

Abigail Paulus

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Ambitious, detail-oriented mechanical engineering student focused on drafting, aspiring to be a design engineer

Education

Bachelor of Science in Mechanical Engineering | Florida Atlantic University, *Boca Raton, FL* May 2028

Accomplishments & Awards: Rising Star Award (Spring 2025), FAU Launch Scholarship (2025), \$1,000 CSYS Dale Davis Scholarship (2024), Florida Academic Scholars (2024), 2x Outstanding Engineering Achievement Award (Fall 2024 & 2023), Cambridge AICE Merit Diploma (2023)

Skills & Qualifications *(*Certifications Italicized)*

CAD: *SolidWorks*, DraftSight, RapidHarness, *AutoCAD*, *Inventor*, *Fusion360*, SketchUp | **Business:** *Excel*, *Word*, *PPT*, PDM, ERP, AS400

Hardware: Soldering, FDM Printing, Calipers, Power Tools, Drill Press, Woodworking | **Programming:** *HTML*, *CSS*, *JS*, MATLAB

Professional Experience

Product Design Engineer Intern | Dometic, *Pompano Beach, FL* May 2025 - Present

- Optimizing performance for products through component selection, sizing, and layout using Solidworks
- Prepare, maintain, and update documentation for components, layouts, assemblies, and drawings in proper sequence and order
- Administering, maintaining, and updating DCR, PSR, RCR, NRP, ECN, ERC, and other product information
- Tracking and assigning part numbers and BOM for products up to date, collaborating with engineering, purchasing, and manufacturing teams to maintain product information documentation

Programing Teacher (Contract) | Code/Art, *Davie, FL* Feb 2024 - Present

- Instructing 10+ students within 1–2-hour lesson using programs such as: Scratch, p5.js, Tinkercad, JavaScript, HTML/CSS
- Verifying comprehension of lessons, facilitating attendance, and establishing a supportive space for students to thrive

Mechanical Engineer Intern | Q'Straint, *Oakland Park, FL* June 2024 - Aug 2024

- Drafted 25-page service manual, increasing technicians' efficiency, reduce costs, improving convenience
- Designed metal support brackets for in-house production using SolidWorks' sheet metal tool and design intent
- Tracked 200+ unused inventory parts, finalized 10+ drawings, fulfilled 2 work orders
- Enhanced UX/UI, optimized, hosted on GitHub (plans to use SQL and PHP, adding features to improve communication)

CAD Engineer Intern | Q'Straint, *Oakland Park, FL* June 2023 - July 2023

- Authored 6 pages of instruction manual using Word, also serving as template for similar components across product line
- Updated 10+ outdated technical drawings to match current standards, replacing to use existing inventory, reducing cost
- Developed HTML/CSS/JavaScript website, replicating McMaster Carr search, efficiently organizing/filtering 150+ small hardware parts in bulk, in effort to use existing inventory to reduce cost, demonstrating web development proficiency
- Edited/enhanced 16 pages of introductory engineering handbook in OneNote, facilitating smoother onboarding process

Projects

Product Developer | Digital Audio Player July 2024 - Present

- MP3 player built from the ground up with custom PCB and CNC machined chassis
- Reverse engineering Raspberry Pi and other plug and play components to create custom PCBA using Altium Designer
- Analyzing consumer needs, prioritizing features most useful and reiterating different versions of prototypes

Team Lead | Blind Spot Sensor for Motorcycle/Bicycle Dec 2023 - Feb 2024

- Modular system for bikes to detect when a car is passing in rider's blind-spot, vibrating a motor on the helmet
- Developed concept and project plans based on Arduino and existing components from premade basics kit
- Designed in Fusion360 to create/produce 4 prototypes using 3D printing, ensuring proper fit of hardware components

Project Manager | Bar-top Display Stand for Teacher's Lounge Mar 2023 - Oct 2023

- Customized and designed bar made for teacher's lounge, used for serving during culinary service
- Increased sales of culinary department by 6% through creating a more appealing display case stand, encouraging orders
- Organized efficient plans, using SketchUp, to cut and assemble materials for team members, leaving 30% of \$1000 budget

Leadership Experience

Technical Outreach and Community Help (TORCH) Chair | National Society of Black Engineers (NSBE) June 2025 - Present

Internal Development Chair/Secretary | American Society of Mechanical Engineers (ASME) Jan 2025 - Present

Academic, Professional & Athletic Chair | Alpha Omega Epsilon (AOE) Jan 2025 - Present

Volunteer Coach | Coral Springs Youth Soccer (CSYS) Nov 2021 - Present

President/Vice President | Southeastern Consortium for Minorities in Engineering (SECME) June 2022 - 2024

Active Club Membership: SWE, SHPE, Women in Engineering and Computer Science, Technology & Aerospace Club