

# BENJAMIN PETERSON

Phone: 207-233-3411 | Email: [peterson.be@husky.neu.edu](mailto:peterson.be@husky.neu.edu)

Portfolio: [benpeterson.website](#)

## RELEVANT EXPERIENCE

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**WHOOOP Inc.** | Boston, MA | *Mechanical Engineering Co-op* **January 2018 – June 2018**

- Collaborated with manager on all mechanical design, testing, and manufacturing responsibilities for a wearable device.
- Designed two parts in the assembly of the WHOOOP strap to increase safety and reliability. Solely implemented the new parts and assembly process on the production line with a tier 1 manufacturer in California.
- Performed detailed engineering analysis including SolidWorks FEA, force testing, and impact testing resulting in a 200% increase in fatigue resistance of a critical plastic component.
- Designed, assembled, and implemented two production fixtures used for UV curing and board level electrical testing.
- Communicated with Chinese suppliers and contract manufacturers on DFM and DFA analysis on multiple production parts of the WHOOOP product. Implemented changes into design to lower production costs and increase reliability.
- Spearheaded design and prototyping of the next generation product to mitigate risks in early stage development.

**Enabling Engineering** | Northeastern University | *XMAX Project, Team Lead* **January 2017 – Present**

- Project lead of a six-student team working to reengineer an XBOX controller for kids with cerebral palsy.
- Communicate with the end-user and physical therapist to receive design inputs and identify constraints.

**Continuum Innovation** | Boston, MA | *Product Development Engineering Co-op* **January 2017 – June 2017**

- Researched and tested the durability and performance of formed nitinol to design a patent-pending surgical instrument.
- Designed full-scale surgical instrument prototypes for a user study with five surgeons from across the country.
- Contributed to the design, fabrication and assembly of a five-degree-of-freedom robot including motor selection, mechanical design, sourcing, and purchasing of custom parts for a surgical device company.
- Utilized SolidWorks PDM and master modeling techniques to collaborate with a team of engineers and designers.
- Performed detailed analysis using Excel and SolidWorks to calculate stability and overbalance requirements of an electromechanical system to meet IEC 60601 standards.
- Designed and led a user study to determine critical insights regarding the usability requirements of a robotic system.
- Prepared presentations and participated in weekly meetings with clients to communicate updates on project status.
- Gained hands-on experience in prototyping using a variety of resources including 3D printer, tabletop mill and lathe.

**Arcadia Designworks** | Portland, ME | *Design Modeling Consultant* **July 2016 – September 2016**

- Built 26 unique parts using SolidWorks in an assembly of over 100 parts for a barrel vault umbrella design project.
- Created 3D models from orthographic drawings incorporating specifications for materials, size, weight, and fabrication.

**Hasbro, Inc.** | Pawtucket, RI | *Project Engineering Co-op* **January 2016 – June 2016**

- Served as the engineering lead on twelve projects and provided assistance with over twenty others.
- Used product design and development skills to take a product from concept to prototype to present to Senior Management.
- Used SolidWorks to redesign a part for a classic Hasbro game creating over \$100,000 in annual savings.
- Communicated with cross functional teams (Marketing, Design, Project Management, Packaging, Quality, Legal, and Engineering), both in the U.S. and China on product content issues throughout the entire development process.

## TECHNICAL SKILLS

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**Applications/Programming:** SolidWorks (CSWA Certified), Microsoft Excel, C++, MATLAB, Adobe Illustrator, Lightroom

**Mechanical Experience:** DFM, DFA, 3D printing, injection molding, casting, manual machining, ultrasonic welding, adhesives

## EDUCATION

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**Northeastern University**, Boston, MA | *Bachelor of Science in Mechanical Engineering* **May 2019**

**Honors:** Dean's List all semesters, Pi Tau Sigma and Tau Beta Pi Engineering Honors Societies **GPA: 3.85**

**Queen Mary University**, London, UK | *College of Engineering Study Abroad Program* **Fall 2016**

**Senior Capstone:** Developed a simulated human stomach model for evaluating medication retention. Project sponsored by Lyndra Therapeutics and the device has been submitted for a provisional patent.