

Benjamin Chia

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EDUCATION

University of California, Davis

Expected Graduation: June 2020

Bachelor of Science in **Mechanical Engineering**

Minor in **Electrical Engineering** (Emphasis: Communication & Signal Processing)

GPA: 3.30/4.00

SKILLS

- **CAD & Fabrication:** SolidWorks, AutoCAD, SketchUp, ESPRIT, Machine Tools, 3-D Printing, GD&T, FEA
- **Programming:** LabVIEW, OrCad, SPICE Simulations, PCBA, VBA, Excel, MATLAB, C, Arduino
- **Technical:** Rapid Prototyping, Fixture Design, Test Method Validation, Product Characterization, Failure Analysis, Strain/Stress Material Testing
- Fluent in Mandarin (Bi-lingual)

EXPERIENCE

Advanced Composite Research Lab (ACRES)–Undergraduate Researcher, Davis, CA Jan 2019-Present

- Renovating a cantilever test machine to measure both dynamic loading and accumulated strain on wind turbine blades.

Boston Scientific–R&D Engineering Intern, Los Gatos, CA June-September 2018

- Led the durability testing and failure characterization of next-generation Mantra heart valves.
- Developed new 29mm valve seal design from initial drawing in Solidworks to prototype manufacturing.
- Designed custom valve fixtures in durability testing, successfully reducing seal-to-frame slippage by 70% of original distance.
- Created component-level seal tensile strength tests, conducting tests on 15+ manufacturing methods.

Human Performance Lab–Undergraduate Researcher, Davis, CA April 2018-Present

- Analyzed research and assessed the efficacy of standing desks on biomechanical factors.
- Built a web-application as an alternative to standing desks that focuses on short light-intensity exercise.

Regional San–Mechanical Engineering Intern, Elk Grove, CA June 2017-January 2018

- Coded a comprehensive data transfer tool to automate data validation of 10,000+ points of wastewater plant data that was used by various departments.

PROJECTS (Portfolio: bjchia.github.io)

Die Game Digital Project, Digital Systems I, UC Davis September-December 2018

- Implemented and designed a dice roll simulation game that counts the roll, adds, passes, and resets the system when the game is won by reaching 15 total points.

CNC Machine Structure Optimization, Mechanical Design, UC Davis November 2018

- Conducted structural analysis on body of CNC machine to optimize rigidity by 40%.

Gyroscope Design & Fabrication, Manufacturing Processes, UC Davis January-March 2018

- Utilized machine tools and G code on Esprit to manufacture a gyroscope that spins for 4.5 minutes.

InHealth, Human Performance Lab, UC Davis May 2018-Present

- Placed top finalists at UC Davis's annual create-a-thon.

LEADERSHIP

Founder–Momentum Speaker Series @ Davis, Davis College of Engineering May 2018-Present

- Pitched and created Davis's Engineering 1st student speaker series promoting peer career mentorship.
- Achieved turn-out of over 60+ attendees during event launch.

Engineering Peer Advisor–Internship and Career Center, UC Davis September 2017-Present

- Review resumes and cover letters of 10+ engineering students weekly while providing feedback.

Industry Outreach Rep.–Theta Tau, Professional Co-Ed Engineering Fraternity 2016-Present

Additional Interests: Basketball, Weightlifting, Reading, Shoes, UI Design