RIRIKO ('LILIKO') UCHIDA

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EDUCATION

Tufts University 2019 - 2023
Bachelor of Science in Mechanical Engineering, Bachelor of Science in Physics *Medford, MA*
Overall GPA: 4.81
Honors: Dean's List Fall 2020, Spring 2021
Relevant coursework: Engineering Design, Materials & Manufacturing, Thermal Fluid Systems, Mechanics, Calculus III, Differential Equations, Intro to Python, Optics & Wave Motion, Classical Mechanics, Intro to Modern Physics

WORK EXPERIENCE

Guasto Lab February 2021 - Present
Undergraduate Researcher *Medford, MA*

- Design and fabricate current amplifier circuitry for inducing magnetic fields in Helmholtz coils
- Study magnetotactic bacterial motion in microfluidic channels

Tufts University Department of Physics September 2020 - Present
Learning Assistant *Medford, MA*

- Provide external academic support for students in introductory physics courses at Tufts

Zemax January 2021 - May 2021
Physics Intern *Remote*

- Co-authored a cohesive online training program for the fundamentals of optical design for optical engineer trainees by designing content for various engineering fields from a physicist's perspective
- In collaboration with Edmund Optics

PROJECTS

Spotify Audio Analytics Analysis

- Created a Python program which utilizes last.fm and Spotify API for developers to gather data on listened to tracks and use a mean-shift clustering algorithm to sort tracks with similar analytics

MBTA Bus Timer

- Developed a virtual reality experience using Vuforia and Labview to display bus times for the Medford/Somerville 94 bus
- Fabricated a physical timer clock with a 3D printed gear system and laser cut body pieces which encapsulated a servo motor programmed to turn a dial to count down the next bus arrival

Motorized Blocks

- Fabricated a tech-smart toy for children at the Tufts University local pre-school
- Programmed a smartphone app to be used with the blocks and control motors and LED lights
- Collaborated with local elementary school to meet with student clients about their desired product

TECHNICAL SKILLS

Languages	Python, MATLAB, LaTex
Software	SolidWorks
Tools	3D printing, laser cutting
Web development	HTML5, CSS