

# Anthony Chen

📍 Waterloo, Canada | 📞 +1 647-446-5824 | ✉ info@chenanthony.com  
🌐 chenanthony.com | 🌐 Anthony Chen | 🌐 slightlyskepticalpotat

## 📖 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

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|--|---|
| <b>Software Member</b><br><i>Waterloo Rocketry</i>   | May 2023 – Present<br><i>Waterloo, Canada</i> |
| <ul style="list-style-type: none"><li>Took on sensor setup and operation-critical telemetry dashboard creation/monitoring during <b>5 engine tests</b></li><li>Maintained rocket engine simulator and migrated <b>10+ simulation parameters</b> to new configuration system</li></ul>  |   |
| <b>Team Captain</b><br><i>FIRST Robotics Competition</i>   | Jun 2022 – Jun 2023<br><i>Toronto, Canada</i> |
| <ul style="list-style-type: none"><li>Co-founded team, recruiting over a hundred students and raising <b>\$75,000+</b> with demos and outreach events</li><li>Led team to qualify for and compete in world championships with <b>daily meetings</b> during inaugural season</li><li>Coordinated build process by planning <b>20+ workshops</b> for the building, electrical, and software subteams</li></ul> |   |
| <b>Co-Founder</b><br><i>X Series CTF</i>   | Oct 2020 – Jun 2023<br><i>Toronto, Canada</i> |
| <ul style="list-style-type: none"><li>Promoted security awareness with <b>weekly workshops</b> on cryptography, forensics, and OSINT research skills</li><li>Organised contests and created challenges with <b>150,000+ total submissions</b> on the above CTFOJ platform</li></ul>  |   |
| <b>QA Engineer</b><br><i>RubixDAO</i>  | May 2021 – Aug 2021<br><i>Remote</i>          |
| <ul style="list-style-type: none"><li>Wrote <b>90+ smart contract tests</b> with PyTest to achieve 100% test coverage, contributed to on-chain demo</li></ul>  |   |

## 🎓 Education

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|--|---|
| <b>University of Waterloo</b><br><i>Bachelor of Software Engineering, Honours</i><br><i>Combinatorics and Optimization Minor</i> | Sep 2023 – Apr 2028<br><i>Waterloo, Canada</i><br><i>90% Cumulative Average</i> |
| <ul style="list-style-type: none"><li>Cohort Academic Representative</li></ul>   |   |