

# Edward Chu

## Mechanical Engineer

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*Mechanical engineer with experience in laboratory research, modeling and simulation, and prototyping in machine shops. Eager to learn and contribute to innovation in an entry-level full-time engineering role.*

### Education

Sep 2018 - **Master of Science**, *UCLA*, Los Angeles, CA.

Dec 2019 Aerospace Engineering | GPA: 3.7/4.0

Sep 2014 - **Bachelor of Science**, *California Institute of Technology*, Pasadena, CA.

Jun 2018 Mechanical Engineering (ABET accredited) | Aerospace Engineering minor | GPA: 3.4/4.0

### Internship Experience

Jun 2019 - **R&D Grad Intern**, *Sandia National Laboratories*, Albuquerque, NM.

- Collaborated with and motivated staff to research material properties of an unusual alloy
- Wrote test plans, set up load frame experiments using digital image correlation for strain data acquisition, and processed data for stress/strain analysis
- Analyzed data trends, wrote procedure documentation, and published an internal report

Jun 2017 - **Technical Intern**, *The Aerospace Corporation*, El Segundo, CA.

- Manufactured and tested dozens of battery cells to research the reliability of satellite batteries
- Compiled and analyzed experimental data in Microsoft Excel
- Conducted failure analysis on batteries with SEM, EDX, and X-ray CT using extra time
- Gave technical Powerpoint presentation to department at end of internship

Jun 2016 - **Research Intern**, *NSF Research Experience for Undergraduates*, Philadelphia, PA.

- Ran over 60 large-scale simulations in molecular dynamics simulator to study Mg hcp crystals
- Wrote MATLAB scripts for automation of data acquisition and data analysis

### Project Experience

Capstone Project Worked in a multidisciplinary team to build three robots. Involved with whole product cycle: CAD design, cost estimation, fabrication, design reviews, testing and validation.

AAReST Cubesat Designed an RF model of a cube spacecraft in SolidWorks, and built it from sheet metal using waterjet cutters and mills. Used with network analyzers to validate design.

Heat Exchanger Determined design specifications to meet performance requirements for a heat transfer system. Carried out finite element analysis for thermal and mechanical behavior.

### Skills and Qualifications

Computer Microsoft Office, SolidWorks, MatLab, Python, Java, ANSYS, COMSOL

Fabrication Machine shop (mills, lathes, waterjet cutters, 3D printers, etc.), GD&T, prototyping

Other Written and oral technical communication, laboratory equipment, full-cycle engineering  
Proficient in Chinese, Eagle Scout