

Lin Hong

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10× Hackathon Winner · Full-Stack Engineer

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: Algorithm Design, Data Abstraction, Software Engineering, Web Development

SKILLS

Languages: TypeScript, JavaScript, Python, Go, Java, HTML/CSS, Tailwind

Technologies: Next.js, React, PostgreSQL, MongoDB, FastAPI, Flask, Docker, Git, Google Cloud Platform

EXPERIENCE

Walnote AI July 2025 – Present

Founding Engineer

Toronto, ON

- Optimized a large-scale video rendering pipeline, reducing processing time by 5× through segment-based parallelization and backend optimizations.
- Implemented Clerk authentication with WebSockets, enabling real-time sync and Redis pub/sub event broadcasting into a Neon-hosted **PostgreSQL** database.
- Built scalable REST APIs using **FastAPI**, Dockerized services, and asynchronous Celery workers orchestrated through Redis for high-throughput processing.
- Deployed frontend to Vercel and backend to Render, utilizing Cloudflare R2 for object storage and GitHub Actions for CI/CD automation.

Linovation Design Summer 2024

Full Stack Developer

Toronto, ON

- Designed and launched 8 production websites using **Next.js**, **React**, **TypeScript**, and **Tailwind CSS**, delivering responsive user experiences across desktop and mobile platforms.
- Built **Flask** APIs with JWT authentication and **PostgreSQL** database integrations, implementing secure user sessions and data persistence.
- Deployed applications using Docker containerization and Vercel for frontend hosting, ensuring seamless CI/CD workflows and scalable infrastructure.
- Collaborated with designers using Figma to translate mockups into pixel-perfect, interactive web applications with optimized performance.

PROJECTS

Spotilike | *Next.js, Tailwind, Flask, MongoDB* June 2025

- Created an AI-driven music discovery platform using **Next.js** and **Tailwind CSS** for the frontend, with **Flask** backend APIs and **MongoDB** for data storage.
- Integrated Spotify API and real-time emotion detection, designing database schemas linking user preferences to music metadata.

Inner Voice | *Next.js, Whisper, OpenAI TTS* July 2023

- Built a multi-persona speech AI app with full STT and TTS accessibility using **Next.js** for the frontend interface.
- Integrated OpenAI APIs for persona generation and conversation flows, creating an interactive user experience.

Claim Brain | *Flask, LangChain, MongoDB* Jan 2024

- Implemented an AI mentor enabling file uploads, note summarization, and personalized study guides using **Flask** and **MongoDB**.
- Used GPT-4, Cloud Vision, and MongoDB Atlas Vector Search to provide semantic retrieval; placed 4th at Hack the Valley 8 among 80 teams.

Bill-in-Bytes | *React Native, Google Cloud Vision* May 2023

- Digitized paper receipts into structured data using **Google Cloud Vision** OCR for expense tracking and financial management.
- Won Best UI/UX Hack & People's Choice at GryphHacks 2023.