

RACE ROSS

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Mechanical Engineer

Recent Mechanical Engineering graduate with hands-on experience in CAD, coding, and volunteer engineering projects. Background includes CAD design for aviation engineering solutions focused on accessibility, as well as communicating engineering aspects of projects with customers, suppliers, and potential sponsors to ensure successful outcomes. Eager to expand skills under the guidance of experienced engineers.

SOFTWARE AND TECHNICAL PROFICIENCIES

Languages: MatLab/Octave, Python, G-code

CAD and FEA Software: Fusion 360, Solidworks, AutoCAD, Inventor

Data and Other Tools: Excel, GitHub, Visual Studio

PROFESSIONAL DEVELOPMENT

Fundamentals of Engineering (FE) Exam – Mechanical: Currently studying for the certification exam

Software and Other Training: Actively learning NX, CATIA, and ANSYS through self-study and online courses

EXPERIENCE

**Freelance connected to Able Flight, Remote
Volunteer**

Fall 2023 - Spring 2024

- Designed and modeled hand-use-only flight controls using Fusion 360, specifically crafted for light aircraft to accommodate pilots lacking lower limb mobility
- Worked as part of a student engineering team to create a control system requiring minimal alteration to the aircraft structure and cockpit
- Developed the controls with minimal changes to the original flight control setup to facilitate obtaining a Supplemental Type Certificate from the FAA
- Communicated with both private pilots and the aircraft manufacturer to obtain necessary details and specifications concerning the aircraft

**Right Footed Foundation, Phoenix, AZ and Oshkosh, WI
Volunteer**

Summer 2023

- Assisted in the installation of a custom-designed automatic door opener system into a prototype aircraft for Jessica Cox's Impossible Airplane project.
- Worked with my capstone team to ensure the capstone project functioned properly in the new prototype aircraft
- Presented the engineering aspects of the project to potential sponsors at the EAA AirVenture show, highlighting design challenges and its impact

Nordstrom Inc., Portland, OR
Logistics Team Lead**Fall 2018 - Summer 2023**

- Managed packaging and shipping of hazardous materials in compliance with company standards and current regulations, ensuring proper labeling and packing for carriers
- As team lead, scheduled and coordinated shipping carrier pick-ups and drop-offs, maintaining clear communication with team members, businesses, and customers
- Maintained tracking numbers, customer information, and carrier details in Excel, ensuring accountability and the accuracy of all shipping records

Form Forge, Oak Grove, OR
Internship**Summer 2018 - Fall 2018**

- Assisted with the maintenance and installation of mechanical systems, including a 5-axis robotic arm, at a large-scale 3D printing company
- Contributed to the design of a machine that regulated the flow rate of plastic pellets, helping to ensure consistent and high-quality 3D prints
- Designed a tool holding platform for the tools used by the 5-axis robotic arm, improving efficiency and reducing the risk of accidents

EDUCATION

Bachelor of Science, Mechanical Engineering,
Oregon Institute of Technology, Graduated Winter 2024
Major GPA: 3.467

PROJECT EXPERIENCE**Capstone Project - RV-10 Aircraft Door Automation Redesign with Van's Aircraft** **Fall 2022 - Spring 2023**

- Redesigned the RV-10 aircraft door for automated opening and closing, enhancing accessibility for pilots with physical disabilities
- Worked with Van's Aircraft and Jessica Cox to develop a solution that supports accessibility while ensuring secure door closure during flight
- Created a prototype that provided space and functionality to enable the expansion of safety features for the Impossible Airplane project
- Delivered a fully functional prototype, contributing to the development of Jessica Cox's accessible aircraft