

Hamza Ammar

Waterloo, Ontario — Email — LinkedIn — GitHub

EDUCATION

University of Waterloo

Bachelor of Software Engineering (BSE)

Sep 2025 - Apr 2030

Elected Class Academic Representative

CERTIFICATIONS

- Machine Learning Specialization - *DeepLearning.ai, Stanford University* Aug 2025
- Algorithmic Toolbox - *UC San Diego* Jan 2025

EXPERIENCE

Dealish

Founding Engingeer

Waterloo, ON

Dec 2025 - Present

- Building a **React Native (Expo)**, location-based app that connects people to **real-time** food and drink specials.
- Designed a secure **Supabase backend** with **role-based access control** to manage user profiles and deals.
- Built a **map-driven frontend** with **react-native-maps**, handling live location, markers, and navigation state.

Kuzu Inc

Software Intern

Waterloo, ON

Jun 2024 - Aug 2024

- Built **operator printing** for KuzuDB's query planner, improving plan visualization and **cutting debugging time**
- Added metadata printing for **40+ operators**, **increasing clarity** of query plans used in performance benchmarking
- Improved Explorer design by refining node layouts and using **Chroma.js** pastel colours for a **cleaner interface**

MapFLOW

Data Manager

Waterloo, ON

Nov 2022 - Mar 2024

- Structured medical research into **JSON datasets** powering MapFLOW's app, trusted by **3,500+ pharmacists**
- Streamlined data access, reducing consultation time by **~15 minutes** and driving **10× pharmacy revenue**
- Built a **Python CLI** with **OpenAI's API** for data translation, expanding to **500+ French-speaking pharmacies**

PROJECTS

Deep Learning Chess Engine

November 2025

- Developed a **deep CNN-based chess engine** trained end-to-end on millions of grandmaster games
- Implemented a **residual convolutional architecture** with policy and value heads using **PyTorch**.
- Optimized training on **NVIDIA H100s** via efficient tensor operations, large batch sizes, and mixed precision

CourseConnect

Sep 2025 – Dec 2025

- Built a **Python + Playwright scraper** to collect and normalize **1,000+** courses into a structured dataset.
- Modeled **degree requirements and dependencies**, enabling a tool for SE students to **validate degree plans**.

Flourishing Realty

Aug 2025

- Deployed a **Next.js + Node.js** rental platform on **AWS EC2**, enabling 20+ tenants to browse furnished homes
- Designed a responsive interface allowing tenants to filter, view, and request available rental homes

MentAI

Apr 2023

- Created a **CoHere-powered web app** for mental health support, assisting users in crisis scenarios
- Placed **Top 5** at **MetHacks**, pitching to judges including representatives from **CoHere**

UniMap

Jun 2022

- Built a **Python + NetworkX** navigation tool applying **Dijkstra's algorithm** to map campus routes
- Developed a **React-based website** to host UniMap and visualize paths between university buildings

SKILLS

- Languages:** Python, C++, C, Swift, JavaScript (React, Next.js, Node.js), SQL
- Frameworks & Libraries:** TensorFlow, PyTorch, NumPy, Pandas, NetworkX, Playwright, Flask, Express.js
- Cloud & Tools:** AWS (EC2, S3), Firebase, Git/GitHub, Linux CLI, Docker, Figma
- Technical Areas:** Full-stack Development, Machine Learning, Web Scraping, Algorithms and Data Structures