Anthony Limiero

(Seeking **full-time** employment | Available July 2025 | US Citizen)

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Education

Georgia Institute of Technology, College of Engineering – *Atlanta, GA* **Aug 2017 – May 2022**

Bachelor of Science: Aerospace Engineering **GPA:** 3.90 / 4.00

Work Experience

Georgia Tech Christian Campus Fellowship (CCF) – *Atlanta, GA* **Present**

- **Campus Minister: May 2023 - Present**
  - Leading a team of interns that minister to freshmen students on Georgia Tech's campus
  - Leading small groups, giving talks, leading service trips, and facilitating events with 100+ students
- **Intern: Aug 2022 - May2023**
  - Investing in underclassmen students academic, personal, and spiritual lives
  - Mentorship of students with mental disabilities at Georgia Tech

NASA's Jet Propulsion Laboratory – Software Computing System Intern – *Pasadena, CA* **May 2022 – Jul 2022**

- Created auto-coding tool in Scala to generate C++ command validation code for Mars Sample Return mission
- Learned the fundamentals of compilers and produced functional flight code over course of one summer
- Contributed to open-source flight software frameworks (FPrime and Fpp) used across multiple NASA missions

NASA Goddard Space Flight Center – In-Space Assembly Intern – *Greenbelt, MD* **Jun 2021 – Aug 2021**

- Developed and analyzed both new and old concepts for the In-space Assembled Telescope (iSAT) project
- Focused on unique design challenges of spacecraft harnessing for large in-space assembled structures
- Interviewed OSAM subject matter experts & astronauts from across NASA centers to inform design decisions
- Illustrated assembly CONOPS in CAD and Blender

Georgia Tech Research Institute (GTRI) – Mech Engineering Student Co-op – *Atlanta, GA* **Aug 2019 – Jun 2021**

- Reverse engineering of avionics components for the air force's C-5 Galaxy cargo plane
- Designed vibration test fixturing for aircraft servo, and worked closely with machinists during fabrication
- Implemented sinusoidal motor control for BLDC motor
- Finite element analysis of servo body structure in SolidWorks
- Extensive engineering drawings and documentation, GD&T, following MIL-SPEC and other standards

Georgia Tech Campus Recreation Center – *Atlanta, GA* **May 2018 – Dec 2018**

- Climbing wall attendant for two semesters
- Ellis certified lifeguard for one semester

Research

Space Systems Design Lab (SSDL) – *Georgia Tech, Atlanta, GA* **Jan 2020 – May 2022**

- **GT-2 Project Lead and Flight Software Team Lead** (1U cubesat mission)
  - Managing other team leads, creating schedule, coordinating with Spaceflight and JAXA for requirements
  - Direct manager of flight software team using JPL's FPrime framework for embedded C++ development
  - Designing system topologies, coordinating tasking, managing GitHub, designing software components
- **GT-1 Flight Software Team Member** (1U cubesat deployed from ISS in February 2022)
  - Implemented I2C control and communication for onboard power system
  - Developed shift register driver in C++
  - Implemented amateur radio software payload
- Gained experience with thermal and vacuum chamber, clean room, and vibration testing

Autonomous Control and Decision Systems Lab (ACDS) – *Georgia Tech, Atlanta, GA* **Summer 2018**

- Research into model predictive control and simulation for highly nonlinear systems such as a unicycle

Projects

DIY 3D Printer (Custom Design) **2021-2024**

- Designed from scratch a direct-drive 3D printer with custom manufactured parts

Full Stack Personal Finance Web App: "Budgeteer" **2018 – Ongoing**

- Full-stack development of personal finance web app using Python, SQLite, JS, and the Materialize framework
- Hosting and management of Ubuntu virtual machine on remote server

Mock Mars Mission Proposal **Spring 2022**

- Senior design project for a mock mission NASA announcement of opportunity, designing seismic lander mission
- CAD assembly lead. Worked in SolidWorks to create lander and orbiter designs

Submersible Water Activity Meter **Fall 2021**

- Prototyped an instrument to take in-situ measurements of water activity for life detection purposes on icy moons

Arduino Based CNC Hot Wire Foam Cutter for use with Homemade Aluminum Foundry **Dec 2020**

- Constructed 2.5 axis CNC controlled with open-source software GRBL and Universal Gcode Sender (UGS)
- Constructed charcoal aluminum foundry for lost-foam sand casting

MATLAB Based Jet Engine Design/Optimization Tool **Nov 2020**

- Collaboratively developed a set of equations to model thermodynamic states of ramjets, turbofans, & turbojets

Self-Balancing Unicycle Robot **Jan 2019**

- Implementation of PID control using an accelerometer/gyro with Arduino to drive a prototype Lego robot

Leadership / Volunteer Work

Midtown Assistance Center (MAC) / La Amistad – *Atlanta, Georgia* **Weekly: Aug 2023 - May 2024**

- MAC - Organized GT students from CCF to help pack and distribute groceries for the food insecure in ATL
- La Amistad - Organized GT students form CCF to help tutor elementary kids from non-english speaking homes

Appalachian Service Project – *East Tennessee* **Oct 2023 & 2024**

- Led student trips to offer home repair/construction to families living in rural appalachian poverty

Casas Por Cristo Trip – *Juárez, México* **Mar 2020, 2021, & 2023**

- Building houses for families in severe poverty

Hurricane Relief Service Trips – *Houston, TX, Jacksonville, FL, Jean Lafitte, LA* **Oct 2017, 2018, & 2021**

- Demolition, cleanup, and reconstruction of homes for families affected by hurricanes Harvey, Irma, and Ida

300 Mile Solo Unicycle Ride for Charity **Aug 2019**

- Raised $3000 over 10 days to provider resources for community leaders in impoverished regions of south Asia

Study Abroad Intern with CMFI - Santiago, Chile **Feb 2019 – Jun 2019**

- Volunteered at a campus ministry in Santiago, Chile teaching English and doing student outreach for five months

Skills

Programming/Computing: CAD (**SolidWorks** FEA, surfacing, sheet metal, weldments), OnShape, Blender, **Python** , **MATLAB**, Simulink, **C++**, C, Fprime, Fpp, Git, GitHub management, **command line Unix**, Java, Scala, JavaScript (jQuery), HTML/CSS, SQLite, XML, Xfoil and AVL, Arduino, Virtual Machines, Linux, Ubuntu, Compilers, Microsoft Office

Mechanical: Extensive **GD&T** experience, 3D printing, mill, lathe, flux core welding, sand casting, sheet metal manufacturing, laser cutting and engraving, soldering, rotary tool (Dremel), table saw, band saw, routing table, drill press, bead blaster, glass cutting, jointer and planer, taps and dies, hand tools

Communication: **Spanish** (Advanced, spoken and written); Co-author of 75,000+ word youth fiction novel, *Son of Time,* and 120,000+ word novel, *The Sierra Rod*; Virtual poster presentation for NASA engineers; Professional design reviews and requirements writing at GTRI; Four years of theater experience including two Shakespeare festival championships

Course Concepts: Linear Algebra, Multivariable Calculus, Differential Equations, Statistics, Physics, Chemistry, Circuits, Engineering Drawing/Sketching, Materials Science, Statics, Dynamics, Deformable Bodies, Thermodynamics, Fluid Dynamics, Aerodynamics, Orbital Mechanics, Aircraft/Spacecraft Flight Dynamics, Jet and Rocket Propulsion, Composites, Structures, System Dynamics and Vibration, Accident Causation and System Safety, Space Instrumentation for Life Detection, Controls, Space Mission Design