KAYMIE SHIOZAWA

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Education

Massachusetts Institute of Technology (MIT) — **Cambridge, MA**
Candidate for Bachelor of Science in Mechanical Engineering — June 2019
GPA: 4.8/5.0
Relevant coursework: Manufacturing and Design I/II; Thermodynamics and Fluids I/II; Dynamics and Controls I/II; Materials and Mechanics; Differential Equations; Introduction to Robotics; Python; Microeconomics

Relevant Experience

MIT D'Arbeloff Lab — **Cambridge, MA**
Undergraduate Researcher — Sep. 2016 - Present
- Designing and implementing a controls infrastructure for an autonomous excavation robot
- Improve current excavation arm through 3D modeling and manufacturing methods
- Perform experiments that register forces exerted on the arm during digging while tracking the soil's movement

Haemonetics Corporation — **Braintree, MA**
Mechanical Design Engineer — June – Aug. 2017
- Developed and designed optical and circuit board components for sensors in an effort to improve blood component separation, while working in the blood-lab for testing and characterization
- Worked closely with the product development team and gained hands-on experience in rapid prototyping
- Collaborated with software, mechanical, and systems engineering teams to explore costs and manufacturability of various sensing techniques
- Presented to managers of the project and executive members of the company

CEA-LETI: Embarked Micro Batteries Laboratory — **Grenoble, France**
Research Engineer — June – Aug. 2016
- Determined the properties of micro battery electrolytes through electrical impedance characterization for the fabrication of more efficient batteries
- Cooperated with team of five members and communicated in French
- Presented findings to lab of 40 people

MIT Little Devices Laboratory — **Cambridge, MA**
Undergraduate Researcher — Feb. – May 2016
- Ideated and created prototypes of mechanical modules for robots that deposit chemicals onto disease diagnostic paper in a cost-efficient, accessible manner

Skills

Languages: French, Japanese, English
Software Experience: SolidWorks, MATLAB, Python, Arduino
Hardware Experience: Lathe and Mill, Welding, Laser Cutting, Water Jetting, 3D Printing

Leadership

Undergraduate Practice Opportunities Program (UPOP) — Oct. 2016 – Sept. 2017
- Participated in a professional development program preparing sophomores for success in the workplace
- Completed a one-week professional development workshop taught by MIT faculty and industry professionals, which explores topics such as effective communication, foundational decision-making, and teamwork

Freshman Pre-Orientation Program: Discover Product Design at MIT — Aug. 2015 – 2017
Co-coordinator & Mentor
- Mentored incoming students in a weeklong program introducing them to product design, ideation, prototyping, and CAD
- Collaborated with MIT faculty to organize the entire program; Corresponded with design firms for tours
- Trained mentors to create lectures and mentor the freshmen effectively

MIT Activities/ Awards

Japanese Society of Undergraduates — Aug. 2016 – Present
Treasurer

Japan Karate Association/MIT Shotokan Karate Club — Aug. 2008 – Present
President of MIT Club

2.12 Introduction to Robotics — Sept. – Dec. 2017
- Designed, fabricated, and controlled a robotic arm and serial elastic actuator to aid hemiplegic patients
- Team placed 2nd; Awarded Most Valuable Engineer of the team by peers and professors

MakerLodge — Feb. – May 2017
- Mentored freshmen on various manufacturing skills at the first student-run makerspace at MIT

Manufacturing and Design Robotics Competition — Feb. – Apr. 2017
- Placed Top 32/160

MIT Autonomous Robotics Competition — Jan. 2016
Mechanical Co-Lead
- Designed mechanisms that consistently completed the task and cooperated with software and electrical leads
- Placed 2nd, Won the Two Sigma Prize