd</sup>**  
Gold Bracket Percentile

Averages  
National: 99.1  
Gold Bracket: 181.8

National: 37.9%  
Gold Bracket: 58.8%

National: 25.5%  
Gold Bracket: 50.1%

Sysmon (Easy)

**95** POINTS  
OUT OF 95

**88.9%**  
ACCURACY

COMPLETION: 100.0%

Home Wrecked (Medium)

**105** POINTS  
OUT OF 105

**77.8%**  
ACCURACY

COMPLETION: 100.0%

Database Backup (Hard)

**120** POINTS  
OUT OF 140

**76.2%**  
ACCURACY

COMPLETION: 88.9%

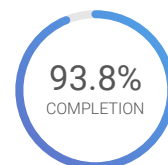
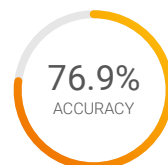
## Network Traffic Analysis Module

Determine what happened and exactly when it happened by looking at network traffic captures.

**26<sup>TH</sup> PLACE**  
OUT OF 6011  
NATIONAL RANK

**25<sup>TH</sup> PLACE**  
OUT OF 680  
GOLD BRACKET RANK

**330** POINTS  
OUT OF 355  
PERFORMANCE SCORE



**100<sup>th</sup>**  
National Percentile

**97<sup>th</sup>**  
Gold Bracket Percentile

Averages  
National: 105.5  
Gold Bracket: 184.3

National: 41.4%  
Gold Bracket: 55.9%

National: 33.7%  
Gold Bracket: 57.6%

The Group Chat (Easy)

**70** POINTS  
OUT OF 70

**100.0%**  
ACCURACY

COMPLETION: 100.0%

Cracking (Medium)

**70** POINTS  
OUT OF 70

**100.0%**  
ACCURACY

COMPLETION: 100.0%

Web Scanner (Medium)

**75** POINTS  
OUT OF 100

**52.9%**  
ACCURACY

COMPLETION: 81.8%

Space (Hard)

**115** POINTS  
OUT OF 115

**90.0%**  
ACCURACY

COMPLETION: 100.0%





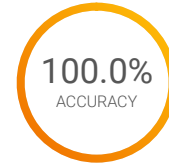
## Open Source Intelligence Module

Obtain information using publicly available data and tools.

**5<sup>TH</sup> PLACE**  
OUT OF 6011  
NATIONAL RANK

**5<sup>TH</sup> PLACE**  
OUT OF 680  
GOLD BRACKET RANK

**245** POINTS  
OUT OF 245  
PERFORMANCE SCORE



National: 76.8%  
Gold Bracket: 85.0%



National: 68.0%  
Gold Bracket: 85.9%

**100<sup>th</sup>**  
National Percentile

**100<sup>th</sup>**  
Gold Bracket Percentile

Averages  
National: 116.3  
Gold Bracket: 168.4

Rules of Conduct (Easy)	<b>15</b> POINTS OUT OF 15	<b>100.0%</b> ACCURACY	COMPLETION:	<b>100.0%</b>
Maze (Easy)	<b>25</b> POINTS OUT OF 25	<b>100.0%</b> ACCURACY	COMPLETION:	<b>100.0%</b>
Flag Location (Easy)	<b>50</b> POINTS OUT OF 50	<b>100.0%</b> ACCURACY	COMPLETION:	<b>100.0%</b>
Target Building (Medium)	<b>80</b> POINTS OUT OF 80	<b>100.0%</b> ACCURACY	COMPLETION:	<b>100.0%</b>
Base of Operations (Hard)	<b>75</b> POINTS OUT OF 75	<b>100.0%</b> ACCURACY	COMPLETION:	<b>100.0%</b>





## Password Cracking Module

Try your hand at cracking these passwords.

**455** <sup>TH PLACE</sup>  
OUT OF 6011  
NATIONAL RANK

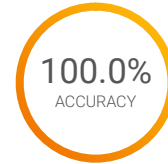
**93<sup>rd</sup>**  
National Percentile

**315** <sup>TH PLACE</sup>  
OUT OF 680  
GOLD BRACKET RANK

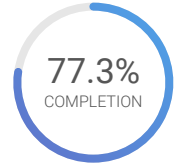
**54<sup>th</sup>**  
Gold Bracket Percentile

**230** <sup>POINTS</sup>  
OUT OF 355  
PERFORMANCE SCORE

Averages  
National: 121.8  
Gold Bracket: 212.2



National: 87.4%  
Gold Bracket: 93.1%



National: 42.5%  
Gold Bracket: 70.6%

Hashing (Easy)	<b>30</b> <sup>POINTS</sup> OUT OF 30	<b>100.0%</b> ACCURACY	COMPLETION: <b>100.0%</b>
Cracking 1 (Easy)	<b>45</b> <sup>POINTS</sup> OUT OF 45	<b>100.0%</b> ACCURACY	COMPLETION: <b>100.0%</b>
Cracking 2 (Easy)	<b>0</b> <sup>POINTS</sup> OUT OF 45	<b>0.0%</b> ACCURACY	COMPLETION: <b>0.0%</b>
Cracking 3 (Medium)	<b>45</b> <sup>POINTS</sup> OUT OF 45	<b>100.0%</b> ACCURACY	COMPLETION: <b>100.0%</b>
Cracking 4 (Hard)	<b>45</b> <sup>POINTS</sup> OUT OF 45	<b>100.0%</b> ACCURACY	COMPLETION: <b>100.0%</b>
Cracking 5 (Hard)	<b>35</b> <sup>POINTS</sup> OUT OF 115	<b>100.0%</b> ACCURACY	COMPLETION: <b>60.0%</b>
PDF (Medium)	<b>30</b> <sup>POINTS</sup> OUT OF 30	<b>100.0%</b> ACCURACY	COMPLETION: <b>100.0%</b>







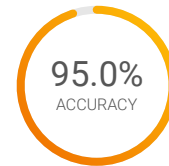
## Scanning & Reconnaissance Module

Before you catch the hackers, you need to find them. Put your tracking skills to the test and find out what the hackers are up to.

**7<sup>TH</sup> PLACE**  
OUT OF 6011  
NATIONAL RANK

**7<sup>TH</sup> PLACE**  
OUT OF 680  
GOLD BRACKET RANK

**315** POINTS  
OUT OF 315  
PERFORMANCE SCORE



**100<sup>th</sup>**  
National Percentile

**99<sup>th</sup>**  
Gold Bracket Percentile

Averages  
National: 85.1  
Gold Bracket: 141.9

National: 72.5%  
Gold Bracket: 84.1%

National: 31.8%  
Gold Bracket: 51.1%

Hidden Treasure (Easy)

**100** POINTS  
OUT OF 100

**100.0%**  
ACCURACY

COMPLETION: **100.0%**

Flag Hunt (Medium)

**105** POINTS  
OUT OF 105

**85.7%**  
ACCURACY

COMPLETION: **100.0%**

Front Desk (Hard)

**110** POINTS  
OUT OF 110

**100.0%**  
ACCURACY

COMPLETION: **100.0%**

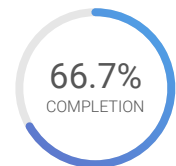
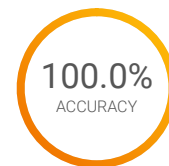
## Web Application Exploitation Module

Find and demonstrate vulnerabilities in various city systems.

**131<sup>ST</sup> PLACE**  
OUT OF 6011  
NATIONAL RANK

**102<sup>ND</sup> PLACE**  
OUT OF 680  
GOLD BRACKET RANK

**165** POINTS  
OUT OF 330  
PERFORMANCE SCORE



**98<sup>th</sup>**  
National Percentile

**85<sup>th</sup>**  
Gold Bracket Percentile

Averages  
National: 59.5  
Gold Bracket: 96.8

National: 82.6%  
Gold Bracket: 93.2%

National: 32.5%  
Gold Bracket: 47.0%

Amoonguss (Easy)

**55** POINTS  
OUT OF 95

**100.0%**  
ACCURACY

COMPLETION: **66.7%**

Poker Night (Medium)

**100** POINTS  
OUT OF 100

**100.0%**  
ACCURACY

COMPLETION: **100.0%**

Mothership (Hard)

**10** POINTS  
OUT OF 135

**100.0%**  
ACCURACY

COMPLETION: **50.0%**

