ANDREW HUANG
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WORK EXPERIENCE

Kuva Systems | Mechanical Engineer Co-op | Cambridge, MA January – June 2022

- Prototyped alternate driving mechanisms of mirror subassembly for non-coaxially mounted motor using 3D printed, machined, and off-the-shelf parts
- Reduced assembly time of mirror subassembly by more than 50% by designing and sourcing custom die-cut tape
- Fabricated new power box by redesigning and sourcing components for a smaller chassis as well as consulting converters for custom power boxes which led to a 40% overall reduction in cost
- 3D Modelled new components and updated 100+ part master assembly and bill of materials
- Built cameras from scratch, including subassemblies, to fulfil record 30 orders in one month

Insulet Corporation | Supplier Engineer Co-op | Acton, MA January – June 2021

- Designed and implemented test fixturing for baseline measurements and force requirements of a fill syringe
- Completed testing, write up, and presentation for alternate material selection of key component in the drive system which was prone to shipping damage
- Authored test procedures and scripts for optical dimensional measurement system and Instron machines
- Developed script to reformat and parse multiple datasets from Instron machine to be used in statistical analysis software, saving up to 15 minutes per dataset
- Conducted Design Verification and Validation testing for component updates and newly installed production line

Nuvera Fuel Cells | Systems Test Engineer Co-op | Billerica, MA January – June 2020

- Adapted pre-existing data processing technique to accommodate a new source, migrating from Excel VBA environment to Python for improved process efficiency
- Defined procedure for reworking "core return" parts into like-new refurbished parts and a thoroughly documented process for transition from an engineering task to one supported by manufacturing technicians
- Took defined test sequence and Pass/Fail requirements for qualifying refurbished parts and automated execution and data analysis which minimized required manual involvement, easing integration into QC program

PROJECTS

Soar Vending, Capstone Project (1st Place - Consumer Products) July – December 2022

- Constructed a programmable workout powder dispenser supporting 12 products and accurate within <0.5 grams
- Tested viability of powder fluidization concept by creating prototype using compressed air and vibration
- Collaborated with members to define, design, and conduct experiments to characterize powder properties
- Diagnosed and troubleshooted failures in compressed air prototype, ultimately reaching the conclusion to abandon the idea and proceed with sifting method
- Wrote code and wired electronics to test dispensing rates of powders according to different mesh sizes

Mechanical Engineering Design Class: Scissor Lift Proposal July – August 2021

- Applied mechanical design knowledge in drafting and selection criteria for final design
- Considered elements such as a motor and a power screw to be integrated into the scissor lift, including torque and horsepower requirements
- Analyzed static, shear, and fatigue failures using MATLAB and FEA after modelling product in SolidWorks

EDUCATION

Northeastern University | Boston, MA | GPA: 3.42 December 2022
Bachelor of Science in Mechanical Engineering, Minor in Computer Science

SKILLS/INTERESTS

Applications: SolidWorks (CSWP), Ansys Workbench, AutoCAD, Microsoft Excel, 3D Printing, JMP
Programming: Python, C++, Java, MATLAB, Excel VBA, Arduino
Fabrication: Bridgeport Vertical Mill, Lathe, Soldering Iron, Breadboard Wiring
Interests: Pottery, Watercolor, Photography, Rock Climbing, Camping, Gardening