

# Ri Hong

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10x Hackathon Winner · Full-Stack & Cloud Engineer · DevOps & Infrastructure · Applied Machine Learning

## EDUCATION

### University of Waterloo

Waterloo, ON

Bachelor of Computer Science (Co-op) · GPA: 3.9/4.0

2022 – 2027

- Relevant Coursework: Algorithms, Data Structures, Databases, Object-Oriented Programming, AI, ML

## TECHNICAL SKILLS

**Languages:** Go, Python, C/C++, TypeScript, JavaScript

**Technologies:** Docker, Kubernetes, Terraform, gRPC, PostgreSQL, AWS, Temporal, React, Next.js, Linux

## EXPERIENCE

### Groq

Sept 2025 – Dec 2025

*Cloud Engineering Intern*

Toronto, ON

- Engineered multi-region infrastructure with Terraform, Kubernetes, Kustomize, and Flux on GCP and Groq hardware, enabling horizontally scalable AI/ML workloads and cutting deployment time by 24%.

### Walnote.ai

Aug 2025 – Present

*Founder & CTO*

Toronto, ON

- Launched an AI platform combining GPT-5 with Manim to auto-generate explainer videos; processed 1,000+ animations with a Celery + FastAPI pipeline.
- Accelerated generation by segmenting code generation and running distributed GPU rendering, reducing render latency from 12s to 2s via a pipelined streaming workflow.
- Scaled secure rendering with Docker, FFmpeg, Cloudflare R2, and PostgreSQL; raised \$20k pre-seed and led product strategy from prototype to production.

### Base Power

Jan 2025 – Apr 2025

*Software Engineering Intern*

Austin, TX

- Engineered scalable backend and infrastructure solutions in a high-ownership environment, optimizing trading workflows for a Series B energy startup.
- Reduced simulation time by 5x by redesigning the simulation engine for Kubernetes-based parallel processing and monitoring with OpenTelemetry.
- Migrated local simulations to Temporal Cloud with intermediate state persistence in AWS S3 for fault-tolerant retries.
- Implemented concurrent batch publishing with Goroutines, increasing BigQuery throughput by 32%, and reduced redundant runs by 47% via input hashing.

### GeeseHacks

May 2024 – Feb 2025

*Lead Software Engineer*

Waterloo, ON

- Led an 8-person engineering team to build core infrastructure for a 600+ attendee hackathon.
- Developed a real-time judging system with Next.js, PostgreSQL, and REST APIs, handling 5,000+ score updates under 200ms latency.
- Built CI/CD workflows with GitHub Actions for automated deployment to staging and production.

### Trend Micro

May 2024 – Aug 2024

*Software Engineering Intern*

Ottawa, ON

- Modernized a 1.2M-line Java codebase by upgrading Deep Security Manager from JDK 8 to 11, unlocking 40+ dependency updates and reducing CI build time by 18%.

### Microgreen Solar

Sept 2023 – Dec 2023

*Software Engineering Intern*

Toronto, ON

- Built a telemetry ingestion pipeline with AWS IoT Core and AWS RDS for real-time off-grid energy monitoring.
- Developed a Progressive Web App using React, Next.js, and TailwindCSS for live telemetry visualization, introducing Redis caching to reduce query latency from 5000ms to 100ms.

## PROJECTS

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### **HomeLab** | *Linux, Proxmox, Ansible, Kubernetes*

Apr 2025

- Deployed a Kubernetes cluster on Proxmox using Terraform and Ansible, enabling scalable, self-healing microservices with Nginx + Cloudflare HTTPS routing.