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 | 3.66 GPA   May 2027
Florida Atlantic University | Boca Raton, FL
Web Development Certification | 4.0 GPA   June 2025
Atlantic Technical College | Coconut Creek, FL

Skills & Qualifications

SolidWorks, SolidWorks PDM, MATLAB, SYSPRO ERP, SketchUp, GitHub, Inkscape, Adobe Dreamweaver, 3D Printing, Soldering
Certifications:
Inventor, AutoCAD, Fusion360; Excel, Word, PowerPoint; JavaScript, HTML & CSS; Photoshop; TestOut IT Fundamentals Pro

Experience

Mechanical CAD Engineer Intern | Q'Straint   June – July 2023
- Authored an instruction manual utilizing Microsoft Word for replacement of part in mainstream product, also serving as a template for similar components across the product line
- Developed an HTML, CSS, and JavaScript-based website, efficiently organized and filtered hardware and small parts in bulk in efforts to use existing hardware in-house to reduce cost, demonstrating web development proficiency
- Edited and enhanced an introductory handbook in OneNote, offering valuable insight for new engineers joining Q'Straint, facilitating a smoother onboarding process
- Updated outdated product drawings to meet/match current standards, replacing similar parts to use inventory, reducing cost

June – Aug 2024
- Drafted service manual for fully automatic wheelchair restraint system, combining existing manuals to increase efficiency of service technicians, reduce cost, and improve convenience of customers
- Designed metal support brackets for in-house production using SolidWorks's sheet metal fabrication tool, using design intent
- Tracked current inventory parts, finalized drawings, and fulfilled work orders, ensuring seamless communication and coordination between mentors and departments through collaboration
- Improved development of hardware sorting website by enhancing user interface, optimizing code, and hosting on GitHub with plans to host on SQL and code revamped to PHP

Programing Teacher | Code/Art   Feb 2024 – Present
- Instruct and mentor aspiring coders in a range of programming languages and programs, including Scratch, JavaScript, Tinkercad, and HTML/CSS, while also communicating and collaborating with fellow leads
- Verify the comprehension of lessons, facilitate attendance, and establish a secure and supportive space for coders to thrive
- Contribute to program improvement by completing a detailed weekly report survey after each session, actively addressing any questions or concerns with the program manager

STEM Tutor | Code Ninjas   Sept 2023 – Feb 2024
- Utilized Scratch Jr. to introduce fundamental coding concepts to 5–7-year-olds and MakeCode Arcade for older beginners
- Monitor, assess student's progress, ensuring communication with parents, providing insights into their child's learning journey
- Establish and maintain an enjoyable, structured learning environment, fostering a positive educational experience

Projects

Teacher's Lounge Bar-top Manager   2023
A custom designed bar made for high-school teacher's lounge, used to serve during culinary service
- Used SketchUp to design preliminary plans and develop a mockup, ensuring the design matches the concept of the director
- Organized plans for team members to use while cutting and assembling the materials also working within $1000 budget
- Increased sales of culinary department by $150 through creating a more appealing display case stand, encouraging orders

Blind Spot Sensor for Motorcycle/Bicycle Team Lead   2024
A modular system for bikes to detect when a car is in the rider's blind-spot, vibrating a motor on the helmet
- Developed a concept and project plans based of using existing components from premade kit
- Used Fusion360 to create and produce multiple prototypes through 3D printing, ensuring proper fit for hardware components
- Assigned roles for team members to distribute work evenly through positions of designer, assembler, and technical writer

Accomplishments & Awards

Outstanding Achievement Award for Engineering   2022-2024
Appointed President of Engineering Club   2023-2024

Extracurricular Activities

Active Membership: American Society of Mechanical Engineers, National Society of Black Engineers, Women in Engineering and Computer Science, Society of Women in Engineering, Society of Hispanic Professional Engineers, Alpha Omega Epsilon Sorority