

Zoha L. Peterson

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Education and Technical Skills

Purdue University – West Lafayette, IN

Expected Graduation in 05/2025

Bachelor's of Science in Mechanical Engineering; 4 time Semester Honors and Dean's List

3.69 GPA

Technical Skills: NX, Fusion 360 CAD and CAM, CATIA V5, ENOVIA V6, ANSYS, MATLAB, Excel, Python, C, TeamCenter, HTML, CSS, Microsoft Office

Work Experience

Textron Aviation – Special Missions Airframe Design Engineering Intern

05/2023 - 08/2023

Wichita, KS

- As per a new Special Missions contract, prepared 10 aircraft outer mold line (OML) 3D models, engineering drawings per ASME Y14.5, and bill of materials (EBOMs) for 3D printing using CATIA V5
- Revised and managed the release of 18 engineering drawings, EBOMs, and 3D models to ensure proper manufacturing, product sustainment, and dimensioning and tolerancing
- Modeled and released 5 critical parts for aircraft attachment and engineering team utilization
- Developed Excel documents at the detail, assembly, and installation level to facilitate organization, engineering efficiency, and manufacturing per tight client schedule and technician requirements

Mechanical Engineering Machine Shop – Manufacturing Assistant

08/2023 - Present

Purdue University – West Lafayette, IN

- Guided students, faculty, and researchers in the use of advanced manufacturing machinery, including mills, lathes, CO₂ lasers, and band saws, specializing in aluminum, steel, brass, and other materials
- Ensured proper tolerances, design for manufacturing, quality assurance, and material compliance
- Analyzed engineering drawings and successfully translated them into precise, high quality products

School of Computer Science – Undergraduate Researcher

05/2022 - 12/2022

College of William & Mary – Williamsburg, VA

- Designed multi-GPU simulation software to report critical performance statistics using cycle based calculations, Go, and Github to broaden understanding of parallelism based computing systems
- Built poster to thoroughly display the purpose, approach, and technical results of the project

Data Science Labs – Undergraduate Teaching Assistant

08/2022 - 12/2022

Purdue University – West Lafayette, IN

- Led a lab of 15 students that demonstrates the link between data science, engineering, and calculus
- Improved Python curriculum via Github and Linux, built hardware powered by Raspberry Pi, and proactively implemented a Slack communication system for lab leaders

Steel City Codes – Director of Curriculum, Volunteer Teacher

06/2020 - 05/2021

Pittsburgh, PA

- Led the design of computer science curriculum while dedicating 50+ hours as a volunteer teacher

Professional Activities

Purdue Space Program: Liquids – Mechanical Engineer

02/2023 - Present

Purdue University – West Lafayette, IN

- Collaborated on an Ethanol, LOx liquid rocket to compete in FAR-DPF targeting a 65,000 ft. apogee
- Developed critical fin can, ground support equipment, recovery bay, and testing structures for rocket integrity, strength, manufacturability, and mass optimization
- Designed using Siemens NX and Autodesk Fusion 360 CAD, simulated with ANSYS, tested structures, calculated relevant factors of safety, and manufactured with Fusion 360 CAM and CNC machinery
- Created technical presentation material for Critical Design Review to be presented to professionals

ASME – Director of Industrial Relations, Executive Board Member

08/2022 - Present

Purdue University – West Lafayette, IN

- Led a team of 5 engineers tasked with expanding industry connection, fostering member professional development, and acquiring funding while growing club impact and mentoring members
- Created project management material, including a Kanban-inspired backlog powered by Javascript