Ririko Alicia Uchida

774.270.2583 | uchidaliliko@gmail.com | linkedin.com/in/liliko | Project Portfolio

Education

Tufts University Sep. 2019 – May 2023
Bachelor of Science Mechanical Engineering, Bachelor of Science Physics *Medford, MA*
GPA: 3.8/4
Honors: Dean's List Fall 2020, Spring 2021

Experience

Researcher Feb. 2021 – Present
Guasto Labs *Medford, MA*
- design and build current amplifier circuits to control Helmholtz coil system
- Investigate and analyze the transport of bioparticles in complex, porous fluids

Optical Engineer/Physics Intern Jan. 2021 – May 2021
Zemax *Seattle, WA*
- Co-author a cohesive training program for the fundamentals of optical design by collaborating with a small team
- Create checkpoint evaluations to record training progress
- Deliver new optical design content to trainees from various engineering fields from a physicist's perspective
- Collaborate with Edmund Optics databases

Physics Learning Assistant Sep. 2020 – Present
Tufts University *Medford, MA*
- Provide external academic support for students in introductory mechanics and Electricity & Magnetism

Projects

Spotify Audio Analytics Analysis | *Python, Spotify & Last.fm API, mean-shift clustering*
* Developed a program which utilizes Spotify and last.fm/music APIs to extract audio analytics from frequently listened to music and analyze tracks using mean-shift clustering

MBTA Bus Timer | *MBTA API, laser cutting, VR, LabView, 3D printing*
* Developed a virtual reality experience using Vuforia and Labview to display bus times
* Built 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
* Collaborated with team members to delegate individual project responsibilities

Motorized Blocks | *LabView, Github, 3D printing, laser cutting*
* Created a tech-smart toy for children at the Tufts University local pre-school
* Programmed a smartphone app to be used with the blocks and move motors and LED lights
* Collaborated with local school to discuss with clients their desired product

Technical Skills

Programming: Python (data analysis with NumPy, Matplotlib), LabView, Matlab
CAD: SolidWorks (including FEA)
Fabrication: 3D printing, laser cutting

Languages

English: Native
Japanese: Spoken at home
Spanish: Conversational

Extracurricular

Jackson Jills: Sing bass vocal part in Jackson Jills All Femme A Capella Group — perform for a variety of shows, performances, charities, and university events