

## Education

**Bachelor of Engineering in Systems and Computing | University of Guelph | Expected May 2029**

Relevant Coursework: Data Structures & Algorithms, OOP, Digital Systems, AWS Cloud Practitioner

## SKILLS

**Frameworks & Tools:** SolidWorks, AWS (S3, EC2), Microsoft Office 365, Flask, SFML, Pandas, SQLite

**Interpersonal Skills:** Strong Team Leadership, Adaptability, Analytical Reasoning, Conflict Resolution

**Programming Skills:** Python, C, C++, MATLAB, Git, SQL

## PROJECTS

### Autonomous Assistive Vehicle Prototype (C, Arduino, AutoCAD) – Team Project

- Designed and modeled the vehicle chassis and mechanical assemblies in **AutoCAD** to ensure accurate integration of motors, power systems, and structural components.
- Developed **C-based firmware** for Arduino microcontrollers to control bidirectional motor operation and manage torque for incline performance.
- Optimized drivetrain design to support payloads up to **~5 kg** while maintaining stability and maneuverability.
- Worked with a **multidisciplinary team** to document design decisions, testing iterations, failure analysis, and final system validation.

### Corporate Spend Approval Engine (Python, Flask, SQL) – Personal Project

- Built a multi-tier transaction approval system with rule-based thresholds (e.g., auto-approve <\$50, escalate >\$500), supporting 3+ approval levels.
- Designed an audit-ready relational database schema to store immutable approval logs for traceability and compliance.
- Implemented real-time checks to flag duplicate and out-of-policy transactions during processing.
- Developed a **RESTful API** supporting concurrent approval requests, using transactions and locking to ensure data consistency.

### 2D Physics Simulation Engine (C++ with SFML) – Personal Project

- Developed a real time 2D physics simulation in **C++ with SFML**, implementing gravity, collision detection, and smooth rendering at 60 FPS.
- Optimized entity management and memory handling, enabling support for **50+** simultaneously active objects without frame drops, demonstrating strong proficiency in computational efficiency and resource
- Designed modular object-oriented structures to maximize code reuse, laying the foundation for advanced features like particle systems.

## LEADERSHIP & COLLABORATION

### Peer Helper | Academic Support Program | September 2025 – December 2025

- Mentored **20+ students** in Python and C/C++ coursework, assisting with debugging, concept clarification, and project implementation.
- Helped peers improve assignment and lab performance by an **estimated 10–20%**, based on follow-up feedback and grade comparisons after mentoring sessions.
- Provided clear, structured explanations of technical concepts, strengthening peer understanding and collaborative problem-solving

## EXPERIENCE

### Sales Associate | HUGO BOSS | May 2024 – August 2025

- Built strong client relationships, contributing to repeat business and consistent achievement of sales targets.
- Operated **POS** systems accurately, handling cash, debit, and credit transactions efficiently.