

Lin Hong

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

EDUCATION

University of Waterloo

Sept 2024 – Apr 2028

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

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

Systems: Linux, 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.
- Containerized **FastAPI** services with **Docker**, async Celery workers, and structured logging, shipped via GitHub Actions to keep releases predictable.
- Delivered real-time collaboration through Clerk auth, WebSockets, and **PostgreSQL** writes with cache validation for consistent multi-user edits.

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 during competition runs.

Linnovation Design

Summer 2024

Full Stack Developer

Toronto, ON

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

PROJECTS

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.

Spotilike | *Flask, Next.js, TensorFlow, DeepFace*

June 2025

- Built an AI-driven music discovery app linking emotion embeddings to tracks with **TensorFlow** and **DeepFace** inference.
- Served recommendations through **Flask** APIs and a **Next.js** frontend integrating Spotify for real-time playback, tuned with batched inference to keep responses snappy.

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**.