

# TONY KWOK

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Full-stack engineer (TypeScript, React, Google Cloud). Scaled SaaS from pre-seed to profitability, tripling revenue and 10x throughput via product optimization, CI/CD automation and hardening security.

## EDUCATION

University of Waterloo, Bachelor of Computer Science and Financial Management (CFM) Co-op - 2022

## SKILLS

**Programming:** TypeScript, React, Python, Javascript, Express, SQL, Node.js, Svelte, Shell, Bash, Flask

**Technologies:** Pandas, Vite, Git, Docker, MySQL, Firebase, AWS, GCP, Power BI, Power Automate, Jenkins, Jest

## EXPERIENCE

**Software Developer | Alethea Medical | React, Typescript, Firebase, Vite, Typesense** 📍 Remote 📅 Jan 2024 – Current

- Grew monthly revenue **\$50k -> \$125k**, users **700 -> 2k**, and eConsults **1.3k -> 3.3k** in 12 months.
- **Restored deployments and slashed build times 3x** by eradicating two years of tech debt; re-architecting the Typescript, React, and Firebase codebase; and migrating to Vite.
- **Hit profitability** by launching premium subscriptions and batched fax alerts, sustaining **7 % MoM revenue, 10 % user growth**.
- Cut client onboarding from **days to minutes** by automating the workflow with GCP Cloud Functions, eliminating manual errors.

**Full Stack Engineer - Pro Bono | Myriade | Node.js, PostgreSQL, Express** 📍 Remote 📅 June 2022 – Dec 2023

- Turbocharged Monero payout API by converting to non-blocking Node.js; **throughput jumped 10x (30 -> 300 req/s)**
- Fortified finance endpoints with auth and balance-validation middleware, **eradicating overdrafts and fraud** across **1k+** monthly transactions.
- Re-indexed PostgreSQL ledgers, slicing mining-history queries **5s -> 400ms** and shaving **30%** off DB CPU.

**Software (Innovation Catalyst) Intern | NPX | SQL** 📍 Remote 📅 Jan 2021 – Apr 2021

- Slashed report generation **2 days -> 5 min** by automating SQL and Power Apps pipeline - freed hundreds of engineer hours and secured **\$1M** contract.
- Architected reusable Power Apps component library adopted by six developers, saving **30 min per page** across 20-page apps and standardizing UI.
- Re-engineered database schema and views, halving bug-fix cycles and shrinking query latency **30s -> 1s**.

**Full Stack Developer Intern | 360 Insights | React, Node.js, Jenkins, Jest** 📍 Whitby, ON 📅 Jan 2020 – Apr 2020

- Deployed Node.js health-check API for 10+ microservices to GCP, cutting mean-time-to-diagnose **30 min/incident** and reclaiming **\$15k/yr** for 100-engineer org.
- Authored reusable React component kit, cutting new-page development effort **25% (~1 h)**, stamping out recurring UI bugs, and unifying UX across four projects.
- **Purged legacy defects** and wrote exhaustive Jest suites, lifting critical-path coverage near **100%** and enforcing quality gates in Jenkins CI.

**Data Specialist Intern | Quarter4 | Python, MySQL, Pandas, Numpy** 📍 Guelph, ON 📅 May 2019 – Aug 2019

- **Secured \$150k pre-seed funding** by supercharging model accuracy **50% -> 85%** via Pandas and MySQL ETL across 40 k rows.
- Engineered Markov-chain text engine for sports stats, a key feature driving pre-seed funding

**Business Application Developer Intern | Marsh | VBA, MS Excel, MS Access** 📍 Toronto, ON 📅 Aug 2018 – Dec 2018

- **Eliminated manual reporting in month #1** by deploying SQL and VBA Access app, slashing **300 hrs/yr** and saving **\$10k**.
- Accelerated insight delivery and sliced data-entry errors **40%** by revamping client dashboards.

## PROJECTS - see more at [tonykwok.info](https://tonykwok.info) 📄 / [ACHIEVEMENTS](#) / [EXTRACURRICULARS](#) / [INTERESTS](#)

**Pneumonia Detector** 📄 📄 | Python, Fast.ai, Gradio | Deep Learning model **with a 98.5% accuracy** in diagnosing pneumonia

**SoulDog** 📄 | Javascript, SQL, Knex.js | Dog-owner matching platform, **recognized as the top project** in the DB management class

**Hack the North: Winner (VoiceFlow API Category)**, Waterloo Microsoft Imagine: 4th Place

Kaggle - Intermediate Machine Learning, Goldman Sachs Experience Program, J.P. Morgan SWE Experience Program

Varsity Track and Field (National top 8), Varsity Cross Country, Arts Student Union: VP Finance, Generative AI, Clidynamics