Melody Liu

melodyL@mit.edu melodygL.wordpress.com 310-955-0810

Education

Massachusetts Institute of Technology (MIT) **Cambridge, MA**
Candidate for BS in Mechanical Engineering **GPA: 5.00/5.00** June 2017

Skills:

Software: MATLAB, Python, ROS
Mechanical: Solidworks, PTC Creo, Machine Shop Experience (Waterjet, laser cutter, CNC mill, lathe, 3D printer)

Industry Experience

Hardware Design Summer Intern, Open Compute Project – *Facebook* **June 2016–August 2016**

- Designed server hardware for data centers for the Open Compute Project
- Used Solidworks to rapidly prototype and design latches and sheet metal cases
- Traveled to data centers to consult with technicians on mechanical design and present solutions
- Negotiated and met with vendors to test and evaluate multiple CAD management software as an independent project

Mechanical Design Summer Intern – *Intel Corporation* **June 2015–August 2015**

- Designed validation hardware for a chip that tests Intel IP using PTC Creo. Created drawings with GD&T
- Manufactured and tested the designed hardware to be sent to the power-on team.
- Communicated with international electrical and firmware teams to create an integrated design

Mechanical Engineering Semester Co-Op – *iRobot* **February 2015–May 2015**

- Developed and implemented testing plans to validate robot specifications
- Analyzed data to produce trends and recommendations for next design

Mechanical Experience

Manipulation and Mechanisms Lab – *MIT Mechanical Engineering* **February 2016–Present**

- Working on robotic gripper mechanical design for Amazon Picking challenge
- Integrating Gelsight technology to create a robotic fingertip

Biomechatronics Lab – *MIT Media Lab* **Feb 2014 – Feb 2015**

- Built robotic instrument to measure tissue properties in order to 3D print more comfortable sockets for prosthetics
- Collaborated with graduate student to design and build the robot using Solidworks CAD and finite element analysis, waterjet, CNC mill, general machine shop, woodworking, and ordering parts from suppliers.
- Operated robot to collect and analyze data from human subjects with prosthetics

Autonomous Robot Project–*MIT Mobile Autonomous Systems Lab* **January 2014, 2013**

- Won 2nd Place in MIT's premier IAP robotics competition
- Worked in a team of five to build a robot that can autonomously collect, transport, and deposit balls over a wall

Electric Go-Kart Project **February - May 2014**

- Class project to build and race an electric go-kart, documenting the process in my blog.
- Designed the go-kart with waterjet aluminum frame; worked on steering, drive, and electrical system
- Following this project, I got funding to build an electric scooter for personal transportation

Leadership

Project Manager for MIT's Mechanical Capstone Class **September 2015 – December 2015**
Co-leader in managing a 20-person team to design, prototype, and build a product in 1 semester

New House Makerspace **June 2014 – January 2015**
Led creation of a machine shop space in my dorm; purchased and managed machines, supervised building workshops

MIT Tour Guide–*MIT Information Center* **February 2013 – Present**
Lead tours of MIT to a group of people, introducing the campus to prospective students and tourists

Program Counselor for Discover Product Design 2014 **August 2014**
Coordinated for a Freshman Pre-orientation Program teaching product design; managed a group of freshmen

Head Associate Advisor of Dorm **September 2013 – May 2014**
Organized all associate advisors in dorm; Aid faculty advisor to offer support and academic advice to the freshmen