

Shamama Sirroon

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EDUCATION

Olin College of Engineering - Needham, MA

May 2024

Bachelor of Science in Electrical and Computer Engineering (GPA: 3.8/4.0)

Coursework: Software Design, Fundamentals of Robotics, Signals and Systems, Data Science, DSA

EXPERIENCE

MIT Lincoln Laboratory - Lexington, MA

Summer 2022

Superconducting Single Flux Quantum Intern

- Led testing of superconducting circuits, including shift registers and SNSPDs, to ensure proper fabrication of silicon microchips and optimize efficiency for future high-performance computing
- Designed MATLAB automation processes to run 50+ superconducting circuit tests

Formula SAE Electric at Olin College

Fall 2020 - Present

Former Head of Suspension and Chassis

- Planned and led organization, fabrication, and assembly of suspension system to optimize Mk.5, Olin's 5th electric FSAE racecar, using MATLAB optimization scripts and SolidWorks, to enhance vehicle performance
- Calculated vehicle dynamics and sensing characteristics to inform vehicle test plans for current competing vehicle

RoboTuna Research - Olin College of Engineering

January 2021 - May 2022

Robotics Researcher

- Worked on fabricating a robotic fish that will be able to ultimately collect wildlife data with minimal disturbance to the ecosystem
- Tested custom-built solenoids, created fins, and developed silicone bladders for aquatic actuation using 3D printing, casting, and molding techniques

Flowonix - Mansfield, MA

Summer 2019

Test Engineering Intern

- Collected experimental data to guarantee the reliability of implantable medical instrument
- Performed R&D testing on patented Class III medical devices and analysis on returned units

Remote Sensing Rover - Fundamentals of Robotics

Spring 2020

- Programmed Raspberry Pi using MATLAB to have rover follow 3 missions using SONAR, IR, GPS, and camera sensors to create wall-following, April-tag recognition, and docking behavior

Two-Axis Gantry Ramen Dispenser

Fall 2021

- Designed ramen dispenser and fabricated two-axis gantry for ramen machine that takes an online order, sends gantry to the correct coordinates, and cooks and delivers the desired flavor

AWARDS AND ACCOLADES

- Clare Boothe Luce Undergraduate Research Award (2021)
- 2nd-Place in Gold Tier Open Division of CyberPatriot XI (State-wide cyber security competition)
- FTC Think Award (MA State Championships 2020, PA Qualifiers), Inspire Award (Canton 2020)

SKILLS

- Software: MATLAB, Python, R, C++, Arduino, Raspberry Pi, LaTeX, GrabCAD, SolidWorks, Onshape, Adobe Illustrator
- Fabrication: 3D printer, resin printer, mill, lathe, ShopBot, common machine shop tools, soldering, TIG, MIG, plasma cutter, laser cutter, forge, wood shop
- Languages: Chinese (Learning), Bangla (Fluent)