

# Kerrie Wu

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## EDUCATION

### Massachusetts Institute of Technology

B.S., Mechanical Engineering w/ Control, Instrumentation, & Robotics, GPA: 4.9/5.0

Cambridge, MA

Expected Jun 2018

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## PROFESSIONAL EXPERIENCE

### Cruise Automation

*Controls Intern*

San Francisco, CA

Jun-Aug 2017

- Prototyped algorithms and bulk data processing scripts for autonomous vehicles.
- Generate metrics for evaluating real-life performance of control system.

### NASA Jet Propulsion Lab

*Summer Intern*

Pasadena, CA

Jun-Aug 2016

- Designed and operated an automated imaging testbed for evaluating a landmark recognition-based instrument placement algorithm's performance for the Mars 2020 Rover, collecting more than 2000 images.
- Wrote scripts for processing and analyzing data, and presented/documented results.
- Co-authored abstract for submission to International Workshop on Instrumentation for Planetary Missions.

### Little Devices Lab

*Undergraduate Researcher*

Boston, MA

Oct 2015-Jan 2016

- Prototyped and documented a do-it-yourself usage-tracking/alarmed pill bottle construction set.
- Assisted with teaching a hands-on high school workshop on DIY medical technologies, including the DIY pill bottle.

### Harvard BioDesign Lab

*REU (Research Experiences for Undergraduates) Intern*

Cambridge, MA

Jun-Aug 2015

- Implemented, tested, and characterized accuracy of algorithms for extracting rehabilitation-relevant gait parameters from inertial measurement unit data.
- Prepared technical paper and present project to 40 REU program participants and mentors.
- Assisted with collecting and processing human gait motion capture/force plate data using Vicon and Visual3D.

### Applied Biosciences Laboratory, Sandia National Laboratories

*Research Intern*

Livermore, CA

Apr 2013-Jul 2014

- Contributed to research utilizing microfluidic devices to investigate protein behavior at nanoconstrictions.
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## LEADERSHIP and PROJECTS

### Construction Project Lead

Jun 2015-Sept 2017

- Designed, built, and operated various large wood construction projects such as a rollercoaster cart, 28-foot tall trebuchet, and floats for dorm activities.
- Coordinated project timeline, bill of materials, budget, and construction in undergraduate student teams.

### Hanging Wall Plotter

April-May 2017

- Fabricated and programmed a hanging wall-plotter, using C on a PSoC microcomputer and 8051 assembly.

### MIT East Campus Dorm Residential Exploration Chair

Feb-Sept 2017

- Managed events and large construction projects for a dorm's freshman welcome week, including \$20k+ budget allocations and funding, in a team of three students.
- Acted as liaison between offices (such as EHS, Professional Engineer, City of Cambridge) and student design teams for construction projects such as a three-story tall wooden fort, swing carousel ride, and more.

### Remote-Controlled Robot

Feb-May 2016

- Designed and fabricated a lantern-lifting, remote-controlled robot.
- Winner of Whitelaw Prize for Originality in Design and top 32 finalist in a 150-student class end of term competition.

### Summer High School Studies Program (HSSP) Co-Director

May-Aug 2015

- Recruited/interviewed teachers, coordinated student registration, and managed logistics for annual six-weekend summer program, serving over 800 middle and high school students from the local Boston Area.
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## SKILLS

**Software:** Python, C++, C, ROS, Java, MATLAB, SolidWorks, MasterCam, Git, Vicon Nexus, Visual3D, Adobe Indesign

**Lab Equipment/Hardware:** Machining, CNC, 3D printing, rapid prototyping, microcontrollers, ICs/Datasheets, EE lab/breadboarding, soldering, wetlab equipment, motion capture, working with human subjects, hand & power tools