

Carlos A. Carrasquillo Torres

(787) 668-8096 | ccarrasquillo3@gatech.edu | www.carloscarras.tech | U.S. Citizen

Education

Georgia Institute of Technology | GPA: 3.9 / 4.0

- PhD, *Robotics*
 - Grad REACH Scholar
 - Pathbreakers Fellow (formerly University Center for Exemplary Mentoring)
 - NDSEG Fellow
- Master of Science, *Computer Science*, Machine Learning Specialization
- Master of Science, *Aerospace Engineering*

Aug 2021 – Present

Expected Summer 2026
August 2024 – Current
August 2023 – Current
August 2022 – August 2025
May 2025
May 2025

University of Florida | GPA: 3.7 / 4.0

- Bachelor of Science, *Mechanical Engineering*, Magna Cum Laude Honors
- Bachelor of Science, *Computer Engineering*, Magna Cum Laude Honors

Aug 2017 – May 2021

May 2021
May 2021

Experience

Graduate Research Assistant | Georgia Institute of Technology, Institute for Robotics and Intelligent Machines

Aug 2021 – Current

Advisors: Anirban Mazumdar, PhD, Aaron Young, PhD

- Led the design and development, of exoskeleton controllers and mechatronic systems for human navigation, mobility, and injury reduction.
- Performed human-subject experiments using motion capture, EMG, and metabolics to validate exoskeleton hardware and controllers.

Computer Science / Mechanical Engineering Intern | Raytheon Intelligence & Space

May 2021 – May 2022

- Developed a MERN stack web application to help engineers find components on printed circuit boards by search and mouseover.
- Engineered a VBA-based desktop application to automate the logging and tracking of material testing data, replacing a manual process.

Undergraduate Research Assistant | University of Florida Dept. of Mechanical and Aerospace Engineering

Jan 2019 – Aug 2021

Advisor: Riccardo Bevilacqua, PhD

- Developed embedded C++ avionics software for the D3 CubeSat, creating custom libraries to interface with the satellite's sensors [C1, C2].
- Engineered a ground station application in Python to transmit telecommands and receiving downlinked data from the satellite.

Undergraduate Teaching Assistant | University of Florida Dept. of Mechanical and Aerospace Engineering

May 2019 – May 2021

- *Design and Manufacturing Lab (6X):* Taught >30 students on design for manufacturing principles and usage of machine shop equipment.
- *Dynamics and Controls Lab (1X):* Lectured to >50 students on applying classical control theory to real-world systems.
- *Thermal Systems and Design Lab (1X):* Guided student teams in designing mathematical models for internal combustion engines.
- *Numerical Methods (2X):* Lectured on iterative algorithms, linear algebra, Fourier analysis and held routine office hours.

Select Publications

- [J4] K. L. Scherpereel, M. C. Gombolay, M. K. Shepherd, C. A. Carrasquillo, O. T. Inan, A. J. Young. "Deep Domain Adaptation Eliminates Costly Data Required for Task-Agnostic Wearable Robotic Control". *Science Robotics*. 2025. (Submitted)
- [J3] C. Carrasquillo, A. Bajpai, D. Iyengar, K. Collins, A. Mazumdar, A. Young. "[Enhancing Human Navigation Ability Using Force-Feedback from a Lower-Limb Exoskeleton](#)". *IEEE Transactions on Haptics*. 2025.
- [J2] C. Carrasquillo, S. Zhou, W. L. Childers, A. Young, K. Herrin. "[A Clinical Decision-Making Algorithm for the Personalized Prescription of Microprocessor-Controlled Prosthetic Knees: An Evidence-Based Approach based on a Randomized Trial](#)". *Prosthetics and Orthotics International*. 2025.
- [J1] A. Bajpai, C. Carrasquillo, J. Carlson, J. Park, D. Iyengar, K. Herrin, A. Young, A. Mazumdar. "[Design and Validation of a Versatile High Torque Quasi-Direct Drive Hip Exoskeleton](#)". *IEEE Transactions on Mechatronics*. 2023.
- [C2] C. Carrasquillo. "[A Versatile and Open-Source Radio Framework for the D3 CubeSat Mission](#)". *Small Satellite Conference*. 2021. Student Competition Best Paper Honorable Mention.
- [C1] S. Buckner, C. Carrasquillo, M. Elosegui, R. Bevilacqua. "[A Novel Approach to CubeSat Flight Software Development Using Robot Operating System \(ROS\)](#)". *Small Satellite Conference*. 2020. Poster Presentation.

Skills

- *Design & Manufacturing:* SolidWorks (CAD, FEA), Fusion 360 (CAD/CAM), Machine Shop Equipment (Lathes, Mills, CNC, Welding), Rapid Prototyping
- *Programming:* Python (NumPy, Pandas, OpenCV, PyTorch, TensorFlow, ROS, OpenMDAO), C/C++, JavaScript, MATLAB, Simulink, VBA, VHDL
- *Personal Projects:* 12-DOF quadruped robot, 3D bioprinter, desktop lathe, MIPS CPU, websites
- *Certifications:* Amateur Radio Technician (2019, KN4ZUC), SOLIDWORKS Associate (2020), Student Pilot (90+ hours), PADI Open Water Diver
- *Languages:* English and Spanish