Anthony Chen

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📖 Skills

Languages | Python, C++, C, Bash, Java, JS, TypeScript, PHP, SQL, Solidity, PowerShell, GLSL
Technology | Flask, Node, React, PyCrypto, jQuery, Django, MongoDB, SFML, NumPy, Pygame
Development | Linux, Git, GitHub, Pytest, Snap, GDB, Make, Wireshark, Valgrind, Gradle, LaTeX

🕐 Experience

Software Member   May 2023 – Present
Waterloo Rocketry   *Waterloo, Canada*
- Took on sensor setup and operation-critical telemetry dashboard creation/monitoring during **5 engine tests**
- Maintained rocket engine simulator and migrated **10+ simulation parameters** to new configuration system

Team Captain   Jun 2022 – Jun 2023
FIRST Robotics Competition   *Toronto, Canada*
- Co-founded team, recruiting over a hundred students and raising **$75,000+** with demos and outreach events
- Coordinated build process by planning **20+ workshops** for the building, electrical, and software subteams

Co-Founder   Oct 2020 – Jun 2023
X Series CTF   *Toronto, Canada*
- Promoted security awareness with **weekly workshops** on cryptography, forensics, and OSINT research skills
- Organised contests and created challenges with **150,000+ total submissions** on the above CTFOJ platform

QA Engineer   May 2021 – Aug 2021
RubixDAO   *Remote*
- Wrote **90+ smart contract tests** with PyTest to achieve 100% test coverage, contributed to on-chain demo

🔨 Projects

🔗 **UWMap** | C++, ESP32, FastAPI, Next.js
- Programmed and deployed **8 hardware nodes** across campus to track and report crowd densities via API

🐙 **dogecoin-unofficial** | Bash, GitHub, Linux, Snap
- Investigated **40+ reports** of issues from Linux users attempting to install the official Dogecoin Core software
- Wrote Bash scripts to retrieve official binaries, verify multiple developer signatures, and run **250+ tests**
- Packaged Snap for amd64, arm64, and i386, active users in **35+ countries**, accepted and merged upstream

🐙 **COSine** | CSS, HTML, Node, React
- Won **2nd Overall** in Major League Hacking PrideHacks, mid-hackathon rebuild from JavaScript to TypeScript
- Integrated OpenAI with prewritten storylines to generate interactions that **enhance societal awareness**

🔗 **CTFOJ** | Bootstrap, Pytest, Python, SQL
- Collaboratively created Flask platform with **1300+ registered users** to host interactive security challenges
- Implemented admin console, logs and **90% coverage** with Pytest; fixed Markdown render and SQL bugs
- Used CAPTCHA, backups, rate limiting, and 2FA to ensure **99.99% availability** and prevent security breaches

🐙 **2022-robot** | C++, GitHub, Gradle, WPILib
- Led a team of **4 developers** to create autonomous and tele-operated code to control drivetrain subsystem
- Wrote control code using slew rate limiting with a **PID controller** to improve robot acceleration and turning

🎓 Education

University of Waterloo   Sep 2023 – Present
Bachelor of Software Engineering, Honours   *Waterloo, Canada*
Combinatorics and Optimization Minor   *85% Cumulative Average*
- Cohort Academic Representative