

Elisa Jee

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EDUCATION

Boston University College of Engineering Expected May 2027
M.Eng. in Biomedical Engineering Boston, MA
College of Engineering Dean's Scholarship

Boston University College of Arts and Sciences Aug 2024
B.A. in Biology, Behavioral Biology Boston, MA
Minor in Public Health
Dean's List

Relevant Coursework: Biomedical Signals & Controls, Solid Biomechanics, Electric Circuits, Mechanics (Statics)

PROJECTS

[Epilepsy Prevention Glass Development](#) | Neuroscience Design Lab Mar 2024 - Present

- Developed voltage-controlled lens eyewear (LCD, LCoS, electrochromic) with integrated PPG monitoring for photosensitive epilepsy mitigation
- Built and tested Arduino-based prototypes demonstrating attenuation of 3–30 Hz seizure-provoking light stimuli with physiologic validation

Bagatelle (Pinball) Machine | Leap Life Jan 2026

- Designed and fabricated mechanical system using CAD, laser cutting, CNC milling, and manual machining to produce precision functional assemblies

7-Joint Optimized Acrylic Truss Design | Engineering Mechanics (Statics) Oct - Dec 2025

- Designed and constructed a 7-joint acrylic truss under strict material constraints using MATLAB-based structural modeling to analyze internal force distribution and compression buckling behavior
- Iteratively optimized geometry to improve predicted load capacity from 38 oz to 53.07 oz; final structure held 55.38 oz
- Accurately predicted the critical buckling member and validated model predictions through experimental testing

RELEVANT EXPERIENCE

Medical Assistant, Boston Common Podiatry | Boston, MA May 2021 - Jan 2023

- Performed procedures including medical pedicures, nail reconstruction, and Extracorporeal Pulse Activation Technology (EPAT)
- Documented procedures, physical examinations, and prescribed treatments in patient medical records
- Coordinated administrative and front-desk operations, including patient check-in/check-out, insurance communication, transaction processing, and appointment scheduling for ~20 patients daily

Volunteer, Kibuye Hope Hospital | Kibuye, Burundi Jun 2022

- Provided perioperative and emergency surgical assistance including suturing, electrocautery, suctioning, and wound care
- Prepared orthopedic and general surgery instrument kits and assisted in procedure setup

SKILLS & CERTIFICATIONS

Programming: MATLAB (modeling, signal processing, statistical analysis), Python, Embedded C
Embedded Systems: Microcontrollers (Arduino), PPG sensor integration, real-time signal acquisition
Design/Analysis: CAD (Onshape), Structural & Buckling Analysis, Design Optimization, Experimental Validation
Manufacturing/Prototyping: CNC Milling, Laser Cutting, Manual Machining
Licenses/Certifications: On Shape Introduction to Sketching, On Shape Parametric Feature-Based CAD
Languages: English (Fluent), Spanish (Conversational), Korean (Conversational)