

IVY FAN-CHIANG

2B Computer Science Student @ University of Waterloo, Security Researcher

📧 contact@ivyfanchiang.ca 📍 Toronto, Ontario 🌐 ivyfanchiang.ca 🏳️‍🌈 they/she [in in/ivy-fan-chiang](https://www.linkedin.com/in/ivy-fan-chiang) 🦖 [hexadecimalDinosaur](https://github.com/hexadecimalDinosaur)

ACHIEVEMENTS

European Cybersecurity Challenge 2024 - First in Guest Teams, Team Canada Competitor

- Competed with Team Canada at the ECSC 2024 capture-the-flag security competition in Turin, Italy as a digital forensics, traffic analysis, and hardware specialist. Team Canada placed first in the guest (non-European) teams category of the CTF.

CyberSci Cybersecurity Challenge 2023-2024 - 4th in Canadian National Finals

- CyberSci is a capture-the-flag security competition for university teams across Canada. Competed in Toronto Regionals and National Finals as a reverse engineering and digital forensics specialist. Selected as a member of Team Canada for ECSC 2024.

Carnegie Mellon picoCTF 2022 - First in Canada, 3rd Globally

- Capture-the-flag security competition for university and high school teams with over 7500 teams and 18000 student competitors globally.

Industry Certifications

- CompTIA Security+ (SY0-701, Dec 2023), AWS Certified Cloud Practitioner (CLF-C02, Oct 2023)

EXPERIENCE

Vulnerability Research Intern

📅 May 2024 - August 2024

Trend Micro

📍 Toronto, Ontario

- Developed proof-of-concept exploit code for **SQL injection**, **remote code execution**, and man-in-the-middle attacks in various security and infrastructure products and developed **Snort** detection rules for attacks.
- Reverse engineered software to find vulnerability root causes and wrote **technical reports** detailing vulnerability details.

DevSecOps Engineer - Co-op Student

📅 September 2023 - December 2023

HOOPP (Healthcare of Ontario Pension Plan)

📍 Toronto, Ontario

- Deployed a high availability Palo Alto firewall cluster to **AWS** and configured deep packet inspection capabilities using **Terraform** scripts and **Azure DevOps** pipelines.
- Developed **Python Lambda** functions for automated **IAM** access key rotation in applications like Panorama, Splunk, and Service Now.

Software Engineering Intern - Backend & Security

📅 January 2023 - April 2023

Dropbase

📍 Toronto, Ontario (Remote)

- Audited the **Python FastAPI** and **SQLAlchemy** powered backend codebase to find and develop mitigations for SQL injection vulnerabilities.
- Designed and developed secure 3rd party API key credential storage and hardened permissions on various API endpoints.
- Wrote the company's **secure programming policy** and technical guides on mitigating vulnerabilities like SQLi during development.

TECHNICAL SKILLS

Security Skills: Digital Forensics, Linux Hardening, Reverse Engineering, Incident Response, Computer Networking

Security Tools: Ghidra, Snort, Radare2, Datadog, Wireshark, Palo Alto Panorama, Identity Access Management (IAM)

Infrastructure Skills: Amazon Web Services (AWS), Linux Administration, PostgreSQL, Ansible, Terraform, Azure DevOps

Programming Languages: Python, C++, Java, JavaScript, Bash, SQL

Frameworks and Tools: Django, Flask, FastAPI, SQLAlchemy, Pandas, NumPy, Git/GitHub, Jupyter

PROJECTS

🔗 Honeypot Server Hosting & Malware Analysis

- Ran **honeypot servers** to gather malware samples and reverse engineered Go malware using **Ghidra** to write threat intelligence reports.

🦖 pycDisGUI

- **GTK** graphical user interface for **Python bytecode disassembly** that provides easy access to disassembled classes, methods, functions, and PYC file information. Developed for CTF **reverse engineering** and malware analysis.

EDUCATION

Candidate for Bachelor of Computer Science (Co-op)

📅 September 2022 - April 2027 (Expected)

University of Waterloo

📍 Waterloo, Ontario