Elliot Bushman

92 Partridge Lane, South Windsor, CT 06074 | Cell: 860-328-2554 | elliot@uconn.edu | Home Page: www.ebushman.net

EDUCATION

University of Connecticut, Storrs, CT | *Bachelor of Science in Engineering*
Mechanical Engineering; GPA: 3.4; Graduation May 2022

UConn School of Engineering Research Assistant, Storrs, CT
Research Assistant, November 2020 – April 2021

- Modeled anisotropic tubular lattice structures post topology optimization.
- Prepared structures for manufacture by designing practical node geometry to accommodate 3D printing limitations.

Senior Design Project; Associated Spring, Bristol, CT

- Design, manufacture, and implementation of end of arm tooling for manufacturing robots.

Krenicki Arts and Engineering Scholar, June 2020

- Granted to student for fine arts and engineering interdisciplinary work

WORK EXPERIENCE

Ensign-Bickford Aerospace and Defense, Simsbury, CT
Development Engineering Intern, May 2021 – August 2021

- Develop frangible joints and associated tools to maximize performance and reliability.
- Design and fabricate test hardware for non-traditional frangible joints in fast paced development environment.
- Implement first use of photonic doppler velocimetry (PDV) test equipment for EBAD destructive tests.
- Work with high school interns to develop test rig for PDV, teaching implementation of tools such as SOLIDWORKS.

UConn School of Engineering Machinist, Storrs CT
Machinist, September 2021– Present

- Develop concepts and models into functioning prototypes, with emphasis on helping adapt designs to manufacture.
- Program HAAS CNC mill using Mastercam to generate toolpaths that maximize tooling performance and part quality.
- Work with students and faculty to machine and fabricate components for projects and research.

Jorgensen Center for Performing Arts, Storrs, CT
Theater Technician, September 2018 - Present

Summer Place at University of Hartford, West Hartford, CT
Camp Counselor, June 2018 - August 2019

LEADERSHIP EXPERIENCE

UCONN Formula SAE, Storrs, CT, September 2018 – Present
Chief Engineer, 2021-2022

- Lead design and fabrication of vehicle to compete at highest level during international competition.
- Manage supply chain for cast magnesium parts by working with external manufacturers; optimize models for sand casting and economical post process machining to meet design specifications.
- Lead development and organization of full car assembly in SOLIDWORKS utilizing over two thousand parts.
- Educate and lead team members through complex multi-year projects ensuring long term success.
- Build inclusive and efficient workspace by investing in every student that joins our team.

Suspension system member, 2018-2021

- Designed suspension kinematics utilizing SOLIDWORKS with equation manager to automate system response changes to drive optimization decisions, including how to accommodate dynamic load of first ever aerodynamic elements.
- Topology optimization and structural analysis of components using ANSYS to reduce weight and ensure reliability

FRC Team 177, Captain, Alumni, South Windsor, CT, September 2014 - April 2018

- Led design and implementation of electrical and pneumatic control systems.
    - Improved function of controls by redesigning legacy system to meet modern standards, this resulted in team completing season without a single electrical or pneumatic failure in a match.
    - Created standards for organization and manufacture of future years wiring to ensure continued reliability.
- Led team of over 50 students, coordinating meetings, travel, and priorities with parents and mentors.

Eagle Scout BSA Troop 880, South Windsor, CT, January 2010 - May 2018

TECHNICAL SKILLS

Software: SOLIDWORKS, Java, Ansys, Mastercam, Adobe Suite, Python, HTML & CSS,
Practical: Manual and CNC Machining Fabrication, TIG Welding, Electrical and Pneumatic Systems, Mechanical Assemblies and Design with computer aided processes, Wood Fabrication, Traditional Blacksmithing
Avid Rock Climber, Outdoor Enthusiast, and Photographer