

ANSH JINDAL

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EDUCATION

University of Waterloo

Sept. 2025 – April 2030

Bachelor of Computer Science (Honours, Co-op)

Waterloo, ON

- Awards: *President's Scholarship* | *J&S Harry-Paul Award of Academic Achievement in Math & Science*

EXPERIENCE

Data & Software Developer

May 2026 – Aug. 2026

WE Accelerate: Data-Driven Solutions for Global Challenges — Blenheim Youth Centre

Waterloo, ON

- Replaced paper sign-in for **100+ youth**, identified a missing member database, built and installed an on-site **React** kiosk on **PostgreSQL**, set up **RLS** to hide personal data of the youth from the terminal, and shifted hours of manual transcription to **one-click Excel exports**.
- Restructured a non-profit's Excel-based data systems, auditing and repairing **15 years** of inconsistent membership, attendance, and donor records, and building **Power BI** dashboards connected directly to the kiosk database, replacing manual spreadsheets for non-technical stakeholders.
- Within a **6-person team** handing off to non-technical staff, set up the organization's **newsletter email system**, documented and trained staff to run the kiosk and **Power BI** dashboards independently with team feedback throughout, so staff can operate every tool with **minimal maintenance**.

Coding & Robotics Instructor, Curriculum & Software Developer

July 2024 – Jan. 2025

Ultimate Coders

Mississauga, ON

- **Solely led** classes of up to **15 students** of different ages and levels in Python, JavaScript, Java, HTML, and block-based robotics, designing curriculum and maintaining progression and attendance records to steadily build computational thinking skills.
- Eliminated in-class progress checks for rotating instructors by integrating the coding platform's data into an **instructor dashboard** with attendance tracking, assignment grading, and progress notes, giving each student a formal record across instructor handoffs.

PROJECTS

Open House AI | Python, FastAPI, MLX, Jev, Qwen3-8B (LoRA), BM25 + Embeddings | [GitHub](#)

Oct. 2026

- To give Ontario tenants and landlords neutral, law-backed answers, built a renting assistant that quotes the RTA and LTB guidance word for word, reviews a user's own lease against **19 legal checks**, and scrubs personal data before any API call.
- Answered **19/20** unseen tenancy questions correctly by **LoRA fine-tuning Qwen3-8B** on **1,969** verbatim-cited examples and serving answers through a **FastAPI** pipeline with hybrid **BM25 + embedding search** over **2,383** LTB decisions.

Goose Nest | Python, FastAPI, Pydantic, Google Maps API, iNaturalist API | [GitHub](#)

Sept. 2026

- To help Waterloo students find housing on what matters locally, co-built a rental search in a **3-person hackathon team** that ranks listings by transit access, budget, and goose exposure, with a per-factor score breakdown on every result.
- Ranked **240+** rentals by building the **enrichment and ranking services**: geocoding listings via **Google Maps**, measuring distance to **19 ION LRT** stops, GO stations, and highways, and scoring **1,789** iNaturalist goose sightings within 500 m.

Read To Me | Swift, SwiftUI, Apple Vision, Python, MLX, Qwen3-VL, Qwen3-TTS | [GitHub](#)

Oct. 2026

- To listen to physical books, built a native **macOS app** that turns photos of book pages into an **.m4b audiobook**, stripping headers, footers, and page numbers and rejoining paragraphs split across page turns.
- Narrated pages at **2x real-time** fully on-device and at **\$0** per book by pairing **Apple Vision OCR** with **Qwen3-VL**, reconciling the two readings word by word via longest-common-subsequence alignment, and voicing text with **Qwen3-TTS** on **MLX**.

VisionCart | Next.js 16, TypeScript, Gemini 1.5 Flash, React, Tailwind CSS v4 | [GitHub](#)

Feb. 2026

- To eliminate barcode scanning at checkout, built an **AI-powered checkout system** that identifies groceries from live webcam frames and generates a real-time receipt with tax and per-item nutrition.
- Matched detections across a **100+ product inventory** by enforcing structured JSON output from **Gemini 1.5 Flash** with a 422 fallback and **Levenshtein-style fuzzy matching**, served from **Next.js 16** Edge-compatible API routes.

StegoVault | Python, Java, Pillow, LSB Steganography, OOP, Cryptography | [GitHub](#)

2024 – 2025

- To move sensitive credentials safely over untrusted channels, **independently built** a steganographic password manager that hides encrypted credentials in image pixels via **LSB manipulation**, leaving images visually indistinguishable from the originals.
- Added a second layer of secrecy by designing a **configurable LSB insertion order** that acts as a secondary key, then **refactored the pipeline from Python to Java** with encapsulation, abstraction, and modular class design.

SKILLS

Languages: Python, Java, Swift, TypeScript, JavaScript, SQL (PostgreSQL), C/C++, HTML/CSS, Bash

Frameworks: FastAPI, Pydantic, React, Next.js, SwiftUI, Tailwind CSS

AI/ML: LoRA Fine-Tuning, MLX, Qwen3, Jev, Hybrid Search (BM25 + Embeddings), OCR

Data & Tools: PostgreSQL, Supabase, Power BI, Excel, Git, Vercel, Linux

Concepts: REST APIs, Row Level Security, OOP, Data Cleaning, Unit Testing, Technical Documentation