

Nathan Kretschmann

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EDUCATION

University at Buffalo, Buffalo, NY

Bachelor of Science in Mechanical Engineering, expected May 2024

GPA: 3.84

- Dean's List (GPA 3.60 and above), University at Buffalo, Fall 2020 – Fall 2022
- Honors College, University at Buffalo, Fall 2020 - present

RELEVANT COURSES

- | | | |
|----------------------------------|-------------------------------|---------------------------|
| • Thermodynamics & Heat Transfer | • Product Design (Solidworks) | • Machines & Mechanisms |
| • Fluid Mechanics | • Differential Equations | • Engineering Materials |
| • STEM Communications | • Mechanics of Solids | • Manufacturing Processes |

PROJECTS

Computer Aided Handheld Can Opener Design, Fall 2022

- Utilized measuring tools to determine the dimensions of each component to design fully constrained 3D models of the parts as well as a complete assembly
- Generated ISO drawings for each component and overall assembly in compliance with GD&T standards
- Performed finite element analysis on the assembly to evaluate its response to various applied forces

Mobile Miter Saw Carts, Summer 2022

- Designed, cut, and assembled a set of carts made of aluminum extrusion and HDPE sheets, as to hold a miter saw and TigerStop SawGear needed to cut steel creform tubing
- Used Solidworks to generate a complete model of the carts along with the necessary machining and parts
- Generated a 2D drawing and bill of materials for each assembly in the model
- Used a saw equipped with TigerStop SawGear to measure and cut each piece of aluminum
- Assembled each component and hardware into the complete product

WORK EXPERIENCE

Framing Technology Inc., Rochester, NY

Mechanical Engineering Intern, Summer 2022

- Used Solidworks to create models of products made from aluminum around a design or parameters given by a customer
- Handled materials such as 6m and 3m aluminum extrusion, plastic panels, and various hardware
- Utilized shop machinery to cut and assemble completed designs to be shipped to customers

Webster Parks and Recreation, Webster, NY

Camp Counselor, Summer 2021

- Created and coordinated daily activities for 20 children ages 5-6 years old
- Collaborated with other camp counselors to plan and run weekly events

LEADERSHIP

New York American Legion Boys' State, June 2019

- Simulated governmental duties on the city, county, and state levels
- Elected as city councilman and state legislator in the Assembly

SKILLS

- Problem solving and time management
- Experience in Solidworks and Autodesk CAD applications
- Proficient in Microsoft Office applications
- Exposure to MATLAB and Python programming