

Lucas Barton

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Summary

Combined 1.5 years of experience in 3D printing, biomedical, and quality control. Seeking employment to apply experience with research driven mechanical design, hands-on fabrication, and testing/analysis to contribute to research and product development.

Education

Northeastern University Boston, MA
Bachelor of Science in Mechanical Engineering May 2019
Minor in Biomechanics

GPA: 3.5/4.0

Honors: Dean's List, Presidential Global Scholarship, Music Scholarship, Dialogue of Civilizations Scholarship

Relevant Coursework: Biomechanics, System Analysis & Control, FEA, Mechanics & Design, Dynamics & Vibrations, Mechanics of Materials, Fluid Mechanics, Fundamentals of CS, Anatomy & Physiology

Activities: Enabling Engineering, ASME, NUSound, Jazz Ensemble, Pep Band, Wind Ensemble, Pit Orchestra

Study Abroad: São Paulo, Brazil – coursework: Alternative Energy, Brazilian Culture May - June 2015

Work Experience

Fortify Boston, MA
Mechanical Engineering Co-op July - December 2018

- Evaluated and tested 3D printing systems to drive solutions in a small start-up environment
- Designed injection molds and components for in house 3D printers with Creo ProE and FEA software
- Developed firmware for sensors, analysis, and optimization of printer performance
- Fabricated sheet metal assemblies, electromechanical systems, and new prototypes through machining, soldering, tolerance analysis, and understanding of fluids
- Prepared STL files, mixed raw materials, and post-processed prints to lead to completion of 3D printed parts, molds, and tensiles
- Coordinated with suppliers to source standard and custom parts for printer assemblies

Stryker Trauma GmbH Kiel, Germany
Biomechanical Engineering Intern July - December 2017

- Utilized Creo ProE to iteratively repair and update 9+ bone models and test setups, design bone rapids for testing, and create novel bone molds, test setup components and unique tools for internal use
- Performed static and dynamic tests on bone implants using servo-hydraulic test machines
- Created foam molds for rapid prototypes to resemble human bone for screw and nail cutout tests
- Prepared test reports for product launches adhering to FDA guidelines and ASTM standards
- Completed requests, validations, and test plans for creep, moisture, sterilization, cleaning, and fatigue tests
- Edited publications and master theses as a native English speaker in Germany

Bose Corporation Framingham, MA
Global Supply Engineer July - December 2016

- Interpreted and evaluated GD&T drawings, approved First Article Inspection, Control Plan, PFMEA, Process Capability and Material Certification for mechanical components
- Led weekly meetings to create a standard PCBA manufacturing control plan; presented at end of Co-op
- Maintained a weekly spreadsheet for more than fifteen project build dates and deadlines
- Created process for environmental compliance and substance declaration forms resulting in 100% completion
- Communicated with Mexico employees and Bose suppliers to complete part approvals and obtain documents
- Assisted in Bose prototype build by replacing outdated circuit boards

Computer Programs

Creo ProE
ANSYS
SolidWorks
AutoCAD

Other Skills

MATLAB
Machining
Soldering
Arduino

Interests

Running - Boston Marathon
Backpacking
Music
Coffee