

Spencer Hum

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EDUCATION

Queen's University

Sept 2022 – Expected Apr 2027

Bachelor of Computing (Honours) - Specialization in Software Design

Kingston, ON

- Relevant Courses: Data Structures, Algorithms, Database Management Systems, Software Architecture, System Level Programming, Computer Architecture, Software Specifications, Human-Computer Interaction

WORK EXPERIENCE

Incoming @ KnowHow

May 2026 – Aug 2026

Software Engineer Intern

Toronto, ON

- Full Stack Developer at a high-growth startup, architecting industry-first AI features and scalable web applications using Django, Python, React/TypeScript, and OpenAI API

Yupi.ca

May 2025 – Apr 2026

Software Engineer Intern

Kingston, ON

- Led development for core features across a full-stack ERP system processing 10K+ daily entries across 3 locations, spanning contract ingestion, inventory, and sales using React, Django, Celery, and RabbitMQ
- Cut manual search time for supplier data from 2 hours to 30 minutes per day by building a Django query interface with custom SQL filters across 5,000+ suppliers and trade data
- Refactored the permissions database and models to introduce a team-based access control system, reducing per-user access provisioning from 20+ individual assignments to a single team assignment
- Fully automated complex payroll calculations by replacing a manual Google Sheets workflow with a full-stack time-tracking app and SQL-based ETL reports, saving 300+ hours annually

Canada Computers & Electronics

Sept 2024 – Dec 2024

Software Engineer Intern

Richmond Hill, ON

- Developed the B2B e-commerce storefront using Node.js and TypeScript, integrating distributor APIs for direct supplier purchasing and deploying REST endpoints handling 1,000+ concurrent requests across enterprise clients
- Implemented role-based access control for 10K+ clients using Express.js, enabling self-managed user administration and cutting support tickets by 50% monthly
- Automated tiered pricing calculations for corporate discounts and bulk rates across 10K+ SKUs using TypeScript and MySQL, handling variable cost structures across multiple B2B partner tiers

PROJECTS

DuckMQ | Go, PostgreSQL, Docker, Prometheus

- Engineered a distributed job queue in Go backed by PostgreSQL, using concurrent worker pools and row-level locking to safely process jobs across multiple workers without duplication
- Designed fault-tolerant processing with exponential backoff retries, dead-letter queues, and a heartbeat-based recovery, ensuring at-least-once delivery guarantees
- Implemented real-time observability tooling using Prometheus metrics and SSE-based live queue monitoring

Agentic Rag Engine | Python, LangGraph, FastAPI, PostgreSQL, Docker

- Developed an autonomous Agentic RAG using LangGraph and the OpenAI API with a self-correcting feedback loop that evaluates and improves model responses to reduce AI hallucinations
- Built a scalable production-grade data pipeline with Docker and PostgreSQL (pgvector) to ingest, chunk, and generate vector embeddings for proprietary enterprise datasets

SKILLS

Languages: Python, Go, Java, JavaScript, TypeScript, SQL, HTML, CSS

Technologies: React, Vue.js, Express.js, Django, Flask, FastAPI, Next.js, GraphQL, Node.js, MySQL, PostgreSQL, MongoDB, AWS (Amazon Web Services), Docker

Certifications: AWS Certified Cloud Practitioner