

# 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

## 🔧 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

## 🕒 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
  - Led team to qualify for and compete in world championships with **daily meetings** during inaugural season
  - 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

## 🎓 Education

- University of Waterloo** Sep 2023 – Present  
*Bachelor of Software Engineering, Honours* *Waterloo, Canada*  
*Combinatorics and Optimization Minor* *90% Cumulative Average*
  - Cohort Academic Representative