ANDREW HAMROFF

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Professional Experience

Stanley Black and Decker **Jun. 2019 - May 2024**

Senior Mechanical Engineer, Drilling and Fastening Team | May 2022 – May 2024 *Towson, MD*

- Designed mechanisms for DeWALT Drilling products while considering manufacturing, assembly, and cost
- Created and reviewed complex engineering drawings that adhere to GD&T standards per ASME Y14.5
- Coordinated with foreign and domestic suppliers to prepare comprehensive quote packages for high-volume parts with manufacturing quantities of 100,000+ per year
- Managed and tracked the bill of materials from prototype stages to manufacturing

Mechanical Engineer, Expansion Team | July 2019 – April 2022 *Towson, MD*

- Developed innovative product and sub-system concepts for dust extractors and awarded one patent for my designs with two more pending
- Re-designed filter cleaning system to achieve 90% filter clean efficiency and ensure reliability
- Utilized CATIA 3D Design and FEA to design precision engineered products
- Translated design concepts into tangible objects via 3D Printing and rapid prototyping methods
- Devised and executed comprehensive test procedures to ensure products meet QA standards
- Conducted jobsite visits and collected end-user feedback to ensure product viability

Stanley Leadership Program | July 2019 – July 2021 *Towson, MD*

- Led the development, and implementation of a lean project that improved IT Help Desk efficiency by 80%

Stanley Black and Decker **Jun. 2018 - Aug. 2018**

Mechanical Engineering Intern, Portable Woodworking *Towson, MD*

- Mitigated vibration for the DeWALT Cordless Random Orbital Sander by analyzing components that contribute to vibration and resizing the counterweight system
- Provided CAD designs and prototypes utilizing user input for a locking mechanism on an upcoming product
- Performed compliance review and testing for marketing claims on various woodworking tools

Middle River Aircraft Systems (MRAS) **Jan. 2018 - May 2018**

Process Consultant *Middle River, MD*

- Helped minimize manufacturing bottlenecks to increase shipset throughput by 50% and allow MRAS to meet an increased production schedule for their Airbus A320 program
- Analyzed MRAS' current processes utilizing Six Sigma Methodologies and Lean Principles to foster communication, increase traceability of inventory, and optimize the layout of the assembly floor

EN Engineering **May 2017 - Aug. 2017**

Project Engineer Intern, Gas Distribution *Glen Burnie, MD*

- Assisted project engineers in day-to-day design, processing, and engineering feasibility review tasks for natural gas pipelines and facilities for Baltimore Gas and Electric and Washington Gas Light Company
- Increased productivity by 11% by creating abandonment info sheets for data entry and pipeline permitting

Technical Projects

Terps Racing **Jan. 2017 – May 2019**

Mechanical Design Suspension Sub-Team Leader *College Park, MD*

- Designed and optimized rear trailing arms using SolidWorks design, engineering analysis, and Design for Manufacturing techniques to reduce weight by 23.8% and increase the reliability of the Baja SAE vehicle

TurBinD **Apr. 2016 – May 2019**

Lead Mechanical Engineer *College Park, MD*

- Designed and built a vertical axis wind turbine to generate electricity and act as an outdoor charging station

Skills

Software:

- CATIA
- SolidWorks
- Inventor
- PTC Creo
- Python (pandas)
- Windchill PLM
- Microsoft Office Suite

New Product Development:

- 3D Printing/Rapid Prototyping
- GD&T per ASME Y14.5
- Finite Element Analysis (FEA)
- Design Failure Mode & Effect Analysis (DFMEA)
- Design for Manufacturing (Injection Molding, Machining, Stamping, Casting, Forging)
- Stack-Up Analysis
- Lean Six Sigma
- Kaizen Methodologies

Certified SolidWorks Associate (CSWA) **Jan. 2015**

Education

University of Maryland, College Park – Honors College, President's Scholarship **May 2019**

B.S. Mechanical Engineering, GPA: 3.79

A. James Clark School of Engineering

University of Maryland, QUEST Honors Program **Aug. 2016 – May 2019**