Jonathan Chan

jchan.engr@gmail.com | (909)-358-0358 | linkedin.com/in/jchan-engr | Eastvale, CA

EDUCATION

University of California, Riverside **Expected: May 2026**

Bachelor's of Science in Mechanical Engineering

- Certified Solidworks Associate in Mechanical Design - June 2021
- Certified Autodesk User in AutoCAD - May 2018

SKILLS

Technical: Solidworks, Fusion360, AutoCAD, Arduino, Matlab, RStudio, FEA, Generative Design, Orca Slicer

Tools: Additive Manufacturing (3D Printing), Dremel, Hand Drill, Drill Press, Laser Cutting, Painting

WORK EXPERIENCE

A&R Tarpaulins **September 2024 – July 2025**

Quality Engineer Intern *Fontana, CA*

- Conducted inspections and tests of aerospace products using control plans, travelers, and dimensional equipment to ensure aerospace products meet specifications and ISO9001 and AS9100D standards
- Reverse engineered and designed blower system housing and telescoping frame for Patient Isolation Transport Unit (PITU) in Solidworks to optimize efficiency and portability
- Fabricated custom jig with real-time measurement for cable net assemblies to reduce human error by 92% and production time by 35%
- Performed root cause analysis by collecting and analyzing data to resolve underlying issues in products
- Created detailed drawings in Solidworks with section views and tolerances to aid manufacturing process

IMRAE **November 2022 – January 2023**

Contract CAD Drafter *Murrieta, CA*

- Applied Fusion360 to design 3D models for manufacturing molds, facilitating the testing of thermal strength and water resistance for new paint mixtures and coatings on building materials
- Researched filament materials to achieve desired heat resistance properties capable of casting molds
- Calculated costs to develop the models from materials, labor, drafting, and post-processing for a final cost
- Tuned print settings by reducing print speed and layer lines in Cura to ensure a smooth print

PROJECTS

Autonomous Arduino Turret **September 2025 - December 2025**

- Developed a motion detecting Arduino-based turret using conditional and state machine logic to perform 180° scanning, target acquisition with auditory feedback, and a manual override mode
- Coded a closed-loop feedback system, using filtered ultrasonic sensor data for precise PWM servo control
- Designed servo motor and ultrasonic sensor housing to replicate turret aesthetics

Truss Bridge **April 2024 - June 2024**

- Constructed truss bridge with straws achieving 330% structural efficiency by withstanding a distributed load up to 3.3kg
- Calculated load distribution with method of sections to identify internal forces of each member
- Examined stress distribution using SolidWorks FEA to locate points of failure and failure mode

Solar Panel Cleaning Brush **March 2021 – May 2021**

- Designed a prototype articulated extension arm in SolidWorks for a cleaning brush to ease rooftop maintenance
- Created an exploded view of assembly to demonstrate mechanism of the model