

RYAN CHIANG

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EXPERIENCE

Spacecraft Qualification Engineer Intern | Planet | San Francisco, CA

May 2024 - Present

- Created a thermal chamber with thermocouple DAQ in house to reduce purchasing costs by \$35,000
- Designed Instron moment bending test fixtures under DFM conditions
- Automated jitter testing accelerometer acquisition to optimize time cost by 80%

Mechanical Engineering Intern | Alef Aeronautics | San Mateo, CA

March 2024 - May 2024

- Increased production yield of 0% to 95% from 1x1x1m 3D printer with flatness tolerance of ± 0.07 mm
- Reduced cabin mount weight by 15% with change of material and DFM design
- Improved hardware enclosure with threaded fasteners over previous friction fit design

Web Development Club Advisor | SAAS Berkeley | Berkeley, CA

January 2022 - Present

- Performed leadership duties for 6 project teams totalling 15 people
- Promoted user retention by 42% by redesigning frontend website via Bootstrap
- Boosted SAAS Berkeley applicants by 50% Y/Y

PROJECTS

Research Assistant | Video and Image Processing Lab | University of California, Berkeley

December 2023 - Present

Electrical Impedance-Based Mapping for Moisture Analysis of Concrete Structures

- Reduced drone payload weight by 35.3% from change of materials (Al to CF) and design changes
- Identified max drone payload weight of 50g through free-weights load testing
- Decreased sensor failure rate of 100% to 33% with circuit redesign and oscilloscope/logic analyzers
- Integrated 4 features with C language: data acquisition, data grouping, bluetooth, GPS
- Visualized moisture heatmap with least squares linear regression and 2D projection

3D-Printer Automatic Print Removal

- Designed linear actuating system via herringbone gears and DC motor
- Performed FEA resulting in a max von Mises stress 0.67 MPa and FOS of 2
- Formulated 8 GD&T drawings of parts

360 Degree Security Camera

- Reduced product size by 65.1% with body, pitch mount redesign and custom PCB board
- Designed PCB layout with self-made stepper motor controls and MCU module
- Created BOM of \$44.82 of \$50 budget

Smart Coffee Maker Attachment

- Calibrated voltage output of thermocouple to temperature from DAQ
- Reduced cost of production to \$32.25
- Integrated live temperature feed through Discord via MQTT

SKILLS

Technical Skills: FDM Printing, GD&T, PCB Design, Soldering, ESP32, Arduino, CNC, TIG Welding, Lathe/Mill

Software: SOLIDWORKS, Creo, AutoCAD, KiCAD, Onshape, MATLAB, Fusion 360, Shapr3D, 3DS Max, Python, C/C++

EDUCATION

University of California, Berkeley | College of Engineering

Expected May 2025

B.S. Mechanical Engineering

GPA 3.81/4

Accolades: TBP (Top 5% Engineering Class of 1058), BCDI Certificate (Prod Dev), SCET Certificate (Entrepreneurship)

Relevant Courses: Manufacturing, Mechanics of Materials, Advanced CADD, Statistics & Data Science, Static and Dynamic Mechanics, Fluid Mechanics, Thermodynamics, Dynamic Feedback Systems, Experimentation, Product Development