BLAKE OSTMAN

Northglenn, CO - https://www.blakeostman.com/ - blake.ostman@gmail.com - (650) 919-4925

EXPERIENCE

Air Squared, Thornton, CO — Dec 2021 - May 2023
Mechanical Design and Test Engineer

- Designed full scroll compressor assemblies according to NASA specifications including scroll geometry sizing, fastener calculations, cooling CFD analysis, FEA, bearing life calculations, pilot/alignment features, DFM, and technical drawings utilizing GD&T
- Created fastener calculation spreadsheet to quickly determine torque specs and bolt sizing based on bolt/clamped part materials, applied load, preload, k-factor, and FOS requirements
- Wrote assembly procedures and user manuals for several designs to facilitate communication between customers, technicians, and engineering
- Worked alongside technicians and machinists to assemble, troubleshoot, and test units of my own design and incorporated feedback into new iterations
- Held customer facing design reviews and update meetings to ensure compliance with evolving requirements

Brewbird, San Mateo, CA — Oct 2020 - Dec 2021
Design Engineering Contractor

- Designed solution to accurately dose a specific volume of coffee beans from a bag into several single-use pods
- Built, tested, and utilized said solution to meet demand of initial beta rollout of Brewbird's coffee machine
- Designed a second version to meet increasing demand and improve reliability
  - Implemented stepper motors and pneumatic cylinders to reduce cycle time and need for manual intervention
  - Modified the assembly process to be done quickly without the use of any tools for easier cleaning

Pratt & Whitney (United Technologies Corporation), North Berwick, ME — Jan 2019 - Jun 2019
Mechanical Design Engineering Co-op/Internship

- Designed static seals between turbine components in the next generation PW1100G commercial jet engine
- Created streamlined spreadsheet to evaluate creep life, thermal expansion, and other factors for future designs
- Refined multiple existing technical drawings to improve clarity and ease of manufacture of respective components
- Modified existing high pressure turbine component models to allow integration of instrumentation for a test engine

Axon Enterprise, Scottsdale, AZ — Jan 2018 - Jun 2018
Mechanical Design Engineering Co-op/Internship

- Drove prototyping, testing, and DFM for multiple new police body camera mount designs
  - Developed screw on mount designed to prevent losing the camera in the field
  - Designed 3D printed prototypes for testing and made modifications to convert to injection moldable parts
- Simulated mechanical characteristics of percussion cap explosion to determine force exerted on components

EXTRACURRICULARS

AerospaceNU – Project Karman — Sep 2018 - May 2020
Airframe Development Lead

- Led ten people in developing and constructing multiple rocket airframes to test stage separation and fin systems
- Instructed incoming students on design in Solidworks and rocket construction techniques
- Launched various rockets from a 2.56" diameter personal NAR certification rocket to a 6" diameter two stage design

SKILLS

Computer: Solidworks including FEA and flow simulation, ANSYS Workbench/Fluent, Arduino, WAZER waterjet software NX, NI LabView, MATLAB, Excel
Hands-On: 3D printing, WAZER Waterjet, laser cutter, aluminum casting, drill press, band saw, mill, lathe

EDUCATION

Northeastern University, Boston, MA
Bachelor of Science in Mechanical Engineering — May 2020