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, Java, C++, Python, C, Go, Javascript, Github, TeamCenter, HTML, CSS, Microsoft Office

Work Experience

Textron Aviation – Special Missions Airframe Design Engineering Intern *05/2023 - 08/2023*

Wichita, KS

- Developed engineering organization materials at the detail, assembly, and installation level to increase engineering and manufacturing efficiency per tight client schedule and technician requirements
- Created engineering drawings using Graphical Dimensioning and Tolerancing (GD&T) and Engineering Bill of Materials (EBOMs) for 10 aircraft Outer Mold Line (OML) parts and prepared them for 3D printing
- Revised and managed the release of over 18 engineering drawings, EBOMs, and 3D models to ensure proper manufacturing, product sustainment, structural integrity, serialization, and GD&T
- Modeled and released 5 critical parts for aircraft OML attachment and engineering team utilization

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, and band saws, specializing in aluminum, steel, and other materials
- Ensured proper tolerances, design for manufacturing, quality assurance, and material compliance

School of Computer Science – Undergraduate Researcher *05/2022 - 12/2022*

College of William & Mary – Williamsburg, VA

- Designed multi-GPU (Graphical Processing Unit) simulation software to analyze and report critical performance statistics using cycle based calculations, Go, and Github
- 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 (MA16290) of 15 students that connects data science, microcontrollers, 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, Teacher *06/2020 - 05/2021*

Pittsburgh, PA

- Led the development of computer science curriculum with a software development focus
- Volunteered to teach Python and Java to students around the world through a weekly online program

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 with NX and Fusion 360 CAD, simulated with ANSYS (mesh convergence), 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