Kerrie Wu

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EDUCATION

Massachusetts Institute of Technology — **Cambridge, MA**
B.S., Mechanical Engineering w/ Computer Science Concentration, GPA: 4.9/5.0 — Expected Jun 2018

PROFESSIONAL EXPERIENCE

NASA Jet Propulsion Lab — **Pasadena, CA**
Summer Intern — Jun-Aug 2016

- Design and operate 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.
- Write scripts for processing and analyzing data, and present/document results.
- Co-author abstract for submission to International Workshop on Instrumentation for Planetary Missions.

Little Devices Lab — **Boston, MA**
Undergraduate Researcher — Oct 2015-Jan 2016

- Prototype and document a do-it-yourself (DIY) usage-tracking/alarmed pill bottle construction set.
- Generate code for running Arduino-based sensors and circuits, such as a tremor sensor and smart pill bottle.
- Assist with teaching a hands-on high school workshop on DIY medical technologies, including the DIY pill bottle.

BioDesign Lab, Harvard School of Engineering/Applied Sciences — **Cambridge, MA**
REU (Research Experiences for Undergraduates) Intern — Jun-Aug 2015

- Implement, test, and characterize accuracy of algorithms for extracting rehabilitation-relevant gait parameters from inertial measurement unit (IMU) data.
- Prepare technical paper and present project to 40 REU program participants and mentors.
- Assist with collecting and processing human gait motion capture/force plate data using Vicon and Visual3D.

Applied Biosciences Laboratory, Sandia National Laboratories — **Livermore, CA**
Research Intern — Apr 2013-Jul 2014

- Contributed to research utilizing microfluidic devices to investigate protein behavior at nanoconstrictions.
- Trained new high school intern in wetlab skills necessary to hand off the project.
- Generated data used in presentation for DTRA Basic Science Review.

LEADERSHIP and PROJECTS

MIT East Campus Residential Exploration Chair — Feb 2016-present

- Manage large construction projects and events for a dorm's freshman welcome week, including $20k+ budget allocations and funding, in a team of three students.
- Act 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 wood fort, swing carousel ride, and more.

Remote-Controlled Robot — Feb-May 2016

- Design and fabricate 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.

Construction Project Lead — Jun-Sept 2015

- Build, operate, and maintain 28-foot tall wood trebuchet in a two-week period for freshman residential exploration.
- Coordinate project timeline, bill of materials, and budget in two-person undergraduate student team.

HackMIT Project: Left Hand Free — Sept 2015

- Prototyped a glove-powered twitterbot in a team of three students, using Arduino and Python.

Summer High School Studies Program (HSSP) Co-Director — May-Aug 2015

- Recruit/interview teachers, coordinate student registration, and manage logistics for annual six-weekend summer program, serving over 800 middle and high school students from the local Boston Area.

SKILLS

Software: Python; Java; MATLAB; SolidWorks; MasterCam; Git; Vicon Nexus; Visual3D; Adobe Indesign
Lab Equipment/Hardware: Soldering, machine shop tools/power tools, oscilloscopes, Arduino, wetlab equipment, motion capture, working with human subjects