

Lin Hong

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10× Hackathon Winner · Software Engineer · Product Development

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

Technologies: Git, Next.js, React, Flask, FastAPI, Docker, AWS, PostgreSQL, MongoDB, Nginx, Pytorch

EXPERIENCE

FTC Robotics

Sept 2022 – June 2025

Toronto, ON

Senior Software Lead

- Led a **5-person** software team and engineered telemetry pipelines in **C++/Java** that fused encoder, IMU, and camera data into a unified robot state.
- Designed signal filtering and validation logic that reduced noisy sensor readings and improved autonomous reliability by **20%**, roughly doubling response speed in field tests.
- Implemented PID tuning and autonomous navigation systems that increased path-following accuracy by **70%**, helping the team consistently reach playoff rounds.

Linovation Design

Summer 2024

Full Stack Developer

Toronto, ON

- Designed and launched **8** production marketing sites using **Next.js, React, TypeScript**, and Tailwind, taking client projects from requirements gathering to live deployment.
- Built **Flask** APIs with JWT authentication and database integrations; deployed with **Docker**, Vercel, and MongoDB, cutting manual content-update work for clients by **~50%**.

PROJECTS

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

June 2025

- Created an AI-driven music discovery platform that matches songs to user emotions in real time using **Python, TensorFlow**, and **DeepFace**, evaluated with **50+** user test sessions.
- Integrated **Flask** backend with **Next.js** frontend, **Spotify API**, and MongoDB schemas linking emotion embeddings to music metadata, increasing relevant recommendation click-through in testing.

Lofied | Python, torchaudio, Pedalboard

May 2025

- Developed a **Python** tool converting Spotify playlists to lo-fi tracks using DSP and Spotify API, automating processing of **dozens** of songs per run with minimal manual steps.
- Won Best Solo Hack & Top 6 Overall at JamHacks 2025 out of **200+** hackers, demonstrating end-to-end product development from design to deployment.

Flaim Brain | Flask, LangChain, MongoDB

Jan 2024

- Implemented an AI mentor enabling file uploads, note summarization, and personalized study guides using **Python, GPT-4**, Cloud Vision, and MongoDB Atlas Vector Search, cutting manual study-note prep time by **~50%** in trials.
- Placed 4th at Hack the Valley 8 among **80** teams, showcasing collaborative problem-solving and rapid prototyping skills.

HomeLab | Linux, Docker, Nginx, Cloudflare

May 2025 – Present

- Built a personal Linux server secured with SSH key-pair authentication and HTTPS reverse proxying using **Nginx**, running **3+** self-hosted services with **>99%** uptime over several months.
- Deployed **Dockerized** Node.js applications with PM2 process management and Cloudflare DNS/routing, turning multi-hour manual deploys into minute-level updates.