

Douglas Hutchings

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EDUCATION

University of California, Berkeley

Graduated: December 2015

Bachelor of Science in Mechanical Engineering

Courses:

Design of Microprocessor Based Systems Feedback and Control Systems Mechatronic Design Laboratory
Introduction to Product Development Introduction to Robotics Organizational Behavior

Computer Tools: Solidworks, Creo Elements, Windchill, Matlab, Simulink, Git, Eagle, ROS, FEMM

(Programming) Languages: C, Java, C++, Python, Mathematica, JavaScript (Basic), Japanese (Basic)

Qualifications: Part 107 Commercial Drone License, Private Pilots License

PROFESSIONAL EXPERIENCE

Lead Mechatronics Engineer, Squishy Robotics

May 2018 – Present

- Coordinate day-to-day technical efforts building air-deployable HazMat Robots for use by First Responders.
- Conducted customer discovery research through Regional I-Corps Program.
- Led competitively selected grant-funded R&D efforts sponsored by the U.S. Army & NSF totaling \$857,000.
- Developed embedded systems for motor control, battery management, gas sensing, and communications.
- Mentored junior employees, interns & masters students; collaborated with university researchers.

Production Engineer, Anthropocene Institute – Sapphire Motors

Aug 2017 – May 2018

- Prototyped Novel DC Brushless electric motor in the 10kW-100kW power range.
- Applied manufacturing techniques developed on miniature prototypes to motor production process.
- Built test setup to collect Back EMF, Eddy Current & Windage data; developed empirical models.

R&D Engineer 1, B.E.S.T. Lab, M.E. Dept, UC Berkeley

April 2017 – Aug 2017 (Full Time) – May 2018 (Part time)

- Designed & Deployed new robust robotic control system for use in research-grade Tensegrity Robots.
- Led team that iterated robot 3x faster than previously accomplished. Robot now used as general platform.
- Instructed researchers on best practices for software and electrical development.

Electronic Technician, E.E.C.S. Dept, UC Berkeley

Jan 2016 – Aug 2016

- Delivered logistical and technical support for two upper division robotics courses of thirty students each.
- Developed & Deployed telemetry, control, and electrical systems to improve student learning in the classes.

Hardware Engineering Intern, Google Inc

Summer 2013

- Developed a robotic device to route network cabling bundles between devices in Data Centers (DCs).
- Defined a way forward for possible comprehensive and quick deployment of the system in DCs.
- Designed user-friendly sheet metal packaging for electronics to increase hard drive erasure throughput.

RESEARCH

Research Assistant, Biomimetic Millisystems Laboratory, UC Berkeley

Summer 2012, Fall 2014 – 2015

- Developed a robotic control system and production method for ~30 gram crawler robots.
- Characterized vertical wall climbing capabilities of the crawler robots.
- Developed new compact motor controller to improve jumping capabilities of the robots.

ACTIVITIES

Pioneers in Engineering (PiE)

Fall 2011 – Present

PiE is a UC Berkeley student organization that runs STEM outreach programs for local East Bay schools.

- **Foundation Treasurer** *February 2015 – Sept 2019*
 - Led the Financial aspect of PiE's Foundation Project, a successful effort to establish PiE as a 501(c)(3)

