Brett Adams

Software engineering student building backend services, data pipelines and developer tools

linkedin | github | website

Education

Honours Computer Science with Software Engineering Specialization Co-op — **Sep 2022 - 2027 (expected)**

University of Windsor — *Windsor, ON*

Skills

Programming Languages Python | TypeScript | JavaScript | SQL | Java | C++ | C | HTML/CSS | VBA

Software & Tools Node.js | Flask | React | Git | GitHub Actions | GitLab CI/CD | Docker

Data & Cloud BigQuery | Apache Airflow | Cloud Composer | dbt | DuckDB | Azure Databricks | Power BI

Experience

Data Analyst Intern, Global Data Operations — **May 2026 - Present**

Geotab — *Oakville, ON*

- Maintain and debug production data pipelines built with Apache Airflow on Cloud Composer.
- Write and deploy SQL for production tables in BigQuery, including the device status, database dimension and accounts master datasets.
- Ship changes through GitLab CI/CD, from branch development through staging validation to production.
- Carry out live table migrations against fixed infrastructure deadlines, coordinating with dataset owners.

Data Management Associate, Co-op — **Jan 2025 - Aug 2025**

Ontario Ministry of Transportation — *St. Catharines, ON*

- Built Power BI dashboards on Azure Databricks and SQL that replaced manual reporting across business units.
- Automated legacy workflows with SQL queries and VBA scripts, cutting processing time from hours to minutes.
- Led the rollout of the internal Data Broker Tool, onboarding teams and standardizing the data vocabulary.

Digital Solutions, Co-op — **Apr 2024 - Sep 2024**

CIMCO Refrigeration — *Burlington, ON*

- Built Flask web applications that deliver real-time data and alarms to NHL arena operations teams, including a thermal imagery viewer used by arena technicians.
- Wrote a Python pipeline that aggregates data from two APIs into structured JSON for the arena interface.
- Automated controller data collection for CAG engineers with a Python tool, replacing manual data entry.
- Designed and ran hands-on Python training sessions for over 20 employees.

Digital Solutions — **Apr 2023 - Sep 2023**

CIMCO Refrigeration — *Burlington, ON*

- Built Power Platform tools that several departments adopted to automate repetitive manual workflows.
- Automated SharePoint document routing and approvals, cutting turnaround time between departments.

Notable Projects

border-waits-pipeline — **Oct 2026 - Present**

Python, dbt and DuckDB pipeline over Canadian and U.S. border wait-time feeds — *Independent*

- Collects the wait estimates CBSA and U.S. CBP publish, models them with dbt on DuckDB, and publishes Parquet that a live dashboard queries with SQL in the browser.
- Reconciled two feeds that disagree about time: CBP's "At Noon EDT" means the hour about to start, and the two sides of one crossing sit in different time zones.
- A failed run redeploys the last good export with a status file naming the step that broke, so a failed refresh keeps the previous data and reports the failure. Tests run on recorded fixtures with no network.

mcp-surface — **Jul 2026 - Present**

TypeScript CLI and GitHub Action for testing Model Context Protocol servers — *Independent*

- Built five MCP servers exposing 69 tools. Published a CLI and GitHub Action that inspect the tool schemas a connected client actually receives.
- Caught all 23 Google Workspace tool schemas changing after a Zod upgrade passed its unit tests. The browser playground lets reviewers try both a healthy and a broken contract.

Signal Lab — **Nov 2026**

Interactive analytics with reproducible public snapshots — *Independent*

- Built three workspaces for historical transit incidents, retail revenue and synthetic customer retention. The static demo serves versioned snapshots with checksums.
- Published a worked investigation and Python verifier that reconcile a £81,948.30 revenue deviation against the median of the previous 12 observed Tuesdays.