Gabriel Brown

linkedin.com/in/brown-gabriel | gabebrown2023@gmail.com | gabebrown2023.wixsite.com/gbrown-portfolio

About Me: I am an enthusiastic engineer who loves robotics, learning, and solving problems. I would like to work on a cross-disciplinary team tackling cutting-edge robotics challenges.

Education: Bachelors and Masters in Mechanical Engineering, Worcester Polytechnic Institute, 2024

Product Insight - Mechanical Engineer

June 2024-September 2025

- Designed and iterated on advanced robotic manipulators with limited oversight
    - Worked closely with electrical engineers to manage cable routing and electronics housing
    - Worked closely with industrial designers to exceed client aesthetic expectations
- Worked and communicated directly with clients often with unclear goals and limited direction
- Designed complex sheet metal assemblies for human interaction in rough environments
- Ran Solidworks static, random vibration, and fatigue simulations with complex interactions
- Created robust skeleton model used by team of 4 engineers to design a large moving assembly
- Worked with vendors to source custom sheet metal, machined, and welded parts
- Ran HALT testing and wrote report documenting failure modes for the client

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Texas Instruments – Equipment Engineering Intern

Summer 2023

- Designed lifting tool rated to remove 500lb fan motor from inside a scanner air control cabinet
- Utilized manufacturing 5S methodology for Lean initiative FSI tool harvest and re-organization

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Modern Motion – Mechanical Engineering Intern

Summer 2020, 2021

- Designed, simulated, and prototyped Helm's Deep 7ft tall smart package storage device
- Machined parts with CNC machine and lathe, wired, and tested Helm's Deep package storage
- Designed, simulated, and manufactured 12 foot tall frame for Wavestair moving staircase

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Combat Robotics Experience

- Clyde 3lb flamethrower - nhrl.io/wiki/index.php/Clyde — August 2021-Present
    - Made 9 major iterations over 4 years developing novel burner and armoring strategies
    - Won 1st place at April 2024 NHRL competition against 100+ other robots!
    - Used Onshape surfacing tools to design parts that highlight their function
    - Optimized using multi-material FDM 3D prints and metal 3D printed fuel manifold
- Fireball 250lb Battlebot - battlebots.fandom.com/wiki/Fireball — July 2023-October 2024
    - Competed September 2023 and October 2024 at live Vegas Battlebots Destruct-a-thon
    - Used Onshape to design drive system and electronics housings
    - Machined parts including parts with multiple setups and tight concentric tolerances
- Waddles 30lb modular robot - nhrl.io/wiki/index.php/Waddles! — December 2022-May 2024
    - Managed CAD master sketches to collaborate with team members on modular systems
    - Reached 2023 NHRL World Championship semifinals in the 30lb division!
- WPI Combat Robotics Club President — February 2023-January 2024

Desktop CNC Mill WPI Major Qualifying Project

August 2023 - May 2024

- Created custom low-cost CNC machine capable of machining aluminum and steel parts
- Lead cross-disciplinary team of mechanical, electrical, and robotics engineers