



POWERED BY

CYBER SKYLINE 

The National Cyber League

A COMMUNITY WHERE CYBERSECURITY IS A PASSION



Annual Report 2020

nationalcyberleague.org

An update from Commissioner Dr. Dan Manson

In 2011, leaders from regional and national NSF ATE Cybersecurity Centers and other institutions formed the National Cyber League. Our vision was, and still is, to provide an ongoing virtual training ground for students to develop, practice, and validate their cybersecurity knowledge and skills using next-generation high-fidelity simulation environments, based on industry-relevant learning objectives.

While initially inspired by the seminal 2005 paper “Exploring a National Cybersecurity Exercise for Universities,” we expanded the scope of NCL to include:

- High school students in addition to college students
- A Spring and Fall season to align with school semesters
- Individual Player Scouting Reports, and
- National Power Rankings

We are the most inclusive, performance-based, learning-centered collegiate cybersecurity competition today.

As we enter the new decade, we are nurturing the growing NCL community with much more content, learning tools, guidance and career support than ever before. Our NCL Player Ambassador Board, led by Crypto Kait, is now producing six days of NCL-related content a week, through blogs and live, interactive video coaching. Composed entirely of dedicated NCL Players and Coaches, this team’s unyielding passion and energy represents everything NCL stands for.

NCL’s technology partner, Cyber Skyline, is mapping challenges and scouting reports to the NIST NICE Framework to better highlight for recruiters the equivalency of the NCL competition to real-world needs for recruiters, talent scouts and hiring managers.

We are mission-driven to expand the NCL community through the inclusion of more schools, more partners, more NCL offerings, and more resources to enable players to be successful. NCL embraces, supports, and encourages any high school student with a passion for learning, any student — whether in high school or college, those taking a full course load or just one class, students just starting their learning or already in love with CTFs, and students of any age — who want to explore and become part of the cybersecurity community. We are proud of the NCL, and our Player Ambassadors live the culture of supporting and celebrating diversity and inclusion of any participant, regardless of ethnicity, race, gender and sexual orientation, religion, age or disability.

Critical to NCL success is growing our community of Coaches who teach, mentor and support students. NCL is a sport, and good coaching makes all the difference for the success of anyone or any team playing a sport. Coaches are also critical to the integrity of the game. As Commissioner of NCL, I also dedicate my time to ensuring NCL Coaches are given the tools and best practices they need for their students to be successful.

Finally, NCL is engaging with academic, industry and government partners that share our vision of providing engaging, entertaining, measurable, and scalable methods of learning, to enlist and inspire a new generation of cybersecurity professionals in a way that makes learning feel like playing. We invite you to join us in this enormously energizing, and of course productive, endeavor!

Our job at NCL is to give you the best cybersecurity competition experience we can. Together, we are truly “a community where cybersecurity is a passion”!



The NCL Community

NCL is a united community of “heroes” - the players, coaches, player ambassadors, and all those supporting NCL’s common mission - advancing the skills of students at every stage of cybersecurity knowledge, through hands-on solution of clearly defined hacker challenges.



NATIONAL CYBER LEAGUE

BY THE NUMBERS

The Need For Ethical Hackers



Every 39 seconds

– a hacker attack
(Clark School, University of Maryland)



1.8 million

unfilled cybersecurity
jobs globally by 2022
(Center for Strategic & International Studies, 2019)



503,316

job openings in the U.S.
(CyberSeek)

The NCL Game Solution



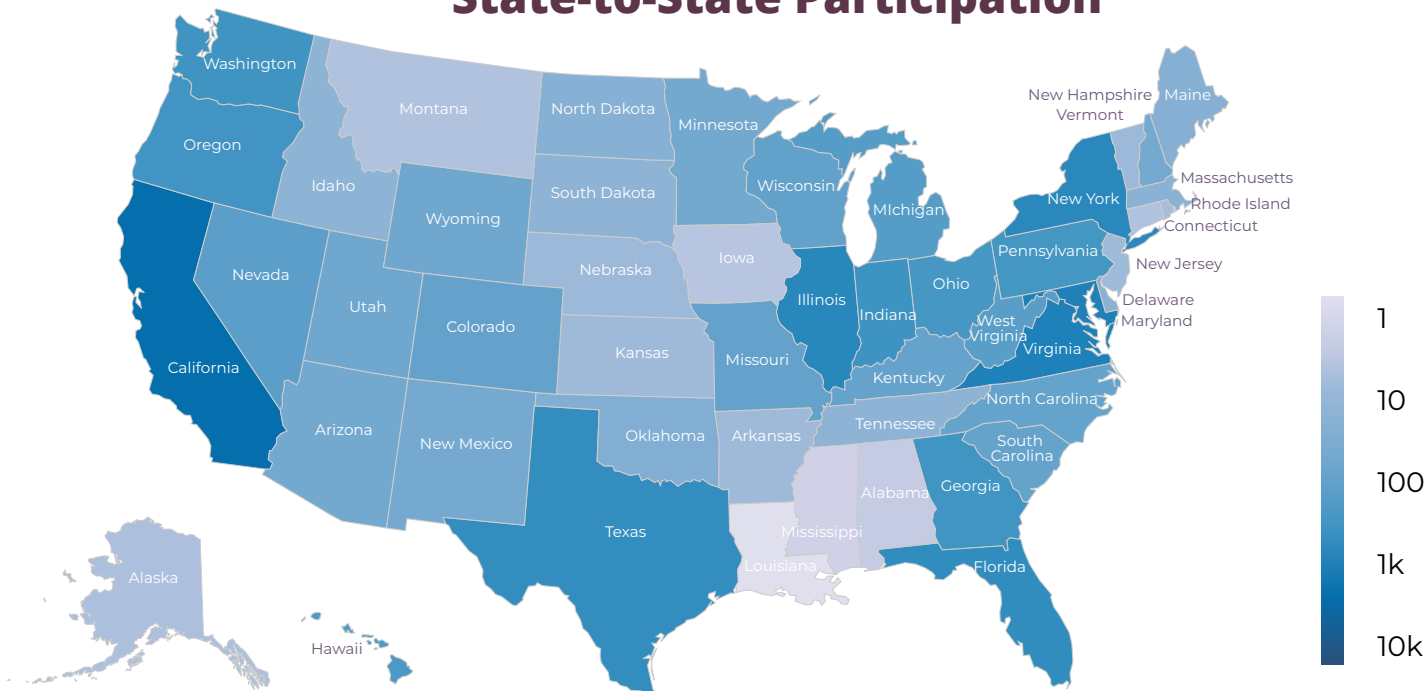
10,000
players annually

In 2019...



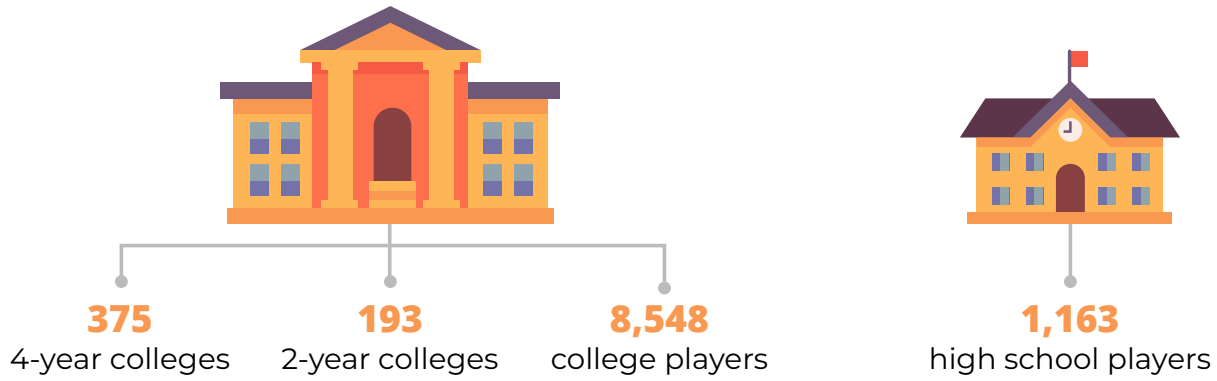
550+ academic institutions
participating annually

State-to-State Participation

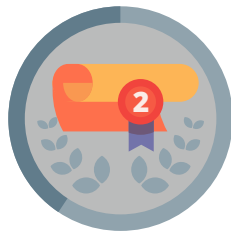


cyberskyline.com/data/map/students

College & High School Participation



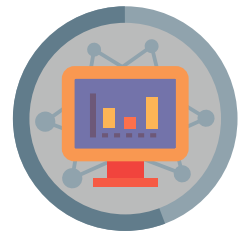
61%
of CAE schools
participate in NCL



63 out of 98
CAE-2Y (2-year CAE
colleges) participate



94 out of 152
CAE-CD (Cyber Defense
Colleges) participate

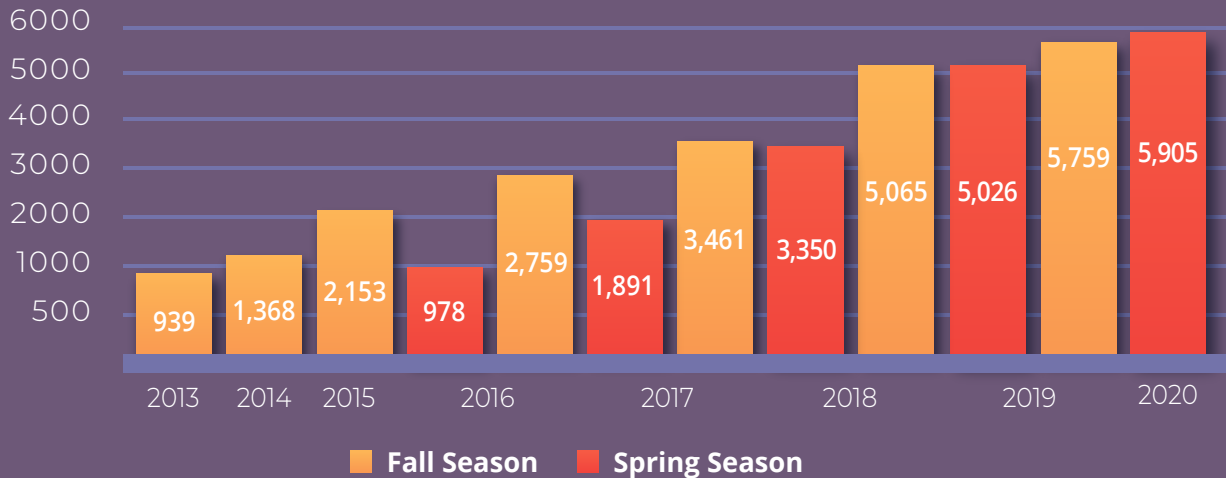


11 out of 25
CAE-R (Research
Colleges) participate

More Students Served Every Year

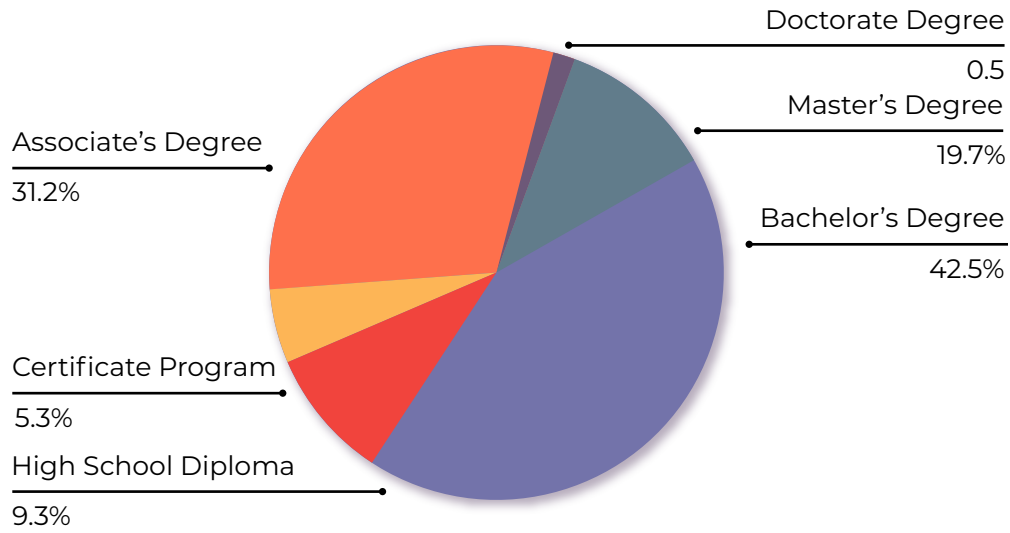
NATIONAL CYBER LEAGUE (NCL)

Number of Participants (Individual-Based Events)



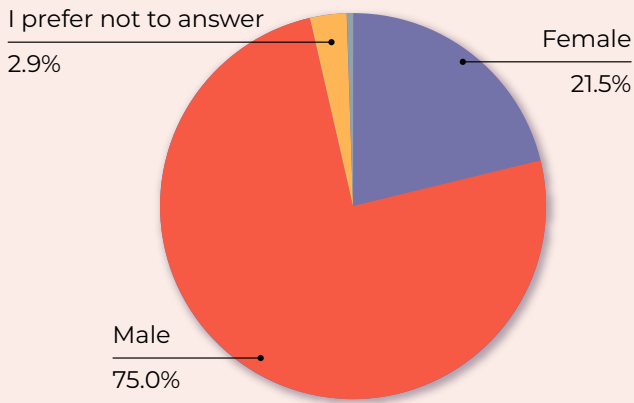
NCL Players Continue to Challenge Themselves

Degree Pursuing

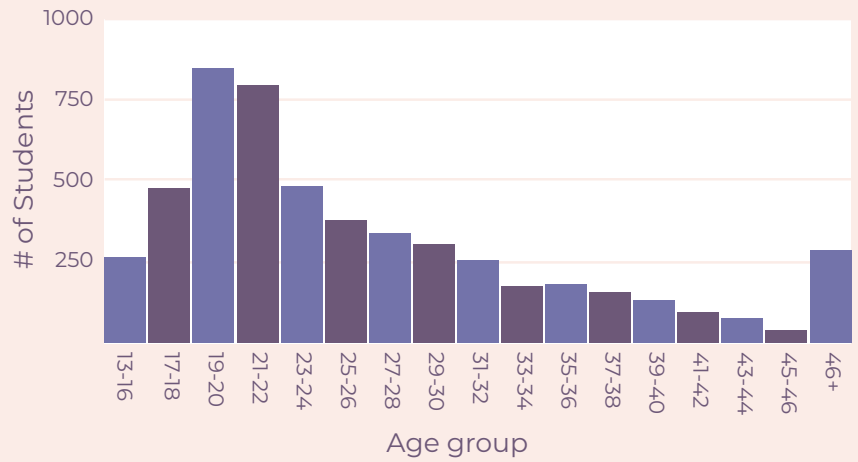


NCL Encourages Diversity

NCL Players by Gender



NCL Players by Age



NCL Players by Race

	NCL	US Population
White	65.0%	73.0%
Black / African American	10.4%	12.7%
Asian	15.1%	5.4%
American Indian or Alaska Native	1.3%	0.8%
Native Hawaiian & Other Pacific Islander	0.9%	0.2%
Multiracial	7.2%	3.1%

* 16.4% of players are Hispanic/Latino



The amazing family of NCL Player Ambassadors

CryptoKait started it all. After playing the NCL games for the first time, she realized how great it would be to have more support from others who had participated before. They could give advice and encouragement, offer tips and techniques and generally be ambassadors on behalf of the students. Our heroes are shown below!



Kait & Xena



Jeana



WebWitch



John



Aaron



Tristan



Meredith



Jacob



Meredith



Paul



Fred



Helping students advance in cybersecurity.

Together, we arm students and fortify national cybersecurity objectives! Partners of NCL include:

- **ACADEMIC INSTITUTIONS** - Give students a leg up in preparing them for real-world cybersecurity challenges
- **CLOUD AND PLATFORM PROVIDERS** - Gain recognition and new users by helping to enhance the NCL game
- **INDUSTRY ORGANIZATIONS** - Tap into a recruiting pool of students of all ages and stages ready to hit the ground running in nine mission-critical areas of cybersecurity
- **NON-PROFIT ORGANIZATIONS** - Join forces with the premier national cybersecurity competition for college and high school students
- **GOVERNMENT AGENCIES** - Collaborate with NCL on a tried-and-true cybersecurity workforce initiative that maps to the U.S. government's NIST NICE work roles.

Ways to partner with NCL

NCL is working with industry organizations to partner strategically. Our goal is to prepare students to hit the ground running as they enter the cybersecurity workforce, addressing the critical shortage of qualified cybersecurity talent at the same time.

Ways to partner include:

- **SPONSOR STUDENTS** - Sponsor students to participate. Individual cost is just \$35 per student, which gives them access to a Virtual Gym, a Preseason Game through which they are bracketed (Bronze, Silver, Gold categories), an Individual Game and a Team Game. A small administrative fee is added when sponsoring.
- **CO-HOST WEBINARS** - Your informative/educational content promoted and delivered live to NCL's community.
- **INTEGRATE YOUR TECHNOLOGY** - Work strategically with NCL to continuously incorporate new and advanced challenges to the games.
- **PROMOTE YOUR BRAND** - Reciprocal co-branding opportunities, including website logos and social media.
- **PARTNER ACROSS ACADEMIA, INDUSTRY AND GOVERNMENT** - Academic alliances in which industry partner and NCL offer services to academic institutions.
- **CREATE NEW CTF COMPETITIONS** - Collaborate on Capture-the-Flag (CTF) competitions at conferences.
- **IMAGINE TOGETHER** - NCL eagerly welcomes your ideas!