

# Cameron HOCHBERG, Security Researcher

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## Summary

I'm a Client-Side Developer with a passion for game development and security. I have worked on the MMORPG Dofus, mainly on the network layer of the game and its anti-bot security measures. I participate in CTF competitions and have won awards for best writeups.

## Key Skills

**C#, C++, Rust, Cryptography, PyTorch**

## Experience

### Client-Side Developer — Ankama, Roubaix

September 2022 to present

- Helped with the migration of Dofus from AS3 to C# with Unity
- Reworked the network layer and implemented a new protocol using DotNetty and Protobuf
- Implemented obfuscation for both the game and network layer as anti-bot measure
- Audited the game for security concerns

### Google CTF

July 2020 and July 2021

- Helped xtal team with cryptographic problems
- Exploited a lattice hidden in the challenge **Story**
- Exploited a nonce redundancy in AES GCM for the challenge **Pythia**
- Exploited a vulnerability in the prime generation algorithm for the **Chunk Noris** challenge

### AI Research Assistant — Case Western Reserve University Computer and Data Science department Soumya Ray's research lab, Cleveland OH

September 2019 to December 2020

- Helped to create an environment to test the efficiency of AI assistants using Unity, OpenHaptics Plugin
- Created the Passive and Active AI assistants used during testing Conversion of the experience from **3D to 2D**

### Penetration Test Intern — Armature Technologie, Paris

May 2018 to July 2018

- Created a **web app** for pen testing report generation using **Django**
- Organized the reports database
- Created an associated API for easier access to this database

## Education

### Bachelor & Master of Computer Science — Case Western Reserve University, Cleveland, Ohio (United States), May 2022

- Focus on Networking and Security
- Major Subjects: Computer Security, Internet Security & Privacy, Machine Learning, Advanced Game Design
- Wrote a master thesis on defending against AI Generative Adversarial Network attacks

## Hacking Competitions

CryptoCTF 2022: 10/421

BambooFox CTF 2021: 36/513

Union CTF 2021: 53/466

Google CTF 2021: 62/379 (Best Writeup prize for Pythia)

ALLES! CTF 2021: 24/523

Tokyo Westerners CTF 6th 2020: 59/648

ALLES ! CTF 2020: 48/470

Google CTF 2020: 161/625 (Best Writeup prize for Chunk Norris)

## Technical Skills

**Programming Languages:** C/C++, C#, Rust, Python, SQL, Java, PHP, HTML, Javascript, NodeJS, Unity HLSL

**Technologies:** Git, Godot, Docker, Unix, Django, Sockets, PyTorch, TCP/UDP, DotNetty, Protobuf, IDA pro

## Languages

**French** Mother Tongue

**English** Bilingual (TOEFL 116/120)

**Japanese** Fluent (JLPT 3)

**Chinese** Intermediate

**Spanish** Intermediate

**Korean** Beginner