Elias Bilal

774 331 1665 | eliasbyo23@gmail.com | LinkedIn| Portfolio Website

EDUCATION

Tufts University

2022 – 2026 Bachelor of Science Mechanical Engineering (BSME)

- Major GPA (Mechanical Engineering): 3.00 / 4.00
- Relevant courses: Robotics and Mechatronics, Computation in Engineering, Mechanics, Materials and Manufacturing, Electronics and Controls, Digital Signals Processing, Statistical Quality Control, Engineering Design, Thermal Fluid Systems, Instruments and Experiments, Physics, Calculus, Differential Equations

The American University in Cairo

2024-2024 Non-Degree Seeking Study Abroad Student

- Relevant courses: Mechanics II Dynamics, Materials and Manufacturing II, Calculus III

EXPERIENCE

Consigli Construction, Cambridge, MA | Mechanical Engineering Intern *June 2024 - August 2024*

- Coordinated mechanical, electrical and plumbing systems with owners, architects, and trades to restore the MIT East Campus Parallels
- Gained experience with and advanced understanding of heating and cooling, electric power control and water distribution systems and their required methods of fabrication, installation and maintenance

Project Management Intern *May 2023 - August 2023*

- Worked closely with project engineers, MEP managers, architects, owners, and subcontractors to restore the Harvard Newell and Weld Boat Houses while obtaining knowledge and experience of construction operations and procedures
- Was responsible for project documentation, communication with subcontractors, and participation in project meetings
- Earned OSHA 10 Certification

Tufts Sports Medicine, Medford, MA | Assistant *October 2022 - Present*

- Accurately upload student athlete paperwork onto the patient database

PROJECTS

Electric Scooter Project *June 2023 - August 2023*

- Engineered and manufactured a functional Lithium Ion/] solar power hybrid electric scooter with aluminum and steel to meet desired load specifications via SOLIDWORKS
- Assembled using an 800W DC motor, Altrax motor controller, braking mechanism and steering mechanism. The project was completed under a budget of $200 to create a functional product

Crossbow Project *October 2022 - November 2022*

- Programmed Lego Spike Prime to operate a Lego and wood website-controlled crossbow that could aim and pop balloons
- Developed to entertain middle school age clients who tested the crossbow from their school location via zoom

Machine Learning Lung Cancer PyScript Website *April 2023 - May 2023*

- Coded a PyScript program which utilizes machine learning, medical patient data of lung cancer probabilities, and user inputs to predict lung cancer risk.
- Designed to accept user inputs submitted online, assess the users lung cancer risk, and graph correlations between different patient characteristics and cancer probability as characteristic level increases

EXTRACURRICULARS

National Society of Black Engineers (NSBE)

- Managed budget of $4000 to invest in Black excellence in STEM at Tufts as NSBE 2024-2025 Treasurer
- Organized events and initiatives to increase NSBE membership as 2023-2024 NSBE Underclassmen Representative

Tufts Football Team

- Training extensively to execute athletically and striving to be a great teammate on and off the field

SKILLS

Languages & Programs: Python, SOLIDWORKS, JavaScript, HTML, MATLAB, CSS, Comsol

Fabrication: 3D printing, Laser Cutting, Prototyping, Design, Injection Molding, lathe, Soldering, Bridgeport Mill, Water Jet