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
Programming for Engineers (MATLAB, C)
Introduction to Computer Aided Design
Electric Circuits

SKILLS

Mechanical: 3D Printing, 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

Boston University Boston, MA
Undergraduate Research Assistant 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.
- Gathered and analyzed data from a Raman spectrometer with software such as WIRE 2.0 and GRAMS/AI.
- Wrote MATLAB script templates enabling seamless transformation of spectrometer data into professional graphs for presentations and publication purposes.

Advanced Engineering & EDM San Diego, CA
Manufacturing Intern July 2022

- Designed 3D models using Solidworks and created engineering drawings for CNC and Wire EDM machine manufacturing.
- Operated and programmed Wire EDM machines using provided engineering drawings to ensure precise fabrication of models.
- Refined and enhanced the surfaces of models using a grinding wheel and sanding paper.
- Identified inconsistencies or errors in manufactured models with a Coordinate Measuring Machine (CMM).

PROJECTS

MATLAB Final Project

- Led a team to create a MATLAB machine learning program analyzing a 7-year database of motor vehicle accidents in Boston.
- Implemented statistical methods to identify high-risk streets for bikers and areas for government funding allocation.

RFID Keycard Door Lock

- Assembled a practical RFID door lock system employing a servo motor and a pulley mechanism.
- Integrated keycard access and configured the mechanism with Arduino.

Math Candy Game

- Created an interactive math candy game for young students dispensing a candy for solving simple math problems.
- Constructed using PVC piping and servo motor-controlled open/close system, programmed with Arduino.