

James Knowles

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EDUCATION

University of Waterloo

Bachelor of Computer Science

Waterloo, ON

2024 – Sept. 2029

Wilfrid Laurier University

Bachelor of Business Administration with Co-op

Waterloo, ON

2024 – Sept. 2029

EXPERIENCE

Software Engineer

Riddle AI

July 2026 – Present

Remote

- Built and maintained a full-stack AI market-intelligence platform with React, TypeScript, Vite, Supabase Edge Functions, PostgreSQL, and REST integrations, transforming multi-source market data into dashboards.
- Maintained data pipelines and semantic read models for market ingestion, cross-platform matching, price history, and AI-generated context, adding provenance checks, freshness gates, and automated regression coverage.
- Optimized prompts and context construction across ChatGPT, Gemini, and Claude, implementing retrieval-augmented generation workflows to improve answer quality and consistency.

AI Automation Engineer

Lazaridis Student Society

May 2026 – Present

Waterloo, ON

- Built an n8n and Shopify Admin GraphQL API workflow that automated club request intake, validation, approval, and draft product publishing.
- Implemented JavaScript data normalization, stable request IDs, duplicate protection, error handling, test mode, inventory and tax logic, and automated approval/status emails.
- Translated stakeholder requirements into retry-safe automation flows and documented system behaviour for non-technical users.

Data Analyst

Definity Financial

Winter 2026

Toronto, ON

- Extracted and structured large-scale datasets from Google Cloud Platform by writing SQL queries to pull 100,000+ records, establishing robust data pipelines that accelerated data retrieval.
- Developed an automated month-end forecasting tool by applying statistical regression formulas to historical datasets, predicting operational results with 10% accuracy to drive strategic decision-making for Regional Leads.
- Automated data cleaning and interactive dashboard updates by writing VBA macros, pivot tables, and advanced formulas, saving five hours of manual reporting monthly and streamlining the regional data review process.

PROJECTS

Financial Analyzer | *React, Python, Supabase RLS, Vercel, Gmail API*

- Built and deployed a financial-analysis application that transformed raw financial data into structured metrics, trend comparisons, and decision-ready insights.
- Developed the React interface and Python analysis logic, implemented Supabase Row-Level Security, and integrated the Gmail API for reading source information and sending generated reports.
- Designed reusable validation, calculation, and reporting components to produce consistent results from varied inputs and simplify future extension.

WLP4 Compiler | *C++, ASM*

- Implemented a compiler for the WLP4 language in C++, translating source programs through lexical analysis, parsing, semantic analysis, and type checking.
- Generated executable ASM while managing symbol tables, procedure calls, stack frames, pointers, and control flow.

TECHNICAL SKILLS

Languages: C++, Python, TypeScript, JavaScript, SQL, VBA, ASM

Frameworks & Tools: React, Vite, Next.js, Supabase, PostgreSQL, n8n, Shopify Admin GraphQL API, Gmail API, Google Cloud Platform, Vercel, Git, REST APIs