

# 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

Dec 2027

Florida Atlantic University | Boca Raton, FL

## Skills & Qualifications

**CAD:** SolidWorks, AutoCAD, Inventor, Fusion360, SketchUp | **Business:** Excel, Word, PowerPoint, SolidWorks PDM, SYSPRO ERP  
**Programming:** JavaScript, HTML, CSS, GitHub, MATLAB, Adobe Dreamweaver | **Hardware:** Soldering, 3D Printing, Woodworking

## Professional Experience

### CAD Engineer Intern | Q'Straint

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- Updated 10+ outdated technical drawings to match current standards, replacing parts to use existing inventory, reducing cost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

### Mechanical Engineer Intern | Q'Straint

June 2024 - Aug 2024

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

### Programing Teacher | Code/Art

Feb 2024 - Present

- Instructing 10+ students within 1-2-hour lesson using programs such as: Scratch, p5.js, Tinkercad, JavaScript, HTML/CSS
- Communicating and collaborating with fellow leads and program manager, completing weekly reports addressing questions
- Verifying comprehension of lessons, facilitating attendance, and establishing a supportive space for students to thrive

## Projects

### 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
- Assigned roles for 3 team members to distribute work evenly through positions of designer, assembler, and technical writer

### 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 to cut and assemble materials for team members, leaving 30% of \$1000 budget
- Used SketchUp to design preliminary plans and develop a mockup, ensuring the design matches the concept of the director

## Leadership Experience

### Secretary | American Society of Mechanical Engineers (ASME)

2025 - Present

- Composing professional emails to send out to 200+ members about meetings, industry tours, guest speakers, and workshops
- Recording 30+ members attendance, dues, and those most active to maintain point system using Google Sheets
- Collaborating with executive board members to enhance the club through new events and retain membership

### Academic/Professional Chair | Alpha Omega Epsilon (AQE)

2025 - Present

- Developing/maintaining sorority website, to increase and maintain communication with those interested, using Word Press
- Leading at least 3 professional or academic related events for members in and outside of sorority each semester
- Servicing communal library, organizing donated books, supplies, notes, and any other school related materials

### Volunteer Coach | Coral Springs Youth Soccer (CSYS)

2021 - Present

- Managing 2 teams each season, 5 different teams total, obtaining WDL history of 41-6-13, securing 2nd place in 2024 playoffs
- Evaluating weaknesses from previous games, coordinating drills for 2 practices a week to hone those skills with other coaches
- Establishing an exciting and engaging team environment to encourage the children's desire to continue playing soccer

### President/Vice President | Southeastern Consortium for Minorities in Engineering (SECME)

2022 - 2024

- Facilitate 4 projects with 3 other clubs, developing individual project plans, budgeting, and assembling
- Organized STEM outreach to elementary school, teaching 10 kids basic robotics and programming using Lego Mindstorm
- Communicated with club sponsor to plan events, including engineering competition with 4 participating local high schools

**Active Club Membership:** Society of Women in Engineering, National Society of Black Engineers, Society of Hispanic Professional Engineers, Women in Engineering and Computer Science, American Society of Civil Engineers, Technology & Aerospace Club

## Accomplishments & Awards

Florida Academic Scholars, Cambridge AICE Diploma, \$1,000 CSYS Scholarship, 2x Outstanding Engineering Achievement Award