Ricky Tang

437-243-5327 | rickytangdev@gmail.com | linkedin.com/in/ricky-tang-dev | github.com/rickytang666 | rickytang.dev

Education

University of Waterloo — GPA: 3.9/4.0
Honours Bachelor of Software Engineering (Co-op) — *Awarded $11,000+ in scholarships*

Technical Skills

Languages: Python, TypeScript/JavaScript, SQL, Go, Ruby, Java, C#, C++, Bash, Swift, C, HTML, CSS
Technologies: React, Next.js, Node.js, Express, FastAPI, Ruby on Rails, Spring Boot, tRPC, RESTful APIs, GraphQL, Temporal
Tools: Git, Docker, Linux, CI/CD, Redis, PostgreSQL, MySQL, SQLite, MongoDB, Firebase, Supabase, AWS, GCP, Cloudflare, Vercel

Experience

Hamming AI (YC S24) | *TypeScript, Next.js, tRPC, Temporal, PostgreSQL, Prisma* — May 2026 – Present
Software Engineer — *San Francisco, CA*

- Architected **Temporal** signup outreach pipeline with **Exa** research, LLM extraction, **5 lead states** and 4 priority tiers
- Eliminated false timeout warnings for OpenAI STT-only runs via **provider-aware** Temporal external dependency policy
- Built GTM pipeline harvesting **7022** profiles via macOS app-container cache and SQLite mining with **100% field coverage**
- Implemented **schema-invalid** LLM test repair: normalize, dedupe, quality-gate before fallback, backed by 69 unit tests

WAT.ai x **Bindwell (YC W25)** | *Python, FastAPI, DeepEval, Weaviate, TypeScript, React* — Jan. 2026 – Present
Software Engineer — *Waterloo, ON*

- Overhauled async BFS EPA crawler with mime sniffing and retry logic, boosting throughput **59%** and fresh PDF yield **227%**
- Engineered crash-resilient APVMA/FSANZ crawler with SQLite queue, per-prefix auto-blocking, harvesting **3900+** pages
- Architected multi-agent RAG pipeline (intent router, query architect, guardrail) over Weaviate **BM25 + vector** search
- Achieved **1.00 faithfulness** (zero hallucinations) and **1.00 answer relevancy** via DeepEval across 5 golden test questions

Waterloo Aerial Robotics Group | *Python, Flask, JavaScript, React, OpenCV, MAVLink, Docker* — Oct. 2025 – Apr. 2026
Software Engineer — *Waterloo, ON*

- Streamlined ground station UI with one-click pause/resume for missions, eliminating manual switching for **50+ operators**
- Reduced mission failure recovery time from 30s+ to 3-5s for command pipeline operations (**85% improvement**)
- Engineered full-stack control pipeline with React frontend, Flask-SocketIO backend, and MAVLink for real-time commands
- Implemented OpenCV object detection in aerial imagery and MAVLink telemetry streaming, achieving **80%+ IoU accuracy**

Projects

Tark – Google Earth for Game Devs | *Python, FastAPI, TypeScript, Next.js, Redis, Prometheus, Leaflet, SciPy, Numpy, Pytest*

- Developed web app turning locations into game-ready 3D meshes in **<15 seconds** (typically weeks of manual modeling)
- Processed Mapbox elevation and satellite imagery to generate terrain meshes at **45K+ triangulated faces per second**
- Extracted **2000+ building footprints** from OpenStreetMap and generated textured .obj files for Unity/Blender workflows
- Productionized with **Redis** job store, reducing latency by **30%** via asyncio workers with **98.2% accuracy** in pytest suites

BrainLattice – PDF to Obsidian Vault Generator | *Python, FastAPI, PostgreSQL, Redis, TypeScript, React, AWS, Cloudflare*

- Developed React + FastAPI web app and **npm CLI** converting PDFs into Obsidian vaults with NetworkX graph generation
- Reduced token costs by **70-80%** via global concept seeds and batched extraction replacing full-document context caching
- Accelerated processing **70%** via parallelization and embedding deduplication, generating **100+ node graphs** in **<1 minute**
- Built event-driven pipeline using **QStash + Lambda + R2** with **pgvector RAG** for on-demand notes, reaching **300+ installs**

Quota – VS Code Extension for Cost Optimization | *TypeScript, VS Code API, LangChain, Python, FastAPI, Next.js, MongoDB, GCP*

- Developed VS Code extension analyzing API/cloud/DB overhead with inline annotations and optimization suggestions
- Achieved <7s initial indexing and **<1s** refresh analysis via file hash caching, outperforming AI IDEs by **47x in speed**
- Implemented hybrid AST + regex parser detecting **2x more cost issues** than AI IDEs while saving **~50k tokens per check**
- Architected RAG-powered web sandbox with **LangChain + FAISS** delivering architectural recommendations in **<2s**

Awards

- DeltaHacks 2026: **1st Place Overall** | Hack Western 2025: **Best AI Application Built with Cloudflare**
- GenAI Genesis 2026 (Canada's largest AI hackathon): **Top 10 Overall** (out of 250+ teams)