Snowlax

City, State, ZIP | XXXXXXXXXX
email

For my master's thesis, I was project lead for the design and operation of an ultra high-speed, precision optical imaging system for biomedical-mechanical material testing. I collaborated with engineers to investigate fracture initiation of bone undergoing dynamic impact. I have experience with system design, analysis, SolidWorks CAD, equipment calibration, failure investigation, creating test methods and technical documentation, and improving operational efficiency and reliability. Now that I've graduated, I want to continue improving my professional engineer skills and technical career as a mechanical engineer; I hope to transition into a technical lead engineer role eventually.

EXPERIENCE

Automated Production Equipment Operator
Apr 2023 - May 2023

ICU Medical, Salt Lake City, Utah

- Responsible for maintaining production line of sterile medical products in a cleanroom.
- Identified and resolved production line issues to support production needs.
- Enhanced productivity through process optimization, increasing mean productivity 15% and reducing product waste 10%.
- Inspected equipment, parts, and products for quality control and ISO compliance.

Graduate Researcher and Experimentalist
Aug 2020 - Dec 2022

Department of Mechanical Engineering, University of Utah

- Collaborated with a team of engineers studying rate-dependence of biomechanical fracture initiation in treated bone, specifically investigating a simulated patient fall event.
- Led optical imaging system project development through concept design, requirements analysis, equipment consideration, calibration, implementation, and operation.
- Developed technical documentation: test methods, work instructions, verification, and validation for optical and force measurement systems.
- Processed images, applied advanced fracture mechanics theory and non-linear numerical methods to calculate fracture using custom-built MATLAB code.
- Applied statistical data analysis, energy, and time-based techniques to validate methodology and results with literature.

Laboratory Instructor and Technical Trainer
Aug 2020 - Dec 2022

Department of Mechanical Engineering, University of Utah

- Guided year 3 mechanical engineering students in practical, hands-on material experiments on metals, plastics, and composites for design and analysis applications.
- Supervised 12 technicians conducting 3 concurrent experiments utilizing Instron, MTS, and ADMET heavy equipment and Bluehill, LabVIEW, MATLAB, and SolidWorks CAD.
- Adapted and validated changes for systems, tools, materials, geometries, and results in response to external issues and internal quality and affordability improvements.
- Reviewed engineering reports and provided feedback to enhance understanding and use of direct, concise, and effective technical communication principles.

Undergraduate Research Assistant
Oct 2016 - May 2020

Department of Mechanical Engineering, University of Utah

- Modeled an adjustable air-pressure gas gun and created DFMA engineering drawings using SolidWorks.
- Soldered full Wheatstone bridges onto specialized aluminum and steel bars to rapidly measure strain in extreme impact environments.
- Developed self-learning and troubleshooting skills for electro-mechanical equipment, advanced engineering concepts, applied analysis tools, and FEA software.
- Presented project progress updates to team using PowerPoint and Gantt timelines.

Apprentice Electrician May 2018 - Aug 2018
AMF Electrical Contractors, St. Louis, Missouri

- Installed and maintained electrical components in residential and commercial sites while consulting construction and electrical schematics to resolve uncertainties.
- Provided quality satisfaction for both internal and external stakeholders.

EDUCATION

Master of Science (M.S.) - Mechanical Engineering Aug 2020 - Dec 2022
University of Utah
Thesis: An Investigation of the Role of Collagen Network on the Dynamic Fracture Initiation Toughness of Bovine Cortical Bone
GPA: 3.3

Bachelor of Science (B.S.) - Mechanical Engineering Aug 2016 - May 2020
University of Utah
Emphasis: Solid Mechanics
GPA: 3.9
Honors: *cum laude*