

Stephen J. Cross

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Education

Georgia Institute of Technology | Atlanta, GA

Bachelor of Science in Electrical Engineering, GPA 3.75
Minoring in Physics

January 2025 – Present

Expected Graduation, December 2026

University of North Georgia | Oakwood, GA

Transfer with 74 Credit Hours, GPA 4.00

January 2023 – December 2024

Lanier Technical College | Gainesville, GA

Associate's Degree in Applied Science, GPA 3.46

August 2021 – April 2023

Experience

Amazon Project Kuiper | Redmond, WA

May 2025 – August 2025

RF Engineer Intern / Payload Integration & Test

- Built a specialized compact antenna test range, CATR, for customer terminal testing. I was responsible for building the anechoic chamber with a positioner gimbal, parabolic reflector, and all the necessary cooling, power and cabling for the antenna under test.
- Used Linux and the AWS system to interface with customer antennas for fixed-point near field calibrations, OTA software updates and setting transmit parameters for RF characterization (EIRP, EVM, SNR, RSSI).
- Worked with communication systems engineers and software developers to test and validate payload software releases on a large scale GSG radiated test venue. I worked to bring up a 48 customer terminal (CT) partially radiated system, my work included determining root cause issues on the PHY layer CT side.
- Extensive experience with Keysight and Rhode RF test equipment, both physically taking measurements in the lab and setting up the device for remote automations via SCPI commands.

Denton Carden Racing | Braselton, GA

May 2023 – December 2024

Lead Mechanic

- Isolated problems post-race, and presented a variety of solutions and their costs. Some problems included isolating intermittent faults in mil-spec wire looms for Cosworth, MoTec, and AEM vehicle management systems.
- Managed trackday crew to efficiently support multiple racecars throughout the season.
- Extensive experience on all aspects of bespoke motorsports builds, which includes TIG welding and bending custom roll cages, installing PDM's, ECU's and Data acquisition systems. Terminating and altering Mil-Spec wiring harnesses, and chassis setup and testing.

Optimum Performance Machines | Cumming, GA

September 2021 – January 2023

Mechanic

- Completed repairs and race preparation on a large variety of race cars for SCCA races.
- Oversaw the trackside support trailer, this includes spatially organizing tools and consumable parts by use for quick access during endurance racing. Kept an inventory of parts used by clients throughout race weekends to an accurate quote and estimate of what to bring for each travel trip.
- Implemented a repair and upkeep procedure for the trackside equipment to extend life and reduce consumable costs from disregarded maintenance.
- Generated quotes for new builds and wrecked cars, presenting clients with multiple cost based solutions with advantages and drawbacks to best maintain their vintage racecar.

Skills

Programming: C++, MatLab

Platforms: Linux (Ubuntu), Windows 10,11

Hardware: Spectrum Analyzer (R&S FSW, Keysight UXA), Signal Generator (R&S SMW200), Network Analyzer (Keysight PNA), ESP32

Software: Visio, SolidWorks, AutoCAD, Excel, VScode, Quartus Prime, LtSpice

Communication: Project documentation (Confluence, Notion), Work Logging (JIRA tickets)

Technical: +20gHz RF terminations (1.85,2.4,2.92), Microscope Soldering, Composite Fabrication, Electrical Troubleshooting

Certifications: SCCA Competition License