

# Mitchell Karchemsky

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## WORK EXPERIENCE

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- AUGUST 2015 - Present | **University of California, CITRIS:Invention Lab** - Lab Manager  
Manage a rapid-prototyping lab during day to day operations as well as large scale events to help foster embedded systems inventions. Duties include safety training, managing equipment and materials, developing internal projects, and mentoring members to create innovative products. Equipment includes, but not limited to, 3d printers, laser cutters, and CNC Mills.
- AUGUST 2015 - Present | **University of California, Berkeley Institute of Design** - Research Assistant  
Work with Professors and Ph.D Candidates to assist in a multitude of research related tasks. Work ranges from but not limited to: Designing and iterating prototypes, conducting and evaluating user studies, writing and editing publications, and researching future topics. Publications at UC Berkeley and at UIST. More information can be found online on website
- MAY 2017 - JANUARY 2018 | **University of California, Berkeley: Jacobs Institute of Design** - Teaching Assistant  
*Design Innovation 22: Prototyping and Fabrication.* The course teaches concepts, skills, and methods required to design, prototype, and fabricate physical objects. Duties ranged from leading lectures and executing lesson plans, to one-on-one advising and consultation.  
*New Media 190: Critical Practices.* A hands-on, studio design course where students work at the intersection of technological innovation and socially engaged art. Students will integrate a suite of digital fabrication tools with social design methods to create work that engages in cultural critique. Duties ranged from leading lectures and executing lesson plans, to one-on-one advising and consultation.
- AUGUST 2015 - SEPTEMBER 2016 | **Dalmatian - Helios** - Founder  
Startup venture with a mission to improve the safety and efficacy of first responders through the development of interactive devices. The product, Helios, was a command management, information, and personnel safety system that directly links firefighting command staff with a wealth of telemetry received from sensor packages worn by individual firefighters. Dalmatian won \$20,000 in grand prize money from Solidworks and Venture.co
- JUNE 2015 - JULY 2016 | **The Aerospace Corporation** - Software Engineering Intern  
Developed an interactive touch-based data visualization that displays all 1650+ US Rocket launches as well as Aerospace Corporation's pedigree in space launch systems dating back to the beginning of the space age. The visualization is displayed on an 80-inch touchscreen for public interaction with employees, US Senators, foreign dignitaries, and elementary students.
- MAY - AUGUST 2013 | **NASA Ames Research Center** - Systems Engineering Intern: *Lunar Micro Rover*  
Designed, built, and maintained a rapid prototyping system to produce designs for a lunar micro rover; reducing turn around time to test designs from 2 months to 24 hours. Also maintained and developed user interface elements for controlling a rover on the moon in real time.

## EDUCATION

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- SUMMER 2017 | **University of California, Berkeley**  
B.A. in Cognitive Science - Focus in Computational Modeling  
Minor in Computer Science

## VOLUNTEER POSITIONS

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- AUGUST 2013 - AUGUST 2017 | **FIRST Robotics: Team 4 ELEMENT** - Systems Engineering Mentor  
Organize and lead high school students through a 6 week build season to build a fully functional 120lb robot. Students then compete in state and national competitions using remote operation and autonomous control to complete objectives with their robot. Duties include prototyping, design, programming, assembly, and project management.
- AUGUST 2015 - JULY 2016 | **Robotics@Berkeley** - Co-Founder | President  
Organize Berkeley students to develop and fund large scale robotics projects ranging from 3D-printed quadcopters to autonomous golf carts. Also organize social events, workshops, and conferences to give students an opportunity to work closer with their peers.

## TECHNICAL SKILLS

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- Python
- Embedded Systems
- Java
- EagleCAD
- C/C++
- MIPS Assembly
- Solidworks / 3D CAD
- HTML/CSS/Javascript
- LaTeX