

# Travis Brown

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## OBJECTIVE

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Seeking co-op internship in software engineering from January 2026 to August 2026

## EDUCATION

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Rochester Institute of Technology

Rochester, NY

Bachelor of Science in Computer Science, Minor in Criminal Justice

Expected: May 2027

GPA: 3.94

## SKILLS

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Languages: C, C++, Rust, Java, Python, HTML/CSS, JavaScript, SQL

Embedded: Logic Analyzer, STM32 MCUs, SPI, I2C, PWM, ADC

Tools/Environments: Git, GitHub, Linux, MacOS, PostgreSQL, Angular

## PROJECTS

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### Real-Time GPS Tracking with Wireless Communication

RIT Electric Vehicle Team

January 2025 - Present

- Implemented low-level hardware control on the ESP32 using the ESP-IDF framework for seamless communication to modules.
- Acquired real-time GPS data, including latitude, longitude, altitude, time, speed from custom driver for a TESEO-LIV3F GNSS module.
- Utilized NMEA 0183 protocol over UART to send commands and receive GPS data from the TESEO module.
- Used LoRa radio communication to transmit real-time GPS data from the ESP32 to a remote computer.
- Enabled live telemetry data for performance analysis and real-time insights into motorcycle performance.

### Handheld Chip-8 Emulator Console

Personal Project

June - July 2025

- Developed a Chip-8 emulator in Rust for a Raspberry Pi 5, with display, input, and sound using GPIO and SPI communication.
- Designed a 4x4 matrix keypad PCB in KiCad, including schematic and layout, and manually soldered key switches and caps.
- Created a custom SPI display driver for an SSD1309 OLED screen, avoiding external graphics libraries for low-level control.

## WORK EXPERIENCE

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### Embedded Software Engineer

RIT Electric Vehicle Team

August 2023 - Present

- Worked with a multidisciplinary team to develop C/C++ firmware for custom-designed PCBs.
- Implemented driver support for PWM, ADC, SPI, and Timers on the STM32F4 series microcontroller, working with the STM32 HAL.
- Applied STM32's CubeMX and CubeIDE to generate example code and converted it to work with EVT's hardware-agnostic API.
- Leveraged manufacturer datasheets to understand and utilize configuration registers properly, and researched peripherals for debugging.

### QA Automation Intern

Lockheed Martin

May - August 2025

- Designed and implemented a Python-based Merge Request Automation Pipeline to streamline the GitLab code review process.
- Automated over 60% of manual review checks required for merge readiness, significantly reducing QA workload and improving team efficiency.
- Built and maintained CI/CD pipelines using GitLab CI, contributing to faster and more reliable testing cycles.
- Enhanced automation scripts by integrating RESTful APIs (GitLab, Jira, and internal Lockheed AI) to retrieve metadata, validate merge request requirements, and generate context-aware responses within QA workflows.

### Digital Content Assistant

Spire Business Inc

June 2024 - April 2025

- Created SEO-optimized web pages with HTML/CSS per owner's specifications.
- Resolved common computer issues, such as slow performance, application errors, and login difficulties, ensuring minimal downtime.