

# MIYUKI WELDON

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## EDUCATION

University of California, Berkeley

**B.S. in Mechanical Engineering | GPA: 3.8**

**Expected: 2020**

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## EXPERIENCE

### Hybrid Robotics Lab – TABREA Project Member

**May 2018 – Present**

This lab is a UC Berkeley Mechanical Engineering lab focusing on controls of dynamic robotic systems.

- Working on TABREA (Thigh-Actuated Bipedal Robot for Extreme Agility) project
- Leading a project where a planetary gear is designed, optimized, and manufactured for the robot's thigh
- Tested and performed analysis on different materials to determine 3D printed strength

### Pioneers in Engineering – Director of Engineering

**May 2018 – Present**

PiE is a student-run non-profit at UC Berkeley that provides an extremely discounted robotics competition to 300+ students from underserved high schools in the Bay Area.

- Managing and advising the hardware-based engineering teams
- Exploring long term, large scale engineering projects to reduce the costs of the robotics kit
- Sourcing and talking to manufacturers to acquire cheap electrical and mechanical parts
- Modeling and creating engineering drawings and contacting manufacturers to produce parts

### Pioneers in Engineering – Mechanical Team Project Manager

**August 2017 – May 2018**

- Led the 10-person mechanical team in designing, prototyping, and manufacturing
- Learned to resin cast polyurethane gears to cut outsourcing costs
- Carefully documented projects and applied for a grant to acquire funding for future projects
- Redesigned mechanical parts in the robotics kit given to the high school students to improve versatility

### Electrical Engineering 16A – Academic Student Employee

**August 2018 – Present**

- Grade assignments and tutor students on homework in office hours

### Engineers Without Borders – Peru Team Member

**August 2016 – May 2018**

The UC Berkeley student chapter of EWB, Peru team, works to implement rainwater catchment systems that provide clean water to replace the arsenic filled well water in rural Peru communities.

- Traveled to the community of Carancas, Peru in August 2017 to construct a rainwater catchment system

### Student Learning Center – Math Tutor

**January 2018 – August 2018**

- Tutored undergraduate level math classes at the UC Berkeley Student Learning Center
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## SKILLS

AutoCAD and Solidworks

Machine Shop (lathe, mill)

GD&T

Matlab and Simulink

Laser Cutting

ROS

ANSYS/FEA

3D Printing

Spanish – proficient

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## RELEVANT COURSEWORK

### Previous:

E 7 – MATLAB

E 27 – Manufacturing and  
Tolerancing

ME C85 – Statics and Mechanics

ME 104 – Dynamics

ME 132 – Controls

EE 16A – Circuit Design

ME 175 – Lagrangian Mechanics

ME 130 – Mechanism Design

### Current:

ME 106 – Fluid Mechanics

ME 108 – Materials

ME 135 – Design of Microprocessor  
Based Mechanical Systems