ALEX STORRER

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EDUCATION

Northeastern University, Honors Program, Dean's List, Tau Beta Pi, Huntington 100 **Boston, MA**
Bachelor of Science in Mechanical Engineering & Physics June 2024 Expected
- Double Minor in German Language and Mathematics GPA: 3.99/4.00

TECHNICAL SKILLS

- SolidWorks (CSWP), NX, MATLAB, COMSOL, Arduino, C++, Fusion 360, STAR-CCM+, Ansys and Python

WORK EXPERIENCE

MIT Plasma Science and Fusion Center (PSFC) **Cambridge, MA**
Mechanical Engineering Co-Op – PI: Steve Wukitch August 2023-Present
- Innovated high temperature copper alloy brazing techniques for development of nuclear fusion energy technology
- Developed MATLAB app and conducted multiphysics simulations with COMSOL to compare optimal parallel flow and jet impingement heat exchanger designs for a high energy gyrotron at the DIII-D National Fusion Facility

SpaceX **Hawthorne, CA**
Propulsion Intern – Raptor Components May 2022 – December 2022
- Responsible engineer for the Raptor V2 main oxidizer valve; planned and supported high pressure bench testing with cryogenic fluids and on-engine campaigns to validate valve design changes for startup reliability improvement
- Designed, analyzed, manufactured, and qualified the performance of a fluid system to address major flight risks to the Raptor V2 engine utilizing relevant thermofluids theory, numerical methods, and Siemens NX
- Manufacturing engineer for Raptor V2 ignition manifold valve, implementing novel assembly tooling and testing methods to improve build reliability, decreasing cycle time by 20% while increasing first-pass-yield by 40%

Northeastern University **Boston, MA**
College of Engineering – Fluid Mechanics Teaching Assistant / Grader January 2022 – Present
- Led weekly fluid mechanics recitations and office hours for 50 students, explaining and walking through problems
- Enhanced students' understanding of fluids topics while developing strong technical communication skills

SharkNinja Corporation **Needham, MA**
Product Development Co-Op – Ninja Motorized July 2021 – December 2021
- Designed and fabricated high-quality motorized kitchen appliances, utilizing both brushless DC and universal AC motors to meet business constraints such as mass, cost, power draw, and competitor benchmarks
- Automated testing and analysis of current and legacy motorized units via custom Python scripts and GUIs, enabling improved device longevity and consumer experience while cutting analysis time by 80%

RESEARCH EXPERIENCE

RWTH University – Institute for Aerodynamics **Aachen, Germany**
DAAD RISE Intern – Research Assistant, PI: Anne-Marie Schreyer May 2023 – August 2023
- Conducted experimental highspeed aerodynamics research studying shockwave boundary layer interactions using modal decomposition techniques like spectral proper orthogonal decomposition to resolve unsteady dynamics
- Presenting findings at 76th annual meeting of American Physical Society Division of Fluid Dynamics

Northeastern University **Boston, MA**
Multiphase Flow Laboratory – Student Researcher; PI: Xiaoyu Tang May 2021 – May 2022
- Planned and executed experiments studying mechanics of liquid droplets impacting pools and substrates of different liquids using high speed video analysis with custom MATLAB script for image processing

CLUB AND VOLUNTEER EXPERIENCE

Northeastern University **Boston, MA**
American Society of Mechanical Engineers – Executive Officer September 2019 – July 2020
- Northeastern University ASME chapter Executive Board member responsible for providing high quality engineering workshops and professional development opportunities for 600+ mechanical engineering students
- Organized and led multiple 50 student SolidWorks courses, elevating students' software proficiency and enabling their completion of the Certified SolidWorks Associate exam

NASA Mars Ice Challenge - Mechanical Team Member September 2020 – September 2021
- Collaborated with a team to design and produce a robot to autonomously drill through Martian terrain as well as melt and filter subterranean ice; won 2nd place overall and best technical paper in the 2021 NASA Mars Ice Challenge

INTERESTS

- Ultimate frisbee (Northeastern A Team Captain), German language/culture, sustainability, thermofluids, and trumpet