Lauren Adachi

lauren_adachi@brown.edu | 69 Brown St. Mail #5948, Providence, RI 02912 | (415) 828-9351

Education

Brown University | Electrical Engineering Sc. B. | GPA: 3.8/4.0 August 2018-May 2022

- **Relevant Coursework:** Digital Electronics Systems Design, Design of Computing Systems, Electrical Circuits & Signals, Dynamics & Vibrations, Object-Oriented Programming, Data Structures & Algorithms.
- **Activities:** Brown Space Engineering, Brown Figure Skating, Brown Intramural Hockey

Engineering and Work Experience

Pufferfish Ventilation |*Open-source ventilator* May 2020-Present
Hardware Team Member

- Leads development of the Interface PCB for user interaction with the ventilator
- Designed schematic and PCB (KiCad) and selected parts with constraints from mechanical, clinical, and UIUX teams
- Assembled and tested PCBs and Raspberry Pi peripherals

Tripathi Biomedical Engineering Group | *Brown University* April 2020-Present
Firmware Developer

- Implements firmware updates for biomedical device in product development stage for PerkinElmer
- Writes code in C for STM32 microcontroller for motor, heating, motor, flash memory, and spectrofluorometer units with FreeRTOS operating system and I2C, SPI, USB, and UART peripheral communication

Brown Space Engineering | *CubeSat Team* August 2018-Present
Avionics Hardware Division Leader

- Leads team of 10 undergraduates to design electronic systems PCBs for CubeSat satellite
- Responsible for EAGLE schematics and board designs for power, radio, and control systems
- Works with Software, Payload, and Manufacturing leaders to ensure cohesive subsystem integration
- Creating preliminary design of systems, power and telemetry budgets, and high-level block diagram
- Mentors first-year students and new members through minority mentorship program

Brown School of Engineering | *Electrical Circuits & Signals* January 2020-May 2020
Undergraduate Teaching Assistant

- Teaches and holds problem-solving sessions; debugs students' circuits in laboratory sections

SF Public Utilities Commission | *Engineering Management Bureau* July 2019-August 2019
Electrical Design Intern

- Designed and established receptacle circuiting plan for Rollins Road facility renovations, including drawings, panelboard schedule, and lighting control panel schedule

University of California, San Francisco | *Wittman laboratory* June 2016-August 2017
Research Intern

- Optimized novel method for light-mediated protein control for optogenetics research
- Published in Columbia Jr. Science Journal ('17) & Cytoskeleton Dynamics: Methods and Protocols ('20)

Skills

Hardware	Software	Prototyping
• KiCad	• Python	• Soldering
• EAGLE	• Java	• Raspberry Pi
• Verilog	• C for STM32 microcontrollers	• Arduino
• ModelSim	• git and GitHub	• SOLIDWORKS
• Breadboarding	• RISC-V Assembly	• 3D-printing
• Logic analyzers	• MATLAB	• Machining (Lathes, mills)

Languages: Spanish (fluent) - Volunteer teacher for ESOL Spanish classes at non-profit *English for Action* (2018)

Honors and Awards

Winning team at *UC Berkeley's Bioengineering Honors Society Competition* for project on using CRIPSR to fight adolescent malnutrition (2016)