

AIDAN ROSENBAUM

arosenbaum.org

206-295-2333

odion1776@gmail.com

Case Western Reserve University School of Engineering

Bachelor of Science, Mechanical Engineering with a Minor in

Business Management | Class of 2024

SKILLS

- Siemens NX, Solidworks (CSWA & CSWP Certification), CATIA, GD&T, Mastercam, ANSYS, Python, Matlab, C++, TIG Welding, Manual and CNC machine operation

WORK EXPERIENCE

Mechanical Design Engineer Intern | May 2023 - August 2023

Mill | San Francisco, CA

- Designed components in NX for the 2nd gen Mill kitchen bin, a product that helps reduce household food waste
- Created engineering drawings using GD&T for injection/compression molded and die cut parts
- Prototyped multiple seal concepts and tested them using CO2 leak tests and salt fog tests
- Traveled to Mexico to oversee manufacturing and assembly of parts for EVT build

Design Engineer | September 2022 - May 2023

CLEANR | Cleveland, OH

- Designed bio-inspired microplastic filtration technology for washing machines, the largest polluters of microplastics
- Prototyped 3D printed water tight assemblies using o-rings and custom silicone molded seals
- Inventor on core technology [patent](#) (WO2024123769), helped develop the novel filtration technology/concepts

Mechanical Engineering Intern | May 2022 - August 2022

Honda Powersports R&D | Columbus, OH

- Designed snap fit injection molded components with CATIA for off-road powersport vehicle accessories
- Used Visual Basic to scrape legacy fastener databases to create a fastener mass calculator
- Reviewed and modified engineering drawings for mass manufactured injection molded components

Mechanical Engineering Intern | May 2021 - August 2021

The Lubrizol Corporation | Avon Lake, OH

- Applied thermodynamic and fluid mechanics calculations to size pumps for chemical production systems
- Created Piping & Instrumentation diagrams to improve workflow efficiency and safety for contractors and mechanics
- Worked with mechanics to rebuild pumps, laser align motors, and troubleshoot systems using vibration analysis tools

PROJECTS

Semi-Autonomous Computer Vision Controlled CNC Welding Machine

Personal Project | September 2023 - Current

- Designed and built a 3-axis CNC machine mounted with an external MIG welder
- Wrote software in python using OpenCV to identify weld joints with a monocular camera
- Used ARUCO tags to scale and transform the image coordinate system to CNC coordinate system
- Generated G-Code over serial to operate the CNC machine and control the MIG welder

CWRU Motorsports | Baja SAE

Chassis Lead | September 2020 - May 2023

- Designed, manufactured and TIG welded a complete chromoly tube chassis for off-road race car
- Created innovative welding fixturing that decreased complexity, setup/weld time and increased frame accuracy
- Completed bending strength/stiffness calculations to select tube material and optimize tube diameter/thickness
- Built test rig to find the torsional stiffness of our tube chassis in order to validate ANSYS FEA simulation results and improve chassis torsional stiffness

Miata Engine Rebuilds

Personal Project | September 2019 - August 2020

- Taught myself how to rebuild engines on 2 different Mazda Miatas in under 3 months with no prior experience
- Resold car parts from free Craigslist listings online for profit to completely fund both projects
- Proved rebuild reliability by participating in local autocross racing events before selling both cars for a profit