

# Samuel Huang

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## EDUCATION

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### University of Waterloo

BASc, Systems Design Engineering | GPA: 3.93

Waterloo, ON

Sep. 2025 – Present

Relevant Coursework: Digital Computation (C++), Introduction to Design, Visual Communications (SolidWorks)

## TECHNICAL SKILLS

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**Languages:** Python, C++, SQL (PostgreSQL), JavaScript/TypeScript, HTML/CSS, Tailwind CSS

**Frameworks:** React, React Native, Next.js, Expo, Express, Node.js, FastAPI, LangChain, Firebase, Supabase

**Developer Tools:** Git, GitHub, GitLab, VS Code, Cursor, GitHub Copilot, Vercel, Render, Figma, SolidWorks

## EXPERIENCE

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### Technical Project Manager

Jan. 2026 – Present

*NeedList.ORG*

Toronto, ON

- Led **migration** of platform from **FlutterFlow to React + NestJS** by writing PRDs and ERDs, enabling **weekly deployments** and **faster iteration cycles**
- Ran **agile workflows** (daily standups, sprint planning, demos) across Coda and GitHub, improving delivery consistency and **reducing sprint spillover**
- Worked with charity clients to onboard them onto the platform, created documentation, and identified bugs through testing, improving **platform usability** and **stability**

### Software Engineer

Jan. 2026 – Present

*WAT.ai*

Waterloo, ON

- Developed an AI sentiment analysis dashboard for **York Region Health** to visualize vaccine-related social trends
- Improved dashboard performance by refactoring data fetching with **TanStack Query**, reducing duplicate API calls and enabling faster, smoother data updates with caching
- Improved data reliability by adding runtime API validation with **Zod** and increasing test coverage with **Vitest**, helping catch data issues early and prevent frontend errors

### Product Designer

Oct. 2025 – Jan. 2026

*Electrium Mobility*

Waterloo, ON

- Designed mobile screens for **Electriumap**, a crowdsourced EV charging platform, ensuring **responsiveness**
- Collaborated with engineers to ensure **technical feasibility**, improving implementation efficiency and reducing future design rework
- Applied modern UI patterns, including **glassmorphism**, to elevate visual design while keeping interfaces intuitive

## PROJECTS

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### The Archives | React, FastAPI, Express, PostgreSQL, Firebase

Mar. 2026

- Built a visual **full-stack** book recommendation platform with an interactive 3D graph UI using React, enabling users to explore relationships between **10k+ books** instead of static lists
- Developed a **hybrid ML model** (TF-IDF + collaborative filtering) combining text, genre, and user rating data into a **weighted scoring system** to generate accurate book recommendations
- Optimized API performance by implementing **batched API requests and caching** with TanStack Query, reducing **redundant data fetching** and improving load times

### Munch | React Native, Expo, JavaScript, PostgreSQL, Figma

Jan. 2026 – Present

- Building a React Native recipe social media app and designed the **backend architecture** with PostgreSQL, enabling **scalable** data management
- Generated **100+** pre-launch signups in **24 hours** by leading an organic waitlist campaign, validating product demand
- Refined MVP direction by prototyping core user flows and running **A/B tests** on key features, improving product-market fit and user experience

### SwiftER | Python, JavaScript, Express, HTML, CSS

Aug. 2024 – Feb. 2025

- Built a real-time ER web app for **40+** hospitals using Mapbox API, enabling quick hospital wait time comparisons
- Automated data collection with a **Python + Selenium** pipeline to scrape and update wait times, delivering **JSON** to the frontend via **async requests**
- Improved triage efficiency by integrating **Gemini**, earning **DMZ Microgrants Finalist** from pool of **100+ projects**