Anthony Chen

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📖 Skills

Languages | Python, C++, C, Java, JavaScript, TypeScript, Bash, SQL, PHP, Solidity, PowerShell, Scala, VHDL

Tech | Django, DynamoDB, EC2, Flask, GCP, Lambda, MongoDB, Node.js, NumPy, PostgreSQL, Qt, React, S3

Development | GDB, GTest, Ghidra, Git, GitHub, Gradle, Linux, Make, Pytest, Snap, Valgrind, Wireshark

🕐 Experience

Software Engineer Intern   May 2024 – Aug 2024
Amazon   *Vancouver, Canada*

- Designed and implemented **20M+ row** data warehouse microservice with live updates and ETL operations
- Created Athena database for on-call developers, supporting standard SQL and speeding up queries by **30x**
- Developed BFF and React UI allowing other teams to submit sanitized queries, view results, and export data
- Wrote backfill script, configured automatic backups, and imported **4 years** of past data into the warehouse

Software Member   May 2023 – Present
Waterloo Rocketry   *Waterloo, Canada*

- Created telemetry dashboard and set up sensors to monitor operations-critical data 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 **100+ students**, raising **$75,000+**, and planning **20+ technical workshops**
- Led software team to create autonomous code, PID controller, and acceleration profiles for robot drivetrain

QA Engineer   May 2021 – Aug 2021
RubixDAO   *Toronto, Canada*

- Contributed to decentralised lending platform with cryptocurrency collateral and a USD-pegged digital token
- Wrote **90+ smart contract tests** with Pytest to achieve 100% test coverage, implemented on-chain demo

🔧 Projects

🔗 **UWMap** | C++, ESP32, FastAPI, Next.js

- Programmed and deployed **8 ESP32 microcontrollers** across campus to track and report crowd density
- Collaborated with other developers to create and deploy map with real-time updates and historical data

⚙ **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 cryptographic 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.js, React

- Won **2nd Overall** at Major League Hacking's PrideHacks event with a participatory multimedia experience
- Integrated OpenAI LLM with pre-determined story paths to enhance awareness of modern social issues

🔗 **CTFOJ** | Bootstrap, Pytest, Python, SQL

- Jointly created Flask platform with **1300+ registered users** to host interactive cybersecurity challenges
- Used CAPTCHA, backups, rate limiting, and 2FA to ensure **99.99% availability** and prevent data breaches

🎓 Education

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

- President's Scholarship of Distinction, Cohort Academic Representative