**Lauren Adachi**

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**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](http://cjsjournal.org/2017) (’17) & [Cytoskeleton Dynamics: Methods and Protocols](https://www.springer.com/gp/book/9781071602188) (’20)

**Skills**

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