Ethan Ragasa

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EDUCATION

Georgia Institute of Technology — Atlanta, GA
BS/MS in Mechanical Engineering | M.S. GPA: 4.00 | B.S. GPA: 3.87 — Aug 2021 – May 2027

- Relevant Coursework: Robotics, Controls of Dynamic Systems, Nonlinear Controls, and Vibrations
- Faculty Honors & Dean's List

SOFTWARE PROFICIENCY

- Solidworks
- Fusion360
- Arduino
- Elmer FEA
- RoboDK
- MATLAB
- Simulink
- Python
- LabVIEW
- OpenFOAM

TECHNICAL SKILLS

- Mechanical Design
- Robotic Manipulation
- Finite Element Analysis (FEA)
- PID Control
- Design for Manufacturing & Assembly (DFMA)
- Failure Mode and Effects Analysis (FMEA)
- Prototyping, Fabrication, & Machining
- Geometric Dimensional and Tolerancing (GD&T)
- Video Tracking
- CAD/CAE Simulation

EXPERIENCE

Cofounder & Chief Prototype Engineer | Laminar Scientific — Atlanta, GA
Team Lead for Renewable Ocean Wave Energy Technology Startup — May 2025 – Current

- Led transition to seal-less external magnet architecture using Elmer FEA magnetostatics to optimize flux density and fiberglass to eliminate eddy current interference
- Directed full-cycle deployment of MantaHub system, including hands-on prototyping, managing DFMA/GD&T, sourcing components from international suppliers, and coordinating with offshore manufacturing teams
- Validated marine-grade prototypes through real-world power-generation tests in Florida, implementing FMEA to mitigate water ingress, biofouling, corrosion, and extreme wave forces
- Secured pilot customers in Canada and Florida by developing engineering roadmaps for AI and defense integration

Robotics Researcher | Georgia Institute of Technology — Atlanta, GA
Biorobotics and Human Modeling Lab — Aug 2024 – May 2025

- Developed a Python/OpenCV slip-detection system using GelSight Mini sensors to compute regionalized entropy and improve grasp stability
- Tuned MATLAB PID controllers for end-effector trajectory tracking and controlled FANUC robots via RoboDK for cable manipulation research

Design Engineer Intern | Navistar International — Lisle, IL
Body Compositions Engineering Team — May 2023 – Aug 2023

- Built a Python/Selenium scraper to automate BOM population, reducing processing time from hours to 5 minutes
- Led interior truck light prototype reviews, balancing cost and functionality across cross-functional teams

PROJECTS

Capstone Team Space Sweepers | Georgia Institute of Technology — Atlanta, GA
Lunar Regolith Collection System for Small-Scale Experiments on Moon — Jan 2025 – May 2025

- Developed a 1U CubeSat prototype for lunar regolith collection; validated vertical transport of 20-80 μm particles via Electrodynamic Traveling Wave (ETW) under high-vacuum, low-humidity conditions

ME 2110 Finalist & Teaching Assistant | Georgia Institute of Technology — Atlanta, GA
Creative Decisions & Design — Aug 2023 – May 2025

- Ranked 4th of 68 teams in autonomous robot competition; designed and programmed an autonomous robot using SolidWorks, Arduino (C++), motors, and pneumatic actuators
- Supervised IDEA Lab fabrication; trained 100+ students in 3D printing, laser cutting, soldering, and prototyping skills