



picoCTF

Carnegie
Mellon
University

picoCTF is a free computer security game targeted at middle and high school students. The game consists of a series of challenges centered around a unique storyline where participants must reverse engineer, break, hack, decrypt, or do whatever it takes to solve the challenge.

WHAT

• IS

PICCO

CTF



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PICOCTF picoCTF is a free, online computer hacking game that challenges beginners and experts alike to solve real-life cybersecurity problems.

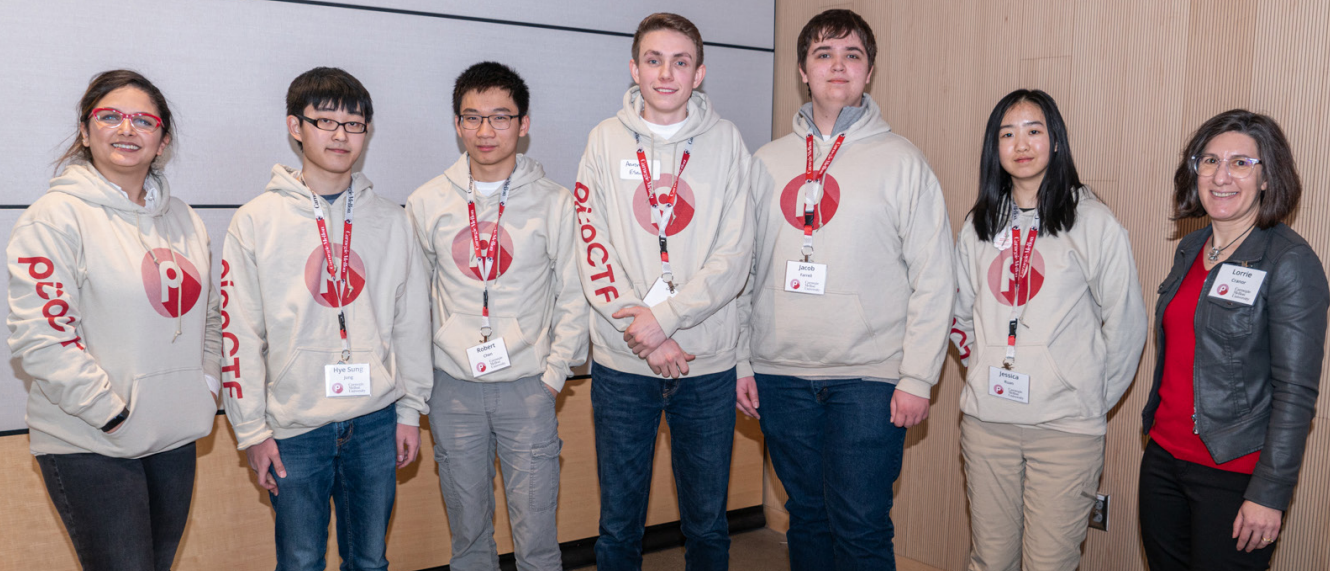
“Capture the Flag” competitions, or CTFs, are popular amongst the cybersecurity community. Contestants are presented with a set of challenges which test their creativity, technical skills, and problem-solving abilities. CTFs allow security enthusiasts test their skills against one another, as well as learn from one another.

picoCTF, meaning “little CTF,” isn’t so little anymore. **Over 110,000 people have competed in the game since its initial launch in 2013.**

The term “hacking” is all about curiosity, exploration, and deeply understanding how something works. Most people who identify as “hackers” are working very hard to protect people and to make technology easier and safer to use. Unfortunately, when most people hear or read about hacking in the news, the story is about people using hacking to do harm, but this couldn’t be further from the true essence of hacking.

PICOCTF was created with the mission of accomplishing two main goals: (1) introduce young people to the field of cybersecurity before they graduate from high school, and (2) identify the best of the best young cybersecurity experts.

The first goal is based on the fact that right now, millions of cybersecurity jobs remain unfilled, putting our own personal security and privacy at risk. Part of the reason these jobs are unfilled is because most people don't learn that cybersecurity is a field they can pursue until college, when most people have already decided on a career path. Playing picoCTF exposes middle and high school students to a burgeoning field they wouldn't have otherwise known about.



TEAM REDPWN, PICOCTF 2019 WINNERS

WHY



picco CTF

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“Problem solving disguised as hacking; hacking disguised as problem solving. This is the stuff that engages students. Would a rose by any other name smell as sweet? No, call it hacking and be okay with it. You guys did, and it was awesome.”

TEACHER FROM OAK HILLS HIGH SCHOOL, OAK HILLS, CA





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64 percent of players are more interested in pursuing cybersecurity as a career as a result of playing picoCTF 2019.

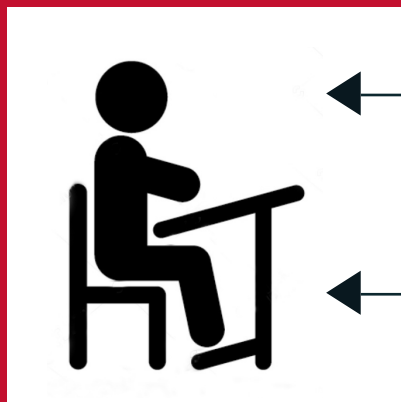
“After the first day we were in the top 10 on the scoreboard. It was at this point that I realized: you know, maybe this is something we’re pretty good at. We ended up finishing in 3rd place, and that’s how I ended up studying computer security in college.”

TIM BECKER, PICOCTF 2013 PARTICIPANT

THE IRREGULAR PATH TO

hacker-dom

In many cases, students have discovered they have a knack for computer security after playing picoCTF. It's hard to measure what makes a good hacker; the best ethical computer hackers didn't necessarily win their high school science fair, nor did they graduate with a 4.0 grade point average or achieve a perfect score on the SAT. Computer security experts have a complex mix of skills, and we believe the easiest way for someone to learn they're good at security is to try it in the first place.



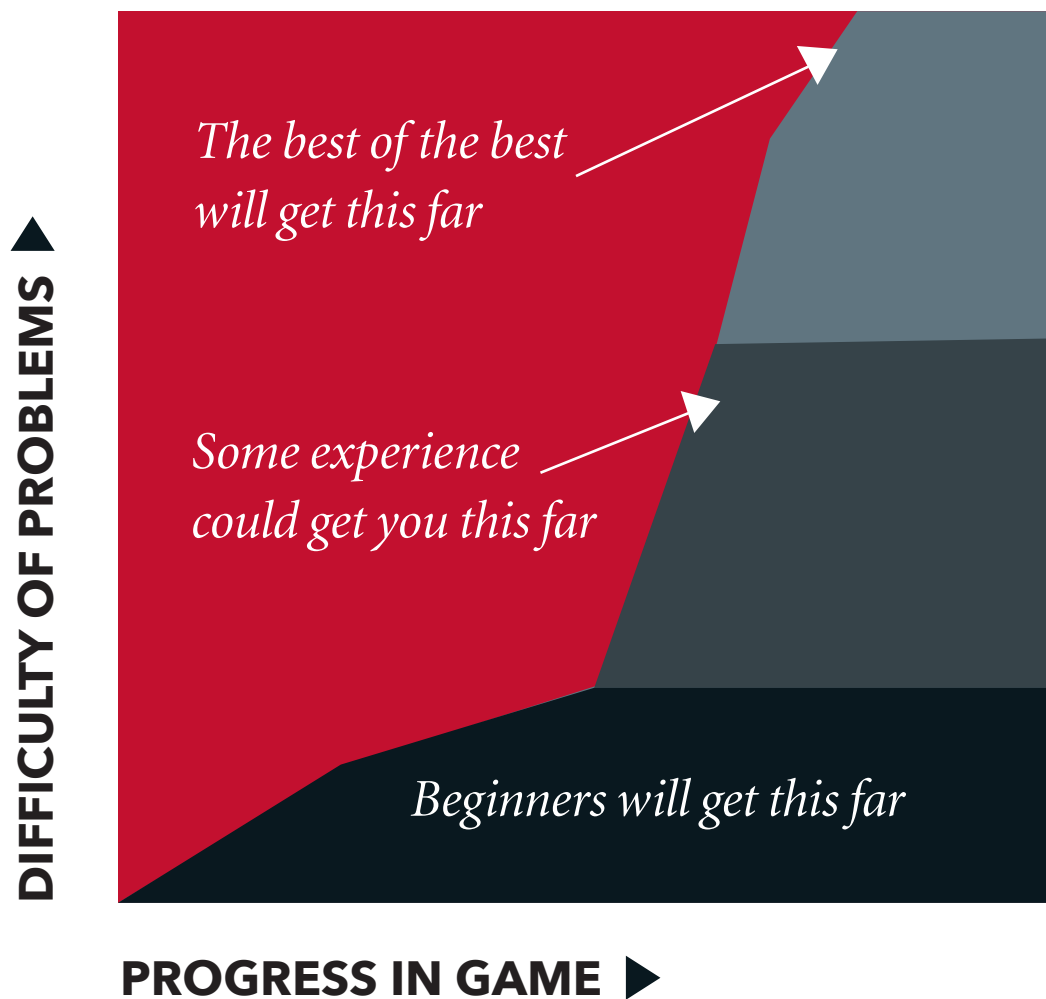
LESS THAN 20% OF US HIGH SCHOOLS OFFERED THE AP CS COURSE IN 2016


ONLY 40% OF PROGRAMS OFFER COURSES IN NETWORK AND/OR INFORMATION SECURITY

get started

- 1** critical thinking skills and the willingness to learn (no prior experience required)
- 2** access to any standard computer with a web browser
- 3** an internet connection
- 4** if you get stuck on a problem, you can use learning resources available at **picoCTF.com**

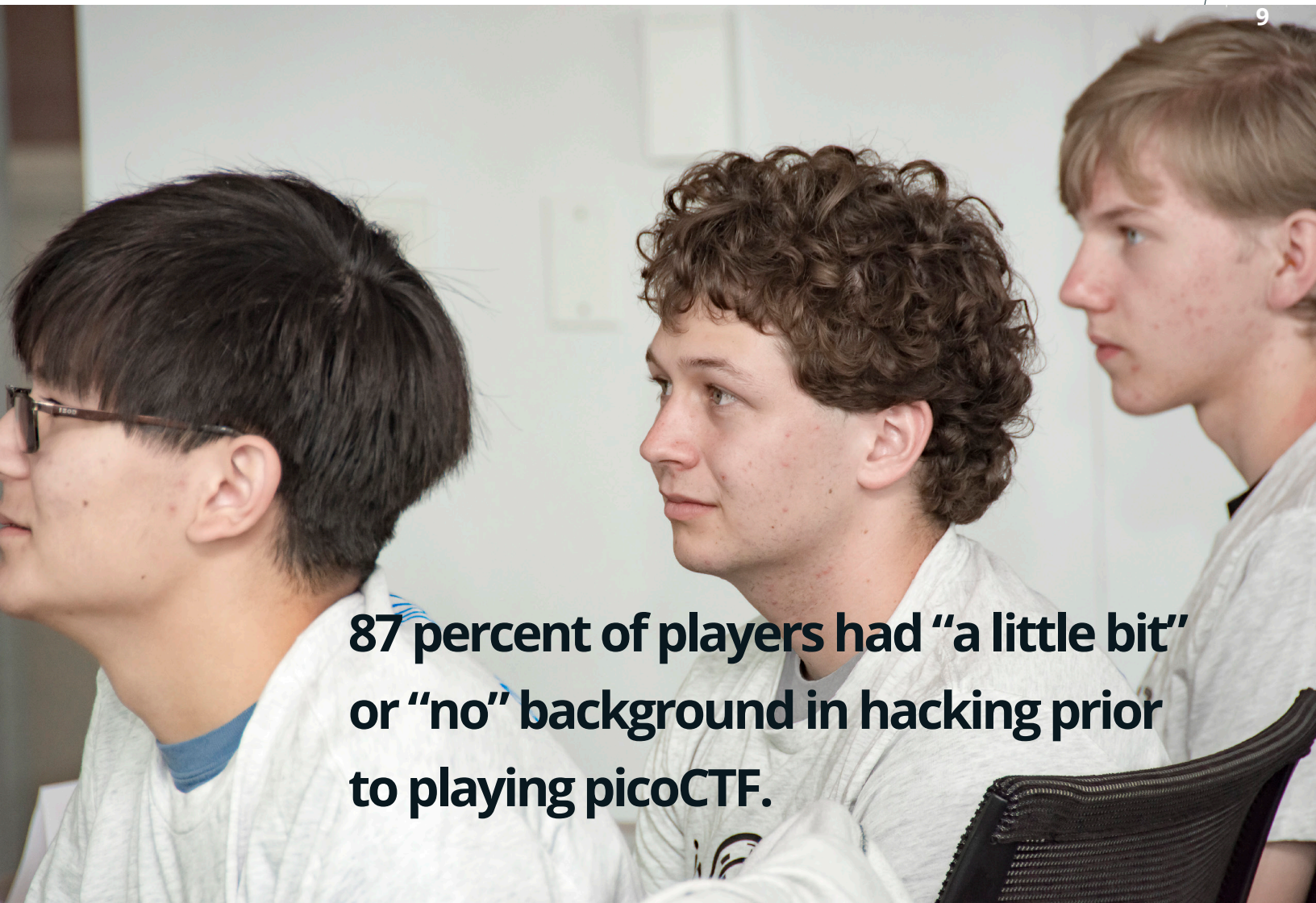
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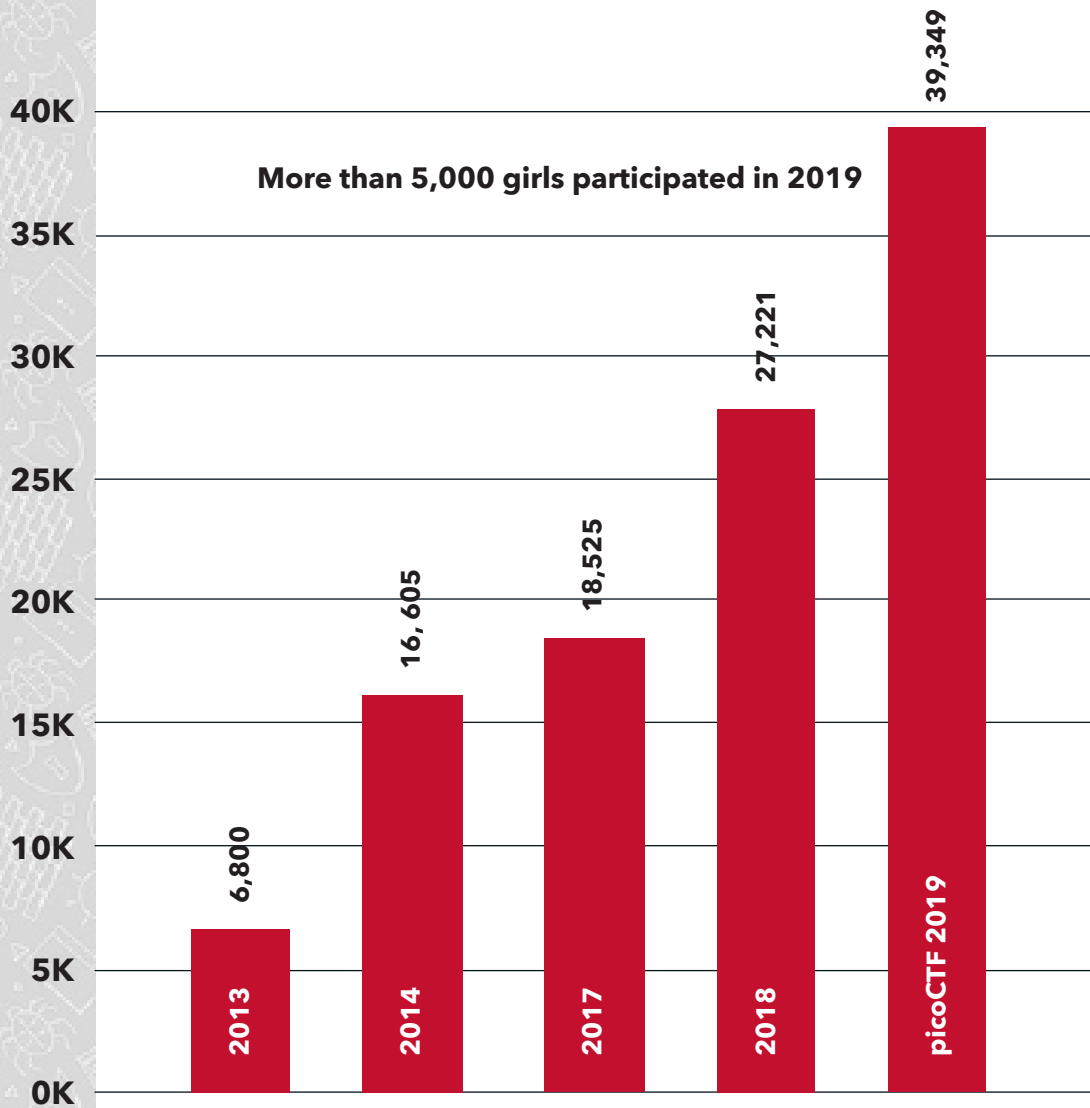


“Students were very engaged. The activity is exciting because students hear about hacking but don’t know where to start. PicoCTF provides them with a great starting point for learning what they don’t know and where to look for more information. Students loved the leaderboard feature, and were fighting to be at the top.”

TEACHER FROM MINEOLA HIGH SCHOOL, MINEOLA, NY



87 percent of players had “a little bit” or “no” background in hacking prior to playing picoCTF.



• GROWING NUMBER OF participants

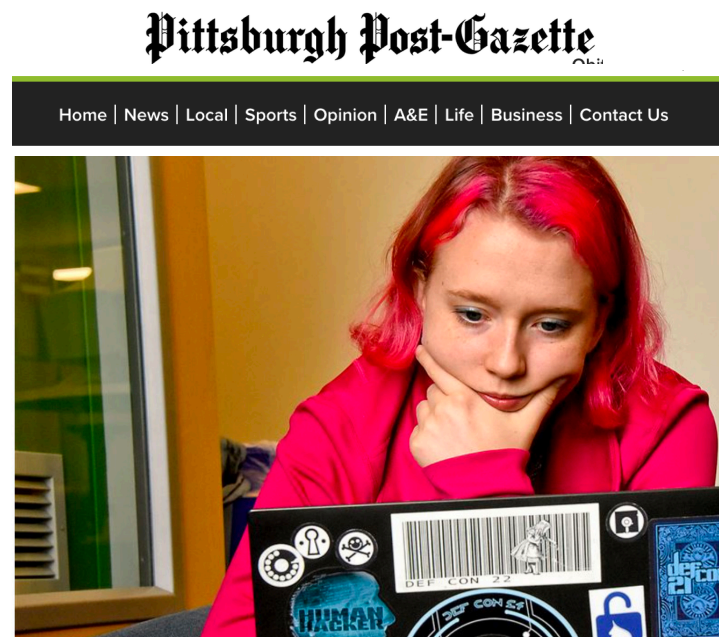
“I enjoyed the questions this year they were really challenging and the beginner questions were a good way for new people. Solving is fun because you learn so much.”

ANONYMOUS PARTICIPANT

WHAT IS BEING SAID

about pico

- **Learning to attack the cyberattackers can't happen fast enough**
Nov 14, 2018 (The New York Times)
- **CMU Cyber Security Contest Promises Kids A Legal Way to Practice Their Hacking Skills** — March 27, 2017 (WESA / NPR)
- **Carnegie Mellon hacking contest aims to get IT Security talent started young**
March 27, 2017 (NetworkWorld)
- **Carnegie Mellon CyLab Challenge: Learn Hacking at School**
March 29, 2017 (iProgrammer)
- **Students Challenged to Test Computer Security Skills**
April 5, 2017 (Campus Technology)
- **Wanted: Hackers. Reward: the best may get a spot at CMU**
April 9, 2017 (Pittsburgh Post-Gazette)
- **To win the cybersecurity war, we need to teach kids how to hack**
April 13, 2017 (Op-Ed in The Hill)
- **Major, well-funded contests entice students to consider cybersecurity careers**
April 24, 2017 (Third Certainty)
- **Why our kids should learn to be hackers**
May 7, 2017 (Canadian Broadcasting Channel Radio)



Wanted: hackers. Reward: the best may get a spot at CMU



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for more information, contact
picoctf.com