

Jacob V Miller

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Education

University of Michigan

Ann Arbor, MI

B.S.E. Chemical Engineering, GPA: 3.80/4.00

April 2023

- Minor in MultiDisciplinary Design, Concentration in Material Science
- Coursework: Reaction Engineering, Mass and Heat Transfer, Separation Processes, Thermodynamics, Fluid Mechanics, Materials and Energy Balances, Physics of Materials, and Solid Mechanics

Engineering Experience

SC Johnson

Bay City, MI

Rd&E Intern - Home Storage

May 2022-August 2022

- Designed and constructed water supply system capable of supplying 128 gph of water at 60 psi for up to ½ hour with no external manipulation to facilitate testing of new equipment aimed at addressing over 50% of customer complaints
- Designed portion of new factory line for pilot plant incorporating 9 independent operations into a single unit. Expected to significantly reduce start-up time relative to current production line

University of Michigan Baja Team

Ann Arbor, MI

Manufacturing Team Lead

July 2022-Present

- Oversaw the Manufacturing team and assisted individual machine leads in meeting their timelines
- Oversaw the Lathe Manufacturing schedule, identified and sourced tooling needed to complete parts
- Guided skill progression for lathe users on the team and adapted techniques to manufacture unique parts

Brakes System Lead

July 2020-June 2022

- Designed an electrically controlled Brakes Testing Dynamometer to streamline testing and validation of brakes system lifespan and performance, including inertial analysis to properly size flywheel and developing control system to allow dynamometer to run automatically up to 4 hours
- Designed and oversaw manufacturing of new Brakes System for the competition car using Siemens NX resulting in a 62% reduction in residual drag in the system
- Managed maintenance of Brakes system across 4 vehicles to ensure all vehicles brakes systems remained fully functional, including manufacture of spare parts
- Developed pressure failure mode test to determine brake system failure mode and reduce weight from overbuilt components

Sales Team

March 2020-May 2021

- Developed sales pitch presentation detailing operations needed to back a 40-car short course off-road race series
- 2021 Sales Competition results: 1st out of 153 teams

General Member

September 2019-July 2020

- Created parts using Siemens NX and Teamcenter environment
- Manufactured vehicle components using several machining tools: mill, lathe, drill press

Awards & Skills

Languages: C++, Java, Matlab

Software: Aspen, Siemens NX, Siemens Teamcenter PLM, Microsoft Office, Autodesk Inventor, Autodesk Autocad, Autodesk Fusion 360

Eagle Scout - Troop 763 Midland, MI

Tau Beta Pi National Engineering Honor Society