

Lin Hong

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10× Hackathon Winner · 2× Founding Engineer · Systems & Full-Stack Developer

EDUCATION

University of Waterloo

Sept 2025 – Apr 2029

Bachelor of Computer Science (Co-op)

- President's Scholarship of Distinction, Ted Rogers Future Leaders Scholarship for Women
- Relevant coursework: Intro to CS, Algorithm Design, Data Abstraction, Calculus 1 & 2

SKILLS

Languages: Go, Python, Java, C++, JavaScript, TypeScript, Bash, PHP, HTML/CSS, Tailwind

Technologies: Git, Next.js, React, Flask, FastAPI, Docker, AWS, PostgreSQL, Redis, Nginx, Cloudflare R2

Systems: TCP/IP & DNS fundamentals, reverse proxying, RESTful API design, microservices orchestration

EXPERIENCE

Walnote AI

July 2025 – Present

Founding Engineer

Toronto, ON

- Cut rendering latency 5× by chunking video jobs across Celery workers with **Redis** queues, parallel **ffmpeg** stages, and resilient retries.
- Delivered real-time collaboration via Clerk, WebSockets, and **Redis** pub/sub writing through to Neon **PostgreSQL** with caching safeguards.
- Shipped containerized **FastAPI** microservices with health checks, rate limits, structured logging, and **OpenTelemetry** tracing, deploying via **Docker** with assets on **Cloudflare** R2 and CI/CD in GitHub Actions.

Linovation Design

Summer 2024

Full Stack Developer

Toronto, ON

- Shipped 8 production websites with Next.js/**TypeScript** and Tailwind, coordinating Figma designs with CI previews to accelerate feedback.
- Built **Flask** APIs with JWT auth, database integrations, and **Docker** deployment across Vercel and MongoDB to harden releases.

FTC Robotics

Sept 2022 – June 2025

Senior Software Lead

Toronto, ON

- Built low-latency telemetry pipelines merging encoder, IMU, and camera data with bounded buffers and watchdogs in **C++** for reliable control loops.
- Designed filtering and validation logic to suppress noisy sensor data, boosting reliability by 20% and doubling control response speed.

PROJECTS

Skip the Walk | *Terraform, Commander.js, Slack API*

Sept 2024

- Built a CLI automating Domino's ordering and volunteer routing with **Terraform**-defined workflows and Slack notifications.
- Integrated Mappedin indoor navigation plus retries and per-step logging to keep runs resilient across flaky venue Wi-Fi at **Hack the North**.

HomeLab | *Linux, Docker, Nginx, Cloudflare*

May 2025 – Present

- Provisioned a Linux server with SSH keys, TLS termination, and **Nginx** reverse proxying routed through **Cloudflare** DNS/proxy for secure access.
- Run containerized services with **Docker** and PM2, adding health checks and centralized logs for quick rollback.

Inner Voice | *Next.js, Whisper, OpenAI TTS*

July 2023

- Built a multi-persona speech AI app with full STT/TTS accessibility in **Next.js**, streaming audio through **Whisper** for low-latency responses.
- Orchestrated OpenAI persona generation and conversation flows with rate-limit aware queueing to keep dialogs fluid.