

# Benedict Halim

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## EDUCATION

### Wilfrid Laurier University

*Honours Bachelor of Science in Computer Science, Minor in Economics*

Sep. 2021 – Oct. 2025

Waterloo, ON

## CERTIFICATIONS

### Microsoft Certified: Azure Fundamentals

*Able to describe cloud concepts, Azure architecture and services, and Azure management and governance*

## EXPERIENCE

### AI Software Engineer (Full-Stack) | *Next.js, Express, Flask, PostgreSQL, Nginx*

Oct. 2025 – Present

*SigmaXL*

*Kitchener, ON*

- Improved AI answer relevance by designing a production-grade RAG pipeline with metadata-rich embeddings, tuned MMR retrieval, and OpenAI's text-embedding-3-large model
- Scaled vector embedding generation safely by implementing batched processing with adaptive throttling and rate limiting, eliminating OpenAI API errors and production instability
- Reduced LLM latency and cost by adding a preprocessing layer that short-circuits greetings, empty messages, and low-signal queries before invoking the model
- Built a full-stack document ingestion pipeline enabling non-technical teams to upload PDF, HTML, and JSON for AI retraining, with asynchronous processing and real-time progress tracking

### Software Engineer – Cloud & Data Systems | *T-SQL, Python, Azure*

Jan. 2025 – April 2025

*Solucore*

*Mississauga, ON*

- Built 20 optimized T-SQL stored procedures/functions in SQL Server Management Studio (SSMS) with indexing to improve query efficiency
- Developed and deployed an Azure Function with 20 Python functions via ODBC to automate SQL execution in the cloud
- Connected an Azure Function to a ChatBot via HTTPS, enabling clients to access personalized data through simple queries
- Delivered an end-to-end solution across SSMS, Azure, and Python, working independently with mentor oversight

### Software Engineer – Data Platforms | *T-SQL*

May 2024 – Aug. 2024

*Solucore*

*Mississauga, ON*

- Developed 15+ T-SQL stored procedures and functions in SSMS to streamline client data retrieval for future chatbot integration
- Applied database administration best practices, including naming conventions and normalization to ensure maintainable, scalable database assets
- Enabled faster client information access by preparing database objects for integration with Azure Functions and future automation

## TECHNICAL SKILLS

**Languages:** Python, TypeScript/JavaScript, SQL (T-SQL), HTML/CSS

**AI/ML & Data Systems:** LangChain, OpenAI API, ChromaDB, RAG Pipelines

**Frameworks, Libraries & Databases:** Next.js, React, Flask, Express, Django, PostgreSQL, MongoDB, SQL Server

**Cloud, DevOps & Developer Tools:** Azure, Docker (Compose, Hub), Nginx, Linux (Ubuntu), Git/GitHub, VS Code, PgAdmin, SQL Server Management Studio (SSMS)

## VOLUNTEERING

### Vice President of Events

June 2024 – Jan. 2025

*UX Laurier*

*Waterloo, ON*

- Planned and oversaw major club events, including the annual Designathon with 300+ participants and a \$5,000 prize pool
- Managed event logistics (venue, catering, setup, and team coordination) to ensure smooth execution
- Secured partnerships with companies and organizations to enhance event quality and attendee experience
- Delegated tasks to a team of directors, driving timely completion of responsibilities and fostering collaboration