

# 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:** Siemens NX, Fusion 360, CATIA V5, ANSYS, MATLAB, Python, C

## 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

- Taught students in the use of advanced manufacturing machinery, including mills and lathes, CO<sub>2</sub> lasers, and band saws, specializing in aluminum, steel, brass, and other materials
- Ensured tolerance and material compliance, design for manufacturing, and quality assurance
- Analyzed engineering drawings and successfully translated them into precise, high quality products

**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, built hardware powered by Raspberry Pi, and proactively implemented a Slack communication system for lab leaders
- Resolved circuitry, Python, and Jupyter Notebook issues while enhancing student understanding

**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

**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 NX and Fusion 360, simulated with ANSYS, calculated relevant factors of safety, manufactured with Fusion 360 and HAAS VF-2, managed engineering documents with TeamCenter
- 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