



# 2024 >\_student hackathon



@Hack ("At Hack") is a national cybersecurity student hackathon hosted by TECHNATION and Concordia University. The inaugural two-day event took place in March 2024 and welcomed cybersecurity enthusiasts from across Canada to Concordia's downtown Montréal campus for a weekend filled with unique cybersecurity challenges.

Teams of students solved a series of cybersecurity challenges around topics such as AI, machine learning, and reverse engineering. Between challenges, attendees participated in workshops, a career fair, and a networking event.

**33**  
capture-the-flag  
challenges

**623**  
participants  
registered

## Challenge Highlights

The "Ping-Pwng" challenge involved a command injection vulnerability in a PHP web application. Severely restricted server and network conditions made traditional exploitation impossible. To overcome these limitations, participants had to devise a timing attack, converting command outputs into measurable network delays. This innovative approach demanded both creativity and efficiency.

Another challenge, "Facade", was a platformer game delivered with a stripped x86 binary requiring reverse engineering a custom texture encoding format, and modifying its map to unlock a hidden level.

"Delving-Deep" was a forensics challenge where an apparently ordinary image file was revealed to hide recursively nested artifacts ending with the secret flag which can only be found through carving using a tool such as binwalk.

**\$16,000**  
in cash prizes awarded

## Infrastructure

- Hosted on Google Cloud, secured by Cloudflare.
- A CTFd platform, integrated with Authentik, managed challenge delivery and scoring through a live leaderboard.
- Terraform was employed for provisioning and configuration.
- GitHub was used for code management and continuous deployment to the event website.
- Challenges ran on a Google Kubernetes Engine cluster, scaling to accommodate peak demand.



Providing welcoming remarks to participants were **Dr. Mourad Debabbi**, Dean of Gina Cody School of Engineering and Computer Science at Concordia University, **Sami Khoury**, Head of the Canadian Centre for Cyber Security, **Angela Mondou**, President and CEO of TECHNATION, and **Dr. Aiman Hanna**, Senior Lecturer at Concordia University's Department of Computer Science and Software Engineering.

