

Lucy Petersen

she/her

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EDUCATION

Northwestern University | Evanston, IL

Expected June 2024

Bachelor of Science in Biomedical Engineering

- Relevant Coursework: Medical Devices & Disease, Medical Imagine, Engineering Experimental Design Lab, Biochemical Sensors, Mechatronics, Mass & Heat Transports, Biomechanics, Regenerative Medicine

Sustainability & Energy Certificate

Segal Design Certificate – Focusing on Ideation through Product Development

- Relevant Coursework: Advanced SolidWorks Modeling, Technical Sketching

PROJECTS

Mitral Valve Retractor | 2023-2024

- Designed a surgical retractor that interfaces with current sternal retractors to widen the field of view, increase stability, and allow for easy adjustment during mitral valve repair and replacement.
- Wrote technical documentation, including a patent, and produced CAD models and sketches.
- Collaborated with cardiothoracic surgeons at Northwestern Medicine and other engineers to perform user testing on porcine heart tissue. Ensured FDA compliance in experimentation and design.

Roll Assist Device for Preventing Pressure Sores | 2023-2024

- Partnered with Lurie Children's Hospital's skin care unit to design a roll assist device that allows nurses to roll patients independently and lessen their workload.
- Led a group that ideated and designed a device using user feedback to create a user centered product.

Sensory Stimulation Toy for Children with Cerebral Palsy | 2021

- Interviewed and collaborated with occupational therapists, teachers, and parents of children with Cerebral Palsy, as well as the children, to get a well-rounded picture of user needs and design requirements.
- Prototyped a toy for children with CP that can be attached to a variety of surfaces including wheelchairs, desks, and walkers while also being compactible for storage purposes.

Blood Pressure Monitor | 2023

- Design a blood pressure monitor from scratch using mechatronics and Python.
- Ensure circuit design is safe for use on humans and used verification testing to test effectiveness of design.
- Provide technical documentation with circuit diagrams and code synthesis.

SKILLS

SolidWorks

Python

MATLAB

Autodesk Revit & Inventor

Mechatronics

FDA Compliance

Technical Communication & Patenting

Adaptability

Leadership & Interpersonal Relationship Building

Organization

Medical Device Design

Client Communication

OTHER WORK EXPERIENCE

Pica's Taqueria | Louisville, CO

August 2018 – September 2022

Waitress

- Provided outstanding customer service and leveraged interpersonal skills to foster a welcoming work environment for coworkers and customers while utilizing critical thinking skills to solve industry problems.
- Trained more than 10 employees on policy, procedure, daily activities, and computer systems.

Camp Manito-wish YMCA | Boulder Junction, WI

Summers 2021, 2022

Wilderness Tripping Leader

- Independently led children ages 11-15 on 4-6 day wilderness canoeing and backpacking trips to facilitate group dynamics, leadership development, and confidence building.
- Ensured safety in a challenging growth environment, practiced risk management, underwent medical training and certifications.