# ALLEN FRAIMAN

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**Portfolio:** www.afraiman.com

## EDUCATION

**Boston University College of Engineering** Boston, MA
B.Sc., Mechanical Engineering Expected May 2026
GPA: 3.98/4.00 (Dean's list)

**Relevant Coursework:**

Introduction to Engineering Design
Programming for Engineers (MATLAB, C)
Introduction to Computer Aided Design
Manufacturing Processes

## SKILLS

**Mechanical:** 3D Printing, Laser Cutting, Soldering, Lathe, Milling, Wire EDM, Belt Sander
**Design Software:** SolidWorks, AutoCAD, Autodesk Inventor, Fusion360, OnShape, Rhino3D
**Programming Software:** Python, MATLAB, C, Arduino IDE, HTML, CSS

## EXPERIENCE

**Regeneron Pharmaceuticals** Rensselaer, NY
Manufacturing Engineering Intern May 2024 - Aug 2024

- Implemented process analytical technology to automate manufacturing processes.
- Developed a prototype for a single use manufacturing process, resulting in annual savings of approximately $8 million.
- Presented the project at a company-wide poster exposition and a departmental conference.

**Boston University** Boston, MA
Undergraduate Research Assistant, Albro Laboratory Jan 2024 - May 2024

- Explored the application of Raman spectroscopy in detecting early indicators of osteoarthritis through cartilage health analysis.
- Enhanced the MATLAB Raman processing code by integrating multivariate analysis techniques to include subchondral bone components.
- Assessed the effectiveness of Raman spectroscopy in accurately measuring AGE crosslinks.

**Boston University** Boston, MA
Undergraduate Research Assistant, Ziegler Laboratory Jan 2023 - May 2023

- Conducted experiments to determine the feasibility of Surface-Enhanced Raman Spectroscopy (SERS) for rapid antibiotic susceptibility on a team of 3 members.
- Handled bacteria and antibiotics leveraging various laboratory equipment including a centrifuge, infrared spectrometer, Raman spectrometer, automated pipette.
- Wrote MATLAB script templates enabling seamless transformation of spectrometer data into professional graphs for presentations and publication purposes.

## PROJECTS

**Room Occupancy Monitor**

- Led the design and assembly in a cross-disciplinary team of four to create a room occupancy monitor, preventing unsafe overcapacity situations, particularly in hazardous environments.

**3D Printed Peristaltic Pump**

- Designed a 3D printed peristaltic pump for vacuum drying filament and biomedical applications.

**RFID Keycard Door Lock**

- Assembled a practical RFID door lock system employing a servo motor and a pulley mechanism.