

Zac Matthias

Engineering Student · Software & Embedded Systems

CONTACT

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PHONE
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LOCATION
Chilliwack, BC

WEB
zacmatthias.vercel.app

GITHUB
github.com/Chaotic-Mess

LINKEDIN
linkedin.com/in/zacmatthias

EDUCATION

University of Victoria
BEng — Engineering
2024 – Expected 2029
2nd-year student

Unity Christian School
Dogwood Diploma
2018 – 2024

AWARDS

Kingma Foundation
Engineering Scholarship

SKILLS & STACK

LANGUAGES

Python · C · C++ · JavaScript ·
MicroPython · Lua · HTML/CSS

AI & ML

PyTorch · HuggingFace · Fine-tuning ·
Agent Design · Homegrown Training

WEB

Frontend · Backend · REST APIs · Flask
· Databases · IIS

EMBEDDED

Arduino · Raspberry Pi Pico W · Custom
PCBs · IoT · MicroPython

TOOLING

Git · GitHub · VSCode · Jupyter ·
Edge-Case Testing

ENGINEERING

Systems Thinking · Mechatronics ·
Prototyping · Algorithm Design

LANGUAGES

English — Fluent

PROFILE

Engineering student at the University of Victoria with hands-on experience building production software, embedded systems, and AI tooling. Preference for working from first principles — I build from the ground up wherever it earns reliability and understanding. Comfortable across the full stack: firmware to frontend, model training to deployment.

EXPERIENCE

TyreSense Victoria, BC
Electronics Assembler (current) May 2026 – Present
Co-op Production Engineer Jan 2026 – Apr 2026

- Designed and shipped three internal systems solo — all still in daily production use across 13,000+ sensors tested.
- Built Sensor Tracker, an internal SaaS platform that enables manufacturing partners to mass-validate hardware devices independently before shipment.
- Developed IOTS, an automated testing platform that replaced previously manual test procedures across the production line.
- Created a Production Dashboard that parses live Excel data and renders it on TV-mounted floor displays for real-time monitoring.
- Assisted with hardware testing, troubleshooting, and technical documentation in a production engineering environment.

Rimex Langley, BC
Paint Prep Aug–Sep 2022, Aug–Sep 2024

- Prepared industrial wheel components for coating in a fast-paced manufacturing environment.
- Followed strict safety and quality-control procedures; maintained organised workflow to support downstream production stages.

PROJECTS

ARES — Homegrown AI

Three-version neural network built without third-party ML frameworks. Covers custom training pipelines, modular refactoring, and a Flask-served agent with a constrained action shell and sandboxed execution. Built to understand every layer of the stack.

TyreSense Systems (see Experience)

Sensor Tracker · IOTS · Production Dashboard. Three internal tools shipped solo — SaaS platform, automated tester, and an Excel-driven floor dashboard.

Algorithm Visualizers

Interactive implementations of A*, Dijkstra, BFS, DFS, and six sorting algorithms — with audio feedback and speed control. No graph or sort libraries used.

3D Solar System

Realistic planetary orbital mechanics rendered with WebGL/Three.js. Interactive camera and live parameter controls.

My Code (GitHub)

Open collection of utilities, university labs, a browser game, ASCII video conversion, and miscellaneous experiments. github.com/Chaotic-Mess