

IVY FAN-CHIANG

1A Systems Design Engineering Student @ University of Waterloo, Open Source Developer

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📍 Toronto, Ontario

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♀️ they/them

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EXPERIENCE

Software Engineering Intern

Dropbase

📅 Jan 2023 - Apr 2023

📍 San Francisco, California (Remote)

Club Vice-President

Mackenzie Computer Programming Team @ William Lyon Mackenzie C.I.

📅 Oct 2021 - Jun 2022

📍 Toronto, Ontario

- Lead a team of executives responsible for the management of the club's online judge, CTF platform, and web servers to run the club's monthly programming contests and weekly events.
- Used **Linux**, **Python**, **Django**, **NGINX**, and **MySQL** to develop a Capture-the-Flag competition platform which was used to create an inter-school CTF competition with over 100 participants.

ACHIEVEMENTS

• Carnegie Mellon picoCTF Computer Security Competition

Capture-the-flag style security competition where high school teams solve cryptography, forensics, reverse engineering, web, and binary exploitation challenges

- picoCTF 2022: First in Canada and 3rd internationally
- picoCTF 2021: Second in Canada and 7th internationally

• CyberPatriot & CyberTitan Cyber Defence Competitions

CyberPatriot is an American cybersecurity competition where high school teams secure virtual networks running **Linux**, **Windows**, and **Cisco** hardware. CyberTitan is the Canadian National Finals of the CyberPatriot competition.

- 2021-2022 CyberPatriot XIV American National Finalist (Finished 5th of 1957 teams)
- 2022 CyberTitan V and 2021 CyberTitan IV National Champion
- 2020 CyberTitan III Bronze Medallist

PROJECTS

🔗 pycDisGUI

- **GTK** graphical user interface for **Python bytecode disassembly** powered by the xdis disassembler that provides easy access to disassembled classes, methods, functions, and PYC file information.

🔗 octoprint-cli

- Command line interface for **OctoPrint 3D printer control servers** that can be used to manage print jobs, server files, and control printer temperatures and G-code. Allows server management from the terminal or SSH.

More projects can be found on [Github](#) and on my [website](#).

EDUCATION

Bachelor of Applied Science Candidate - Systems Design Engineering

University of Waterloo

📅 September 2022 - April 2027

📍 Waterloo, Ontario

TECHNICAL SKILLS

- **Programming and Scripting Languages:** Python, Java, JavaScript, Processing, Bash, Arduino
- **Embedded Electronics:** Arduino, Raspberry Pi, Raspberry Pi Pico, CircuitPython
- **Security Skills:** Digital Forensics, Linux Hardening, Reverse Engineering, Cryptography, Incident Response
- **Programming Frameworks and Tools:** Django, Flask, PyGObject/PyGTK, Git/GitHub, Jupyter Notebook
- **Server Software:** Linux, NGINX, Wireguard, Supervisor, Linode
- **Computer Aided Design Software:** Fusion 360, SolidWorks, Sketchup, AutoCAD, Blender