

MONE SEKIGUCHI

mone@bu.edu (650) 946-6692 Los Altos, CA

[linkedin.com/in/mone-sekiguchi/](https://www.linkedin.com/in/mone-sekiguchi/) monesekiguchi.wixsite.com/engportfolio

EDUCATION

Boston University | Boston, MA

Expected May 2025

BS in Biomedical Engineering, BS in Mechanical Engineering

Cumulative GPA: 3.96/4.00, *Dean's List all semesters*

Relevant Activities: Engineering Student Government, Engineers Without Borders

EXPERIENCE

Moon Surgical Clinical Engineering Intern | San Carlos, CA

May 2023 - Present

- Moderated and observed Usability Studies and Design Validation Studies using a surgical assisting robot for laparoscopy, involving 15 surgeons and 15 nurses, providing detailed performance evaluations and comments.
- Assisted in writing reports and creating study result tables crucial for FDA 510k clearance.
- Managed cadaver set-up and clean-up for surgeon-focused studies, ensuring compliance with safety protocols.
- Organized participant data files and created comprehensive Excel sheets for streamlined analysis.
- Improved and developed critical documents such as the Information for Use and Quick Reference Guide to ensure consistency, objectivity, and efficient decision-making in the operating room for first-in-human studies involving the robot.
- Collaborated on modifying system drape design and designed realistic liver molds using SolidWorks.

Material Robotics Lab Research Assistant | Boston, MA

Sep 2022 - Present

- Develop a 3.5 mm soft medical robot for bronchoscopy lung cancer diagnosis and tissue biopsy.
- Build actuators using Teflon and TPE through layering and heat-pressing techniques, while modifying the design using SolidWorks.
- Perform in vitro experiments using a 3D printed lung model to evaluate bending angle and pressure.
- Analyze acquired data employing Image Processing Toolbox in MATLAB.

Micro and Nano Imaging Facility Technician | Boston, MA

Nov 2021 - Sep 2022

- Captured brain images using an Olympus VS120 scanner and confocal microscope based on customer requests.
- Prepared reports for each scan, including information on image type, magnification, and cost breakdown.

Connizzo Lab Research Assistant | Boston, MA

Jan 2022 - Sep 2022

- Conducted in vitro experiments on mice tendons, employing healing assays to evaluate cell mobility.
- Cultivated and enumerated cells using a hemocytometer chamber, and analyzed the data obtained.

PROJECTS

Alarm Circuit Design | Boston, MA

May 2023

- Designed and implemented a circuit using op-amps and photosensor to detect ambient light, activate an LED, and generate sound through buzzer.
- Utilized LTSpice to organize and create detailed circuit schematics for the project.

Truss Design Project | Boston, MA

Oct - Dec 2022

- Built and designed a truss within strict cost and time limitations, meeting specified load requirements.
- Developed an analyzation tool in MATLAB to determine member forces, failure points, maximum load capacity, and cost ratio, enhancing efficiency and accuracy of structural analysis.

Bike Light Project | Boston, MA

Sep - Dec 2022

- Engineered a hands-free bike light utilizing BH1750, LED, convex lens, Arduino, and Lipo Battery.
- Constructed and presented a comprehensive final report showcasing the design process, which included the PCC table, Morph Table, Glass Box Diagram, CAD drawings, Code Flow Charts and Bill of Materials.

SKILLS & CERTIFICATIONS

Skills: MATLAB, C, C++, Java, Python, Arduino, SolidWorks, OnShape, CAD, IoT, LTSpice, IFTTT, Excel, Word, ImageJ, Google Drive, Adobe Acrobat, English, Japanese

Certifications: HCI UX Design, Accessibility: How to Design for All, Emotional Design (IxDF)