

Steven Dyer

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EDUCATION

Memorial University of Newfoundland

Bachelor of Mechatronics Engineering; GPA: 3.75/4.00

St. John's, NL, Canada

2023 – 2028

EXPERIENCE

Michelin

Electrical Engineering Intern

Waterville, NS, Canada

Jan. – Apr. 2025, Sept. – Dec. 2025

- Developed C firmware for a new standards training lab on an ESP32 microcontroller, including I2C and UART drivers for proximity and barometric pressure sensors.
- Led a team of four technicians to install a new energy monitoring device by drafting all necessary electrical schematics and writing PLC ladder logic, resulting in improved energy trend tracking.
- Fine-tuned a Gocator 3D sensor via built-in emulation software, enhancing the automated quality inspection system and improving dimensional measurement accuracy by 60%.
- Designed and proposed a closed-loop control system to enhance temperature regulation for a tire membrane test bed's heating element, including the full schematic design in DraftSight.

TechnipFMC

Project Engineering Intern

St. John's, NL, Canada

May. – Aug. 2024

- Managed master equipment certification folder using Excel to streamline data retrieval for audits and inspections.
- Conducted site inspections to monitor subsea project progress and ensure compliance with quality standards.
- Performed calculations on a reel lift rigging assembly using knowledge of statics to ensure the assembly can tolerate expected loads.

PROJECTS

Paradigm Engineering – Software Team Lead

Aug. 2025 – Present

- Wrote onboard firmware, including low-level drivers for CAN, UART, and PWM, using C and FreeRTOS on an STM32G4 microcontroller to facilitate communication between a Jetson Orin, a Pixhawk 6C, and several motors.
- Developed a computer vision system using a ZED 2i Stereo Camera and PyTorch, implementing a CNN to detect white lines on the race track, enabling autonomous navigation.
- Designed the software architecture of an autonomous go-kart which achieved second place at the 2025 Autonomous Karting Series National Grand Prix.
- Led and mentored software team by preparing onboarding resources, documentation, and task assignments, resulting in significant contributions and experience-gain by 10+ members.

Memorial Baja – Electronics Team Member

Sept. 2023 – Present

- Developed C firmware for an ESP32 microcontroller to measure the drive shaft RPM from hall effect sensor data and establish communication to a digital dashboard via BLE to display RPM.
- Tested and troubleshooted the hall effect sensor using multimeters and oscilloscopes to ensure accurate readings.

Personal Project – STM32F1 Development PCB

Nov. 2025

- Designed an STM32F1 development PCB using KiCAD which includes an SWD interface, two crystal oscillators, USB input, and a linear regulator for prototyping and developing embedded systems.

DO.IT – Only a Spoonful

Jun. 2025

- Wrote all firmware, including PID balancing, using C on an ESP32 microcontroller for a self-balancing eating utensil to assist those with Parkinson's disease and wrist tremors.
- Placed first overall in the DO.IT hardware hackathon.

SKILLS

Languages: C, C++, Python, JavaScript, Rust, Bash

Tools: Linux, FreeRTOS, Git, KiCAD, Jira, Make, CMake, Docker, ROS2, PSpice, Simulink, SolidWorks

Protocols: Ethernet, TCP, UDP, UART, USB, I2C, SPI, CAN, LIN