Shane Meyer

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Education

Northeastern University, Boston, MA — May 2024
Candidate for Bachelor of Science in Mechanical Engineering — GPA: 3.13
Courses: ME Design, Capstone I, System Analysis & Control, Thermal System Analysis & Design, Fluid Mechanics
Activities: NU SEDS: Mechanical Lead for Big Idea project (2022), American Society of Mechanical Engineers (ASME)

Skills

Applications: SolidWorks (CSWA), Creo, Ansys, AutoCAD, Arduino, MATLAB (basic), Windchill, Teamcenter PLM
Hard Skills: Proficient with 3D printing, hand & power tools, Dremel, wood working, reworking prototypes, soldering

Work Experience

Coravin, Bedford, MA — July – December 2023
Mechanical Engineer Co-op

- Designed and 3D printed new parts in Creo to update current designs and create new features in existing products resulting in a $0.37 cost savings per unit in flagship product
- Tested new materials and designs using compression & tension tests on an Instron, to save up to $0.25 per unit
- Created test and assembly fixtures using Creo and 3D printing, resulting in increased accuracy and prototype assembly
- Fabricated testing rigs that recreated issues seen in the field, saved $1,500+ on travel & shipping costs
- Created and performed a reliability test & needle puncture force test, resulting in improved lifecycle design
- Hand machined prototype parts using tap & die, lathe, scroll saw, bench grinder, while following specifications
- Performed validation on outgoing units, fixed complications in the entire system, ensured unit met standards

SharkNinja, Needham, MA — June-December 2022
Mechanical Engineer Co-op, Shark Advanced Development

- Fabricated and designed POC prototypes to validate designs using SolidWorks and hand fabrication
- Led design and fabrication of testing rig for underfloor video of debris pickup for all Shark floorcare, worked with different teams and outside vendors, while managing budget and timeframe, decreased testing time by 20 minutes
- Designed new vacuum technologies for upcoming products and retrofitted into old designs using SolidWorks and Creo resulting in better functionality solving consumer pain points
- Modified prototypes and created testing rigs using power tools such as milling machine, band saw, and grinder
- Worked cross functionally to create prototypes that solved issues identified by consumers
- Designed and executed test procedures for new vacuums to gather data accurately and with confidence

Mobile Robotic Control, Boston, MA — May-June 2022
Research Assistant, reported to Head of Northeastern Mechatronics

- Wrote code in Arduino to analyze motor output, calculating angular displacement, angular velocity, revolutions
- Created program to calculate error and applied the error value to correct the motor speeds

BorgWarner, Ithaca, NY — July-December 2021
VCT Product Engineering Co-op

- Designed and tested various prototype features with a tolerance of 50 microns using Keyence machines, micrometers, drop gauges, all with regard to cost, manufacturing, and effectiveness
- Analyzed assembly processes, recommended was accepted and implemented by engineering team
- Tested prototypes using flow tester, force press and sectioned parts using cut off wheel, sanded cut pieces
- Assembled prototypes in white room using hand tools and following drawings and torque specifications
- Performed teardown of warranty and tested parts using hand tools; provided report and test results in detail
- Worked with tool room to create and assemble max and min limit prototypes as well as fixtures for testing using SolidWorks, hand tools, gauge blocks, Dremel and CMM

Projects

- Designed and built personal desk and coffee table using statics to determine support placement and bending stress