

# Ethan Huber

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[in ethan-huber](#)

[zushiEdu](#)

## Technical Skills

**Programming Languages:** C, Java, Go, C#, JavaScript, Python, HTML/CSS, VHDL

**Tools and Frameworks:** Git/Github, VSCode, Linux/Unix, Arduino, SQL, STM32, REST API, FPGA, Docker

**Design and Planning Tools:** OnShape, Fusion 360, KiCad, Solidworks, AutoCAD, Xilinx ISE

## Personal Projects

### PCB Business Card // Dec 2025 – Jan 2026

[github.com/zushiEdu/BusinessCard](https://github.com/zushiEdu/BusinessCard) ↗

- Designed a PCB using KiCad with an STM32F103 powering a 12x12 LED matrix to simulate Conway's Game of Life
- Programmed C firmware with STM32CubeIDE, and soldered SMD components onto the board

### Filedex - Semantic file search engine // Jul 2025 – Sep 2025

[github.com/zushiEdu/filedex](https://github.com/zushiEdu/filedex) ↗

- Developed a semantic file search engine in Go for file indexing and retrieval
- Integrated SQLite for structured metadata storage
- Implemented graph traversal algorithms to identify relationships between tagged files
- Deployed local ML recognition using Ollama to automate metadata tagging generation

## Education

### Bachelor of Engineering, Computer Engineering (Co-op)

Sept 2024 – May 2029 (Expected)

*University of Guelph; GPA: 3.7*

Guelph, Ontario

- Maintaining an 86% average, Dean's Honors List: Winter 2025, Fall 2025
- Relevant courses: Data Structures and Algorithms, Engineering Systems Analysis, Object Oriented Programming for Engineers, Digital System Design, Software Systems Development and Integration

*Key academic projects:*

- Gryphon Management - University Management System (Feb 2025 - Apr 2025):
  - Led UI development for a Java Swing university management system built in IntelliJ
  - Implemented Git version control workflows to manage contributions across a 5-member team

## Technical Extra-Curricular Experience

### Electrical Team Member

Sept 2025 – Present

*University of Guelph Robotics Team*

Guelph, Ontario

- Planned, designed and routed the rover's power distribution board in KiCad, optimizing trace sizing, connector placement, and converter mounting
- Tested and validated the board's performance, producing safety documentation to ensure competition compliance

### Frame Team Member

Sept 2024 – Present

*Gryphon Racing*

Guelph, Ontario

- Designed motor controller mounts in SolidWorks and performed finite element analysis to optimize structural strength across design variants
- Created 8 3D-printed jigs to improve fabrication accuracy and assembly efficiency
- Modeled mounting tabs and front body panel components to support subsystem integration and assembly efficiency

### Vice President

Sept 2022 – Jun 2024

*Huron Heights Secondary School Robotics Club*

Kitchener, Ontario

- Managed parts research, purchasing and inventory for the club
- Mentored students and delivered presentations on design and safety
- Developed a battle-bot rule book and Arduino battle-bot inspired by Tombstone ([OnShape CAD File](#) ↗)

## Work Experience

### Process Control Team Member

May 2025 – Present

*Toyota Motor Manufacturing Canada*

Cambridge, Ontario

- Supported final assembly operations using Toyota Production System principles to maintain workflow efficiency
- Identified 19 potential defects during vehicle shipping preparation (manual installation and label application) demonstrating exceptional attention to detail and commitment to quality