

# Aidan Duggan

## Manufacturing & Mechanical Engineer

San Francisco, California

Portfolio: <https://aidandug.github.io/>

LinkedIn: [www.linkedin.com/in/aidanduggan](http://www.linkedin.com/in/aidanduggan)

## SKILLS

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*Mechanical Design • CAD Modeling • Prototyping • Machining • Manufacturing Processes • Drone Assembly & Repair • RC Systems • Flight Tuning • Electronics Integration • Testing/Troubleshooting • Technical Documentation • Team Collaboration*

## EDUCATION

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### **Texas A&M University, Bachelor of Science Manufacturing and Mechanical Engineering Technology**

August 2022 - May 2026 | GPA: 3.5

(3x) Dean's Honor Roll Recipient for Outstanding Academic Achievement

Member of the Society of Manufacturing Engineers and FSAE Development Team

Fraternity Leadership as Philanthropy Chair

## EXPERIENCE

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### **Project Manager and Design Lead, Senior Capstone Project**

College Station, TX. Fall 2025 - Spring 2026

Designed and developed a modular leg alignment brace to apply controlled rotational forces for therapeutic correction.

Led mechanical design, strengthened experience in composite fabrication, machining, iterative prototyping, load path analysis, hardware integration, DFMEA, and technical documentation.

### **Drone Mechanical Engineering Intern, Matternet**

Mountain View, CA. Summer 2025

Led the end-to-end design and development of drone delivery hardware, creating 3D models and custom parts using CAD. Directed and executed testing by writing test scripts, overseeing data collection and analysis, and compiling reports presented to the engineering team to validate design functionality, reliability and usability.

### **FSAE Development Team Member, Texas A&M University**

College Station, TX. Spring 2023

Collaborated with a team to design and simulate suspension geometry for a high-performance racing vehicle. Designed ideal geometry and utilized simulations to model functional components under tight deadlines.

## PROJECTS

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### **5ft Missile Replica Fabrication & Systems Integration**

Designed and manufactured a scaled missile assembly incorporating detailed fin geometry, body segmentation, and surface features. Integrated an internal actuation system using servo-driven control surfaces to simulate fin movement.

Developed a microcontroller-driven interface with TFT display and button inputs to control actuation modes and animations. Programmed menu navigation, boot screens, and system feedback indicators to simulate a mock guided system interface.

### **Drones and RC Vehicles**

Built and tuned high-performance RC platforms including a 30" wingspan 3S aircraft and a 6S 5" FPV drone. Selected power systems, soldered electronics, integrated flight controllers, and tuned PID values for performance and reliability.

Designed and printed mechanical components to develop understanding of aerodynamics, vibration management, structural stiffness, and rapid iteration under real-world load conditions.

### **Embedded Systems Integration**

Designed and programmed interactive microcontroller systems integrating displays, buttons, servos, sensors, and audio feedback. Developed menu-driven UI systems and animated display outputs. Built custom 3D printed enclosures for cable management and hardware protection.