

Lazo Attar

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Objective

Results-driven electrical engineering major specializing in RF electronics and embedded software, equipped with technical proficiency in circuit design, signal processing, and microcontroller programming. Proven ability to work collaboratively in cross-functional teams, communicate complex technical concepts effectively, and adapt to evolving project requirements. Seeking an internship for summer 2025.

Education

Georgia Institute of Technology | Atlanta, GA

Bachelor of Science in Electrical Engineering, GPA 4.00

August 2022 – Present

Expected Graduation, May 2026

Skills

Programming: C, MATLAB, MIPS Assembly, Java, Python, Bash, LaTeX

Hardware: STM32 microcontroller, FPGAs, oscilloscope, spectrum analyzer logic analyzer

Software: Altium Designer, Altera Quartus II, Git, Docker

Experience

Georgia Tech Research Institute | Atlanta, GA

January 2023 – January 2024

Electrical Engineering Co-Op

- Wrote over 10,000 lines of embedded C to program an ARM MCU to communicate with peripherals and perform critical tasks
- Designed the schematics of 6 crucial RF devices in Altium Designer referencing their respective technical documentation
- Characterized the performance of RF devices using a spectrum analyzer to determine components in an RF chain
- Tested digital communication interfaces, including SPI and I2C, for over 10 devices with a logic analyzer and an oscilloscope
- Shadowed the characterization of wideband coplanar waveguides on a PCB with time-domain reflectometry via a VNA
- Designed a state machine framework to ease the development and modification of a complex hierarchical state machine

Georgia Tech Experimental Rocketry | Atlanta, GA

August 2022 – present

Flight Computer Lead

- Planned the details of a two-year development cycle for a two-stage solid-propellant rocket
- Directing a team of more than 10 peers to design the hardware and software of a flight computer
- Designing the hardware of a five-board flight computer via Altium Designer including ARM microcontrollers, multiple communication interfaces such as SPI, I2C, USART, and CAN, and RF electronics for telemetry and the use of a GPS
- Writing embedded software in C to program four ARM microcontrollers on a flight computer to coordinate and perform critical flight tasks
- Supervising an intern on a project to develop an app for recovery team communication to be used when recovering a rocket after launch

The Hive Makerspace | Atlanta, GA

January 2024 – present

Peer Instructor

- Assist end-users operate tools and machinery, including laser cutters, 3D printers, instrumentation equipment, PCB fabrication machines, and electronic prototyping equipment
- Assist end-users with their embedded systems projects involving sensors, many communication interfaces, and complex control flows

Relevant Coursework

Signals and Systems: LTI systems; Fourier transform; time-domain and frequency-domain characterizations of linear systems; discrete-time representations of continuous-time signals, Nyquist sampling, filters, Laplace-domain signal analysis; feedback

Digital Design: Combinational design using multiple methods: primitive gates, schematic capture for FPGAs, and VHDL; examination of real timing issues on hardware using timing simulation, oscilloscope, and logic analyzer; state machine specification, design and simulation; project engineering issues: top-down vs. bottom-up design, hierarchical decomposition, and modularity

Programming for HW / SW Systems: ISA data path; assembly programming; C programming; procedural abstraction; data abstraction; file systems and I/O, software testing, debugging, and performance monitoring; embedded software; concurrency in multicore systems, data-level parallelism, atomicity