■ Molly Sharpe / ENGINEER

Cleveland, OH | mollycsharpe@gmail.com | 216 · 645 · 7967
Examples of Work Available at mollycsharpe.com

■ Professional Experience

MECHANICAL ENGINEER   05/2021 – 2022
PAX Labs | *San Francisco, CA*

- Performed SolidWorks thermal and CFD simulations to improve device performance, updating part tolerances and CAD models per global manufacturer DFM and FAI
- Wrote and executed Arduino program for pressure testing to inform design decisions
- Sourced and characterized new materials from global suppliers through Instron tensile and stress-relaxation testing, cracking pressure, and surface contact angle measurements
- Designed and validated test platform with custom adaptors and breakout sensor boards (pressure, temperature & humidity, MOX) to evaluate next-generation device features
- Quantified perceived vapor quality and consumer experience by devising and administering a series of user studies, creating SOP for Health & Toxicology and Legal

ASSOCIATE MECHANICAL ENGINEER   01/2020 – 06/2020
Continuum Innovation | *Boston, MA*

- Programmed industrial-grade 2D machine vision system for automated optical inspection (AOI), allowing for high-speed image acquisition and identification of crucial features
- Designed spring-loaded mechanical testing apparatus, including GD&T drawings for over-seas manufacturing and formal test documents for contracted client in Belarus
- Troubleshooted PCBs utilizing multimeter and first principles, reworking surface-mount components to verify schematic and functionality

MECHANICAL ENGINEERING CO-OP   01/2019 – 06/2019
Ecosense Lighting | *Los Angeles, CA*

- ME lead for unreleased product, owning CAD, tolerance stack-up, and PCB interfacing
- Identified failure mode of existing components and improved performance through tool-safe modifications and design validation testing, releasing ECO with GD&T drawings
- Executed thermal, water ingress, load, and pull-force testing for engineering validation involving fixture design and construction, equipment set-up (thermocouples, force gauge, torque wrench), data analysis, & reporting
- Created custom fixture for WeWork NYC to display new technology by designing sheet metal parts and validating performance through thermal and CCT testing

MECHANICAL ENGINEERING CO-OP   01/2018 – 06/2018
Haemonetics | *Boston, MA*

- Designed and rapid-prototyped configurable parts utilizing SolidWorks and FDM 3D printer to enhance user capability of medical devices based on direct customer feedback
- Devised and constructed mechanical testing apparatus for load cell verification
- Developed medical assays for manufacturing processes with nano-dispensing technology for rapid, comprehensive identification of hemostasis conditions in a laboratory setting
- Wrote Visual Basic macro program to quickly and effectively organize large data sets and generate comprehensive reports for research and development

■ Technical Skills

Applications: SolidWorks (PDM, Surfacing, Sheet Metal), OnShape, AutoCAD, Microsoft Excel, Arena PLM, Adobe Suite
Programming: MATLAB, C++, Arduino, Visual Basic (Excel Macros)
Hardware: FDM 3-D Printer, Laser Cutter, Instron, Bench Mill, CNC Mill, Lathe, Soldering, Thermocouples, Power Tools

■ Education

BACHELOR OF SCIENCE MECHANICAL ENGINEERING
Northeastern University | *Boston, MA*

Honors: University Honors Program (Top 10% Entering Class), Recipient of Dean's Scholarship & Presidential Global Scholarship, Global Experience Photography Fellowship