

Pablo Avila

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EDUCATION

Georgia Institute of Technology

Bachelor of Science in Mechanical Engineering | May 2026 | GPA: 3.97/4.0

- Concentration in Automotive Engineering and Design.
- 2022 Gold Scholar recipient, representing the top 2% of admitted students.
- SolidWorks Certifications: CSWA, CSWP, CSWPA-DT, CSWPA-SM, CSWPA-WD.

PROFESSIONAL EXPERIENCE

Product Development Intern

Textron GSE

June 2025 - present, Cartersville, GA

- Designed a high-load testing device for baggage tractors (50,000 lbs), performing FEA and motion analysis studies; presented in open reviews and DFM/DFA meetings to ensure manufacturability and first-pass success.
- Supported the development of a fully electric airport baggage tractor, focusing on the design of key exterior components including light guards and mounting for rear hitch mirrors, rear cameras, and work lights.
- Applied GD&T to production-ready part drawings to ensure precise manufacturing and quality control.

Reliability Engineer Intern

Shaw Industries

June 2024 - August 2024, Dalton, GA

- Designed and developed lightweight, portable waste collection devices, supporting the transfer of over 15,000 lbs of resin spills, leading to improved efficiency in waste management.
- Engineered 2,000 lbs impact-resistant polycarbonate forklift roofs, enhancing associate visibility and safety.
- Automated the reorganization of the supply room by leveraging Excel functions and query viewers, identifying 4,500 outdated parts for potential use across 35 Shaw plants, optimizing inventory management.

Design Engineer Intern

Shaw Industries

June 2022 - August 2022, Dalton, GA

- Designed cost-efficient, controllable camera mounts using 3D-printed filament, reducing production costs by 90%.
- Implemented rapid prototyping and programmed motors using Arduino and MQTT for automated operation.
- Practiced PCB design through schematic wiring and soldering.

PROJECTS

Mobility Support Device for Spinal Cord Injury Patients

Equity in Mobility | Spring 2025 - present

- Collected feedback from 50+ individuals with spinal cord injuries via NextStep Atlanta to guide a user-centered design, focusing on documentation through Gantt Chart, HOQ, Morph Chart.
- Developed a retractable, compact, open-source lift capable of transferring a 10 kg wheelchair into a vehicle, incorporating a 1:5 mechanical advantage to accommodate limited strength and range of motion.

Autonomous Robotics Competition | 2nd place

ME 2110 - Creative Decisions & Design | Fall 2023

- Led a 6-week design project for a robot under \$100 and capable of completing 5 tasks in 40 seconds.
- Applied design and management tools such as HOQ, specification sheets, function trees, Gantt charts, evaluation matrices, and FMEA to accelerate team progress by 20%.
- Documented the project's process through 3 IEEE-compliant engineering reports and formal presentations.

EXTRACURRICULARS

Lambda Theta Phi Latin Fraternity

Vice President | Spring 2025 - present

- Responsible for coordinating 2+ weekly events ranging from social gatherings to Latino cultural workshops.
- Serve as primary liaison between the executive board, 17+ members, and external connections to drive chapter recognition and engagement.

EcoCAR EV Challenge

System Design & Integration Subteam | vip.gatech.edu/teams/vpu | Spring 2024 - 25

- Modeled HV box mounting, performing FEA for 20g crash scenarios to ensure structural integrity and user safety.
- Designed and assembled a test connector enclosure to contain LV and HV connections, enhancing testing safety.
- Researched stub shaft manufacturing methods and collaborated with vendors to evaluate production capabilities.
- Designed motor bushing mounts to reduce cabin vibration and prepared the front subframe for FEA validation.

SKILLS

Technical Skills: SolidWorks, Siemens NX, Fusion 360, OnShape, MATLAB, Altair Inspire FEA, Word, Excel.

Interpersonal Skills: Bilingual - Spanish, Leadership in Collaborative Environments, Conflict Resolution.