

Caroline Van Tiggelen

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Engineering Experience

Fall 2019 | Truss Bridge Stress Analyzer Project

- Collaborated with team members to successfully build model bridge and integrate Arduino stress calculator.
- Wired bridge with LED and pressure sensors, MATLAB, troubleshooting.

Spring 2020 | Fuel Tank Carrier for Ecocar

- Analyzed fuel tank dimensions and constraints through engineering drawings, CAD software
- Accomplished design and fabrication of carrier through use of the table saw, impact driver, and measuring instruments.

Fall 2020 | Clock Manufacturing Project

- Practiced safe machining to create various clock parts.
- Studied GD&T engineering drawings to create and assemble clock given constraints.
- Studied and became proficient in the use of band saws, drill presses, lathes, and grinders.

Work Experience

Fall 2020- Present | Colorado State University Mechanical Engineering Department – Lab Support Engineer

- Organize, optimize, and upkeep 5 labs within the department
- Assist and oversee students and professors in various projects and design work
- Utilize EMEC machines to execute product and lab fixture creation
- SolidWorks, Mastercam, Haas CNC, Bridgeport lathes and mills

Education

2019- Present | Colorado State University/ B.S. in Mechanical Engineering, minor in Sustainable Energy

- Recipient of Wolves to Rams Scholarship and Bridges to Baccalaureate participant.
- Transferred from Front Range Community College

2015-2016 | Université Catholique de Louvain | Special Math Coursework for Engineers and Scientists

Leadership and Community

Fall 2020 – Present | American Society for Mechanical Engineers – President

- Revived a volunteer Engineering Club
- Implemented new club structure to increase student engagement

Spring 2019 | Kid Wind Challenge Event - Volunteer/ Project Assistant

- Mentored and coached 30+ children through engineering learning activities
- Participated in the setup and cleanup of the KidWind event.

Fall 2021 – Present | STEM 4 Kids – President

- Created and managed a STEM outreach program to draw female students to STEM
- Lead a team of 12 volunteers and a cohort of 30 female students
- Oversee the planning of projects, allocation of funds, and management of junior members

Skills

Software: MATLAB, SolidWorks, Microsoft Suites, Adobe Suites, Canva, WordPress

Machining: CNC mill, band saws, lathe, drill press, power tools, horizontal milling machine

Languages: English (Native), French (Native)

