

MARK BOHAYCHUK

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SUMMARY

Software developer focused on cloud and AI systems. Helped design and build a cloud-based SaaS platform on Azure from the ground up using C#/.NET and Vue.js, and delivered database and feature work for enterprise software used by a Fortune 500 client. Outside of work, builds production-shaped agentic AI systems — RAG pipelines, multi-service architectures, and MCP servers. NAIT Computer Engineering Technology graduate, 4.0 GPA.

TECHNICAL SKILLS

Languages: C#, Python, TypeScript, JavaScript, PHP

Frameworks & Platforms: ASP.NET, Vue.js, FastAPI, .NET MAUI, Azure Cloud

APIs & Integration: REST API design & development, JWT/OAuth authentication, WebSockets, data pipeline architecture

Databases: PostgreSQL, SQL Server, MySQL, SQLite, Qdrant (vector DB)

AI & Agentic Development: RAG, LLM integration, ReAct & agentic loops, MCP server development, Claude Code / Windsurf

Hardware Background: MicroPython, embedded C, PCB design, I2C, NFC/RFID

PROFESSIONAL EXPERIENCE

Software Developer — Valstone

Jan 2025 – Present

- Researched and evaluated architectural decisions for a new Vue.js + ASP.NET cloud-based SaaS application on Azure, and helped design and build it from the ground up to replace a legacy Windows Forms product.
- Implemented new features, database design changes, and SQL Server stored procedures across legacy Windows Forms and Windows Service applications, including software used by a Fortune 500 client.

Software Development Intern — Valstone

May 2024 – Jan 2025

- Worked as part of a team to build an ASP.NET REST API and .NET MAUI mobile application that integrated into an existing multi-application workflow alongside Windows Forms and ASP.NET Razor systems, including implementing JWT OAuth token authorization.

Electronics Technician (Co-op) — Alberta Gaming, Liquor and Cannabis

May 2024 – Aug 2024

- Performed component-level electronics troubleshooting and repair, developing hands-on hardware diagnostic skills.
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SELECTED PROJECTS

CarBuyerAssistant — Personal Project

- Built a distributed multi-process pipeline that aggregates vehicle auction listings, scores them with an LLM (GPT-5 nano), and pushes Discord deal alerts. Ten asyncio worker processes coordinate through PostgreSQL NOTIFY/LISTEN with SKIP LOCKED — using Postgres as the queue and source of truth instead of Redis or RabbitMQ.
- Reverse-engineered HiBid's GraphQL API after their SPA migration, implemented tiered soft-close-aware bid polling, and deployed on Linux with systemd, advisory-lock singleton enforcement, a FastAPI + HTMX dashboard, and a Discord bot.

Briefer — Personal Project

- Designed a multi-service data pipeline (Vue.js frontend, ASP.NET Web API, Python FastAPI, PostgreSQL, Qdrant) that ingests, scores, and summarizes articles, using a ReAct loop to determine user interests and a multi-stage scoring pipeline for relevance ranking.

Mechanics Sidekick — Personal Project

- Built a RAG-based diagnostic assistant grounded in real vehicle reference material, plus an in-progress companion OBD2 scanner MCP server that lets any MCP-compatible AI agent pull live fault codes and sensor data from a vehicle.

Interactive Gameboard — NAIT Capstone

- Built an end-to-end .NET MAUI mobile app that communicated in real time with embedded firmware on Raspberry Pi Pico W boards over WebSockets, so movement on the physical board reflected live in the app.
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EDUCATION

Computer Engineering Technology Diploma

Dec 2024

Northern Alberta Institute of Technology (NAIT) • Dean's List • 4.0 GPA