

# ALEX STORRER

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## EDUCATION

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

## COMPUTER SKILLS

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

## WORK EXPERIENCE

**SpaceX** **Hawthorne, CA**  
*Propulsion Intern – Raptor Components* May 2022 – December 2022  
o Designed, analyzed, manufactured, and qualified the performance of a fluid system to improve the performance and reliability of the Raptor V2 engine utilizing relevant thermofluids theory, numerical methods, and Siemens NX  
o Planned and safely conducted high pressure testing campaigns with cryogenic fluids to validate valve design changes  
o Supported the production of components on the Raptor V2 ignition system, implementing novel assembly tooling and testing methods to improve build reliability, decreasing cycle time by 20% while increasing yield by 40%

**SharkNinja Corporation** **Needham, MA**  
*Product Development Co-Op – Ninja Motorized* July 2021 – December 2021  
o 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  
o Rapidly developed and prototyped components with 3D printers and machining skills to improve and innovate functionality of motorized consumer products, at various stages along the product development cycle  
o 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%

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

## RESEARCH EXPERIENCE

**Northeastern University** **Boston, MA**  
*Multiphase Flow Laboratory – Student Researcher; PI: Xiaoyu Tang* May 2021 – May 2022  
o 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  
o Designed 3D printed fixtures for uniform droplet generation and velocity measurement during experimentation  
o Collected data and synthesized impact behavior regime maps for use in fluids engineering applications  
*Split Hopkinson Pressure Bar (SHPB)- Student Researcher; PI: Sinan Müftü* September 2019 – January 2022  
o Designed and manufactured a miniature SHPB using SolidWorks, Arduino, and FEA for 20% of its retail price  
o Calibrated setup with measuring precision to accurately model and analyze unique stress-strain responses of polymer and metal materials at strain rates of  $1000\text{ s}^{-1}$  –  $5000\text{ s}^{-1}$  during high-speed impact tests  
o Developed custom gas gun striker propulsion system for consistent stress wave generation during testing

## CLUB AND VOLUNTEER EXPERIENCE

**Northeastern University** **Boston, MA**  
*NASA Mars Ice Challenge - Mechanical Team Member* September 2020 – September 2021  
o 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 2<sup>nd</sup> place overall and best technical paper in the 2021 NASA Mars Ice Challenge  
o Designed, manufactured, and implemented several system critical mechanisms, utilizing Fusion 360 and relevant engineering theory to increase possible water prospection by 80%, doubling the previous competition record  
*American Society of Mechanical Engineers – Executive Officer* January 2021 – January 2022  
o Northeastern University ASME chapter Executive Board member responsible for providing high quality engineering workshops and professional development opportunities for 600+ mechanical engineering students  
o Organized and led multiple 50 student SolidWorks courses, elevating students' software proficiency and enabling their completion of the Certified SolidWorks Associate exam

## INTERESTS

o Ultimate frisbee (Northeastern A Team Captain), German language/culture, thermofluids, camping, and baking