Mark Leggiero

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470-234-3583

Education

Master of Science in **Mechanical Engineering**, *Georgia Institute of Technology* | Started Aug 2025
Bachelor of Science in **Mechanical Engineering**, *Georgia Institute of Technology* | Aug 2022 | GPA: 3.94
Bachelor of Science in **Physics**, *University of North Georgia* | Aug 2022 | GPA: 3.91

Technical Skills

Programming: Python, C++, C, MATLAB, LabView **CAD:** SolidWorks, Fusion360, Revit, AutoCAD

Engineering Experience

CORE|EPC - *Mechanical Engineer I* **Apr 2025 - Present**

- Designed building and manufacturing systems for $500K+ commercial and industrial projects, ensuring client satisfaction and regulatory compliance.
- Worked in multi-disciplinary teams across recycling, renewable power generation, chemical production, and manufacturing sectors.

Smart Sea Level Sensors Project - *Research Intern* **May 2021 - Aug 2021**

- Upgraded firmware (C++) for ESP-32 IoT controller to allow for dense LoRaWAN network rainfall data collection in Savannah, Georgia.
- Conducted market analysis optimizing rainfall sensor cost and reliability; developed cellular-capable telemetry redundancy plan.

Brookhaven National Laboratory - ***Research Intern*** **May 2019 - Aug 2019**

- Developed sample exchange robotic system and GUI (LabVIEW) for in-vacuum x-ray imaging beamlines with postdoctoral research staff.

Global Health and Development Experience

Kiwimbi International - *Board Member* **Jan 2025 - Present**

- Guide strategic decisions for $300,000 nonprofit improving child nutrition, primary and high school education, and quality employment in Kenya.

Peace Corps Kenya - *Education Volunteer* **Oct 2022 - Nov 2024**

- Led $12,000 USAID project for village-scale water distribution system serving 2,000+ individuals.
- Taught Math and Physics to 250+ high school students in a resource-constrained environment.

Engineers Without Borders GT - *Technical Lead* **Aug 2020 - Aug 2022**

- Led 10-engineer team conducting remote needs-analysis for sanitation solutions in rural Malawi.
- Designed eight ventilation-improved latrines (Solidworks) for primary school of 300+ students.

Key Technical Projects

“MacGyver Bot” Two Wheeled Self-Balancing Robot **2023**

- Created a PID-controlled balancing robot using only materials accessible in a rural Kenyan village.

Open Source "Micro-Spot" Quadruped Robot **2021 - Present**

- Built 12 DoF dog-style quadruped with Raspberry Pi, Arduino, and an IMU. Developed custom whole body inverse kinematics solver (Python) for joint positioning.

VAMPIRE Building Thermal Analysis Publication **Jan 2018 - Aug 2021**

- Developed novel building thermal output measurement technique (MATLAB). Primary author of *Energy and Buildings* journal publication.