

ABBAS MERCHANT

Vaughan, ON

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in [Abbas Merchant](#)

🌐 abbasmerchant.com

Education

University of Waterloo

Bachelor of Software Engineering

Expected May 2030

Waterloo, ON

Experience

Invision Custom Solutions Inc.

Apr 2026 – Sep 2026

Software Developer Intern – Client: Combined Metal Industries (CMI)

Richmond Hill, ON

- Built and deployed a production React and TypeScript dashboard monitoring live weights for **61 scale-equipped bins** across **20+ customer sites**, ingesting CMI's 60-second scale feed (**~90K readings/day**) and raising threshold, SLA, and emergency alerts that drive truck dispatch
- Engineered dispatcher workflows for acknowledgment, escalation, truck dispatch, team comments, and role-based access across **3 user roles** and **4 SLA tiers**; added audit logging and CSV reporting, backed by **43 automated tests**
- Built a restart-safe ingestion pipeline that replayed **304K production readings in ~27 seconds** and quarantined **5 classes of invalid sensor data** to prevent bad readings from triggering dispatch alerts
- Designed and shipped an internal QR asset-tracking app in Microsoft Power Apps backed by SharePoint, letting staff scan assets, validate serial numbers, and log asset movement in real time

AI Data & Validation Intern

Sep 2024 – Jun 2025

- Generated and validated **large-scale datasets** for model training and fine-tuning in Python, designing test cases and running error analysis to catch labeling and output defects before they reached training
- Integrated new data sources into **Python ingestion pipelines**, implementing validation and preprocessing logic to improve data reliability and reduce pipeline failures
- Delivered **production code** and documentation for BookedYou.com (launched) and Notepress.ai (in development)

United Canada Inc.

Feb 2024 – Aug 2024

Part-Time – QA / Software Support

Richmond Hill, ON

- Tested and debugged e-commerce features, reproducing customer issues from **production logs** and verifying fixes
- Authored and **executed test cases** for the browse, cart, checkout, and payment flows; documented defects and drove them to resolution with cross-functional teams

Projects

Multi Agent Manager | *Electron, Node.js, TypeScript, SQLite, Supabase, React Native, C++* | multiagentmanager.app

- Built and **publicly released a Windows desktop app** that unifies ChatGPT, Claude, Gemini, and Copilot sessions across browser, desktop, terminal, and VS Code into one live queue with one-click window focus
- Designed a **cross-source search engine** with local SQLite indexing over every AI conversation, regardless of whether it originated in a browser tab, desktop app, or terminal
- Implemented real-time agent detection using **Chrome DevTools Protocol, MV3 browser instrumentation, and OS accessibility APIs**; shipped **iOS and Android companion apps** with push notifications and automated releases gated by **1,600+ tests**

Spotify Lyrics Translator | *JavaScript, Chrome Extensions API, HTML/CSS* | [Chrome Web Store](#)

- Launched a Chrome extension that translates non-English Spotify lyrics into English in real time (**300+ downloads**)
- Integrated translation APIs with **dynamic DOM manipulation** to overlay translated lyrics inside the Spotify web player
- Owned the product end-to-end: architecture, API integration, Web Store review and release, and post-launch iteration

Skills

Languages: C++, C, Python, TypeScript, JavaScript, SQL, HTML/CSS

Frontend & Mobile: React, React Native (Expo), Tailwind CSS, Chrome Extensions

Backend & Desktop: Node.js, Electron, Supabase (PostgreSQL), SQLite, REST APIs

Tools & Cloud: Git, GitHub Actions, Vercel, Azure, Microsoft Power Apps, SharePoint, AI-assisted development

Relevant Coursework

Software: Programming Principles, Data Abstraction and Implementation, Methods of Software Engineering, Digital Circuits, Foundations of Sequential Programs*, Digital Computers*, Logic and Computation*

Mathematics: Calculus 1–3, Linear Algebra, Honours Algebra, Statistics for Software Engineering* *in progress, Fall 2026