Victor Huang

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Education

University of Waterloo — Expected Graduation 2028
Bachelor of Computer Science, Honours Co-op — *Waterloo, ON*

Skills

Languages: Python, C, C++, TypeScript, JavaScript, Java, SQL, HTML, CSS, Scheme, Haskell, R
Frameworks/Libraries: Express.js, Prisma, Flask, FastAPI, Next.js, React, Node.js, Tailwind, Mastra, Pandas, NumPy
Tools: Docker, Kubernetes, AWS, GCP, PostgreSQL, MongoDB, Redis, GraphQL, Arduino, Linux, Vim, Git

Experience

ETHGlobal — *San Francisco, CA*
Software Engineer | *TypeScript, React, GraphQL, Mastra, MySQL, Prisma, Vercel* — May 2026 - Aug 2026

- Architected and implemented **X/Twitter referral system** for **10k+ attendees**, handling **460k+ USD** Ethereum traffic, and building post verification (see posts) on Mastra agent with Grok's X Search toolcall and GraphQL resolvers.
- Shipped a full-stack **QR networking platform** for **2,000+ ETHConf attendees**, owning schema design, GraphQL resolvers, and building modern Next.js dashboard with hybrid rendering and suspense boundaries.
- Extended **internal AI agent** with tools for automatic sponsor account creation, retrieving user data and company logos from X/Twitter profiles, processed **100+ companies** and shaved **20+ hours** off logistic workflows per event.

Hack the North — *Waterloo, ON*
Backend Engineering Lead — Nov 2025 - Present

- **Led 4 backend engineers** across Hacker Directory, mailing list revamp, account management, and CI/CD migration.
- Launched Hacker Directory's **semantic-search pipeline** to serve **1k+ hackers** in teammate-matching with Chroma vector retrieval and Cohere reranking; reduced its api costs by **67%** with Redis rate limiting across **8 Kubernetes** pods.
- Modified **core RBAC and GraphQL server** logic to restrict user access and enforce valid application-stage transitions in pipeline handling **9k** applications, in response to critical auth exploit , and authored offical response .
- Reviewed **220+ PRs** and **4 major RFCs**, driving decisions on architecture, data modeling, security, and performance.

Backend Software Engineer | *Typescript, Express.js, Node, GraphQL, Postgres, K8s, Docker* — Mar 2025 - Nov 2025

- Owned design and development of database schema and **30+ GraphQL endpoints** on **Express.js** server for an event gamification system, supporting features for **1500+** users with quest tracking, point transactions, and user analytics.
- Resolved **20+ Kubernetes pod incidents** across **GCP** deployments and enabled **13 platform engineers** to securely develop against staging data by integrating **Cloud SQL Proxy** and **GCP Secret Manager** into the local dev flow.

TOOLBX — *Santa Monica, CA*
Software Engineer | *Typescript, React, Redux, GraphQL, Jest, Enzyme, SQL, AWS* — Sep 2025 - Dec 2025

- Shipped **20+** fullstack features to production, including reusable TypeScript React components and robust **GraphQL** resolver implementations, delivering reliable data flows **100k+ active users**.
- Developed payment promise and auto-pay features for material suppliers, supporting **$4M+ USD** in daily volume.

Projects

gpix | *Javascript, Electron, WebGL, Gemini*

- Built **cross-platform** screen capture tool with **Electron** and **WebGL** overlay for fast screenshot-to-LaTeX conversion.
- Delivers **>95%** LaTeX conversion accuracy for inline and standalone equations, **<500ms** from capture to clipboard.

Sentilysis | *Typescript, React, Tailwind CSS, FastAPI, MongoDB, Gemini*

- stock-sentiment dashboard that generates Gemini-powered sentiment summaries for **20+ stocks** at SpurHacks
- Architected **MongoDB** Atlas schema to ingest and persist data from asynchronously scheduled web-scraping jobs.

Apocalift | *C++, JavaScript, Python, Flask, Arduino, HTML/CSS*

- Built **REST endpoints** for a RC vehicle rental platform using **Flask**, featuring **real-time video** streaming capabilities.
- Optimized endpoints to transmit user controls to the RC vehicle via **ESP32** wireless communication.

Theater Movers | *C++, Arduino, Git, KiCad*

- Prototyped a 3D-printed intelligent lighting fixture with **dual-axis rotation** for community stage productions.