Michael C. Lagana

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Education

Georgia Institute of Technology **Atlanta, GA**
Bachelor of Science in Aerospace Engineering May 2026
Minor in Robotics GPA: 4.00/4.00

- Honors Program, Sigma Gamma Tau, Faculty Honors
- Relevant Coursework: Computing for Engineers, Statics, Mechanics of Deformable Bodies, Thermodynamics and Fluids Fundamentals

Experience

Ben T. Zinn Combustion Laboratory **Atlanta, GA**
Research Assistant September 2023 - Current

- Created SolidWorks CAD assemblies of optical setups for use with Raman scattering diagnostics
- Learned about the design of experimental combustion stand and testing methodology
- Wrote MATLAB code to expedite PIV data processing
- Fabricated various components for use in optical testing setup using 3D printing, laser cutting, etc

VIP Special Purpose Aircraft: NASA ULI Urban Air Mobility **Atlanta, GA**
Hardware Sub-team January 2023 - May 2023

- Built and tested RPi based drones for use with experimental flight path generation algorithms
- Diagnosed drone hardware and software issues (e.g. telemetry, motor controls)
- Recorded instructions for researchers of other cooperating universities to reproduce the tests

Activities

Invention Studio **Atlanta, GA**
Prototyping Instructor September 2022 - Current

- Trained on a variety of specialized tool groups within Georgia Tech's maker space
- Provide support and instruction to students needing prototyped designs
- Assist with the maintenance and repair of studio equipment and machines
- Specialized in the electronics tool group to learn more about and help manage it

Yellow Jacket Space Program **Atlanta, GA**
Propulsion Controls Sub-Team Member January 2023 - Current

- Designing a prototype dual chamber pump for consideration on upcoming Vespula rocket
- Writing MATLAB code to model engine throttling
- Aided in the collection of data for a prototype needle valve using a pressurized water flow stand

RoboJackets: RoboNav **Atlanta, GA**
Drone Hardware Lead October 2023 - Current

- Designing and building a drone to complete tasks including guidance and data gathering
- Integrating frame with a robotic arm to complete delivery tasks
- Retrofitting previous team's old hardware for cost efficiency

Platform RPi Drone **Atlanta, GA**
Personal Project June 2023 - Current

- Used experience from VIP to design around the Pixhawk flight controller and Ardupilot software
- Applied CAD experience to design drone frame components in Fusion 360 for ABS 3D printing
- Programmed flight computer and ground station in Python for wireless control via laptop

Skills & Interests

Software: Linux, Fusion 360, Simulink, KiCAD, SolidWorks, ANSYS, LabView
Technical: Waterjet, Metal Shop, Wood Shop, 3D Prototyping, Metal Lathe, PCB Fabrication
Programming Languages: Python, MATLAB, C++
Interests: Chess, Cardistry, Golf, Jiu-Jitsu, Cyber CTFs