Lucas Plant

(508) 395-8462 | lucasplant@gatech.edu | https://www.linkedin.com/in/lucas-plant/ | US Citizen

Education

Georgia Institute of Technology | Atlanta, GA *Expected Graduation: May 2026*
BS in Electrical Engineering | Minor in Computing Intelligence (AI/ML) **GPA 4.00**
Specialization in Robotics, Control Systems, and Electromagnetics / RF

Experience

SpaceX | Hawthorne, CA *May 2024 – August 2024*
Falcon Avionics Testing – Engineering Intern *May 2025 – August 2025*

- **Redesigned** hardware and software for **power management** and **serial communication** on Redundant IMU test systems.
- Refactored test system **software** for controlling thermal chambers **saving 350 hours** of lead/chamber time per year**.**
- **Identified** and **implemented** improvements for programming **firmware,** reducing engineering debug time in production.
- Evaluated **relational databases** and recommended changes to improve **trend analysis** in production.
- Developed a portable testing system for **root cause analysis**, hardware development, and radiation testing.
- Developed web tools for server provisioning, network switch setup, and nonconformance triaging.

Dynamics and Control Systems Laboratory *August 2024 – Present*
Undergraduate Research Assistant
DCSL is a lab at Georgia Tech Researching visual odometry, motion planning, and control systems for aerospace robotics.

- Developed C and MATLAB code for communication with a digital **IMU** leading to a **5x** improvement in sampling rate.
- Used the **ROS2** framework to develop code for a multi agent visual **SLAM** pipeline.
- Debugged, tested, and improved **PCBs** for a robot used to test satellite SLAM algorithms in a simulated environment.
- Used Rotational Dynamics, **Signal Processing**, and Regression algorithms to determine IMU alignment experimentally**.**
- In process of integrating new IMU system into the **Kalman Filter** of the COSMOS2 robot.
- Wrote firmware to control thrusters with **PWM** signals and telemeter pressure data to the main computer.

Tesla | Palo Alto, CA *August 2023 – December 2023*
Vehicle Software – Firmware Integration Intern – Steering Team

- Conducted testing to **evaluate** the functionality of **vehicle software** and root cause bugs in development firmware.
- Developed instructions and **software** for service technicians to **diagnose and repair** customer cars.
- Collaborated to bring up a new **HIL** (Hardware In the Loop) table to test steering software integration.
- Worked with **suppliers** to roll out bug fixes and firmware improvements in a timely manner.

Projects and Involvement

Yellow Jacket Space Program *August 2022 – January 2024*
Yellow Jacket space program builds, tests, and launches liquid fueled rockets with the goal of reaching space within the near future.

- **Designed**, troubleshooted, and selected parts for a circuit schematic on the rocket's **battery management system**.
- Designed a circuit with a **Buck Boost** regulator for controlled battery charging.
- Piloting **board designs** to replace *beagle bone* computers with STM32 **microcontrollers** for flight controls.

Boy Scouts of America | Brentwood, TN *2015 – June 2022*
Eagle Scout

- **Facilitated** groups of scouts to complete community **service projects**, merit badge requirements, and scouting events.
- Led a team of over 10 scouts to build 3 concrete tee pads for a frisbee golf course in a local park.

Skills

- **Programming:** Python, C/C++, Fortran, MATLAB, Java, SQL, Arduino.
- **Hardware:** PCB Design, Soldering, Breadboarding, Harnessing, Oscilloscopes, NI tools.
- **Software:** Altium, GIT, Jira, Wireshark, Vector CAN tools, LTSpice, Linux, Simulink, Meep, Simulation (RK4).
- **Languages:** English (native), Portuguese (conversational), Spanish (beginning conversational), French (beginning).

Professional Organizations: Yellow Jacket Space Program, HyTech Racing (Formula SAE), Electrify GT, Society of Hispanic Professional Engineers, Brazilian Student Association, Georgia Tech Grand Challenges, Delta Chi Fraternity.