

RUBEN MAXWELL

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Education

UNIVERSITY OF TORONTO | Honours Bachelor of Science, Computer Science

Toronto, ON | 2025-2029

LANGUAGES: Python, Java, C/C++, JavaScript/TypeScript, SQL

FRAMEWORKS: React, Node.js, Express.js, PostgreSQL, AWS, Git/GitHub

SKILLS: Docker, Linux, Bash, REST APIs, Firebase, MongoDB, MySQL, Postman, CI/CD, Unit Testing, Raspberry Pi

Experience

Fullstack Developer | **MY CODE CLUB**

Mississauga, ON | July 2025 – August 2025

- Led the redesign of the company's main website, replacing an outdated interface with a cleaner, responsive front-end built in **HTML, CSS, JavaScript**, and **Tailwind CSS** to improve usability across desktop and mobile devices.
- Fixed navigation and layout issues on the company website, improving mobile responsiveness and reducing page formatting issues by **25%**.
- Reorganized page structure and content sections, reducing the time needed to update website content by **30–40%**.
- Used **Firebase** to host the website and manage workshop information so the team could update content more easily, added **Mailchimp** for newsletter sign-ups, and helped structure the site for future online payment features.

Software Developer | **QMORPHIX LLC**

Toronto, ON | July 2025 – August 2025

- Worked with noisy **MRI imaging data** to test quantum machine learning methods for image reconstruction and denoising by applying **VQEs, QNNs, and quantum kernel methods** to compare performance on MRI data.
- Built and tested quantum circuits using **Qiskit, PennyLane, and Cirq**, improving simulation accuracy by **7%** and reducing training time by **12%**.
- Evaluated results across **112 datasets**, improving reconstruction quality by **61%** and reducing noise impact by **21%**.

Software Engineer | **FOURTH DIMENSION**

Toronto, ON | May 2026 - August 2026

- Developed and deployed containerized microservices using Docker, improving deployment reliability by **12%** and reducing environment setup time by **10%** across distributed backend systems.
- Engineered scalable event-driven workflows with RabbitMQ and optimized MongoDB queries/indexing to process **50+ requests/messages daily**, reducing latency by **12%** and improving system throughput by **9%**.
- Built and maintained high-performance backend APIs in an agile engineering environment, contributing to **4+ production releases** while improving system stability and debugging critical production issues.

Projects

DECYP3R | **FIREBASE/REACT MOBILE APP** 

- Built a cross-platform daily microgame app for **iOS, Android, and Web** using **React Native, Expo, and TypeScript**, with 6 mini-games, daily challenges, and streak tracking for puzzle enthusiasts on the go.
- Used **Firebase Auth** for anonymous login and **Firestore** to store scores and leaderboard data, making it possible to support live rankings and repeat daily play with **daily attempt limits** to keep gameplay fair.
- Launched the app in **beta testing**, achieving **95%+ crash-free sessions**, **under 2-second leaderboard refresh times**, and a **75% drop in duplicate submissions**.

FORGEFOUNTAIN | **REALTIME MARKET OPPORTUNITY ANALYZER** 

- Built a market tool for the **Hypixel SkyBlock** economy to help users find profitable trades faster using live market and recipe data, reducing manual price-checking time by **70%**
- Helped users spot better opportunities, improving **average per-trade margin** by up to **60%** in strong market windows.
- Kept the platform reliable during live use so users could still access useful pricing data when outside API requests failed or were limited.

URSA CASE COMPETITION | **SKIN CANCER DETECTION ANALYSIS** 

- Built a skin cancer classification project using the **HAM10000 dataset (10,015 images)** to distinguish melanoma vs. nevus, with a focus on both model performance and fairness across patient groups.
- Trained image models in Python and **TensorFlow/Keras**, improving validation performance to roughly **0.90 AUC** and reaching about **89–91% validation accuracy** during testing.
- Evaluated results by sex using Fairlearn, identifying a **4.45% accuracy gap** and a **4.45% false negative rate gap** to show where model performance differed across groups.