

# RYAN O'BANNON

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Project Portfolio: ryan-obannon.squarespace.com

## EDUCATION

### University of California, Berkeley

*Bachelor of Science, Mechanical Engineering*

Berkeley, CA  
expected May 2018

- GPA 3.90
- Dean's Honors – Spring & Fall 2015, Fall 2016, Fall 2017 (Top 10% in College of Engineering)

## COURSEWORK

- Solid Mechanics, Engineering Dynamics, Feedback Control Systems, UAV Control Design, Manufacturing & Tolerancing, GD&T, Design of Planar Machinery, Human-Centered Design, Thermodynamics, Fluid Mechanics, Heat Transfer, Behavior of Engineering Materials, Circuits, Computer Programming (Matlab), 3D Modeling

## EXPERIENCE

### Apple

*Hardware Reliability Engineering Intern*

Cupertino, CA  
May 2017 – August 2017

- Designed automated ball impact test fixture for investigating consumer device failure due to impact onto the device. The fixture conducts repetitive tests more precisely and significantly faster than manual testers.
- Created LabVIEW program and user interface to import test data from standardized file and command three movable axes to execute impact sequence at specified drop heights and locations.
- Assessed critical features and shortcomings of previous manually operated fixtures to guide improved design.
- Worked with Reliability Engineers and Technicians to improve efficiency and streamline testing workflow.
- Evaluated automated tester to ensure continuity in failure rates compared to manual fixture.

### Chemisense

*Mechanical Engineering Intern*

Berkeley, CA  
February 2016 – September 2016

- Collaborated with CTO to create calibration procedure that eliminates baseline drift in chemical and environmental sensors due to changing ambient conditions. Listed as an author on patent application.
- Automated temperature and humidity control of environmental chamber by outfitting lab equipment with servos and writing Arduino-based control scheme. Saved eight manhours per above calibration cycle.
- Interfaced directly with Chinese engineers and manufacturer representatives to prepare second generation device for injection molding and troubleshoot mechanical and electrical issues on three prototype versions.
- Recommended sensors to include in second generation air quality monitoring device based upon extensive testing of sensor accuracy, noise and detection threshold.

### National Instruments

*Mechanical Engineering Intern*

Berkeley, CA  
May 2015 – August 2015

- Modeled, simulated, manufactured and tested a three-mass, two-spring slider crank as an example mechanism to validate and identify issues with NI and Autodesk's interface between LabVIEW and Inventor.
- This R&D work contributed to the development of an integrated design platform to dynamically simulate mechanical systems designed in Inventor using LabVIEW, which was announced at NI WEEK 2015.

## AWARDS

- Mary C. and William G. Drake Scholarship
  - Four year full-ride Mechanical Engineering scholarship awarded to 5 students yearly for exceptional interest, academic and extracurricular achievements.
- UC Berkeley Regents' and Chancellor's Scholarship
- National Merit Scholarship

## SKILLS

**Computer:** Siemens NX, Solidworks, Autodesk Inventor, LabVIEW, MATLAB, Simulink, Arduino, Python, MS Office  
**Technical:** DFM/DFA, GD&T, Soldering, 3D Printing, Vertical Mill, Lathe, General Machining, MIG/TIG Welding