

ADIB MAZLOOM

Mechanical & Aerospace Engineer · MBA · US Citizen

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SUMMARY

Mechanical and Aerospace Engineer with full ownership of hardware programs — from ambiguous requirements to detailed CAD, fabricated prototypes, integrated systems, and tested hardware. Experienced designing electromechanical systems, assembling and troubleshooting prototypes on the shop floor, and driving design improvements through hands-on test and failure investigation. Does not hand off after CAD is complete — stays responsible through build, integration, and test. US Citizen.

TECHNICAL SKILLS

Software: SolidWorks · AutoCAD · MATLAB · Python

Design & Analysis: GD&T · Tolerance Analysis · DFM & DFA · Engineering Drawings · FEA (Structural & Thermal)

Fabrication: Additive Manufacturing (FDM, SLA) · Multi-material Prototyping · Hardware Inserts & Post-processing

Integration & Test: Electromechanical Assembly · PCB Integration · Soldering · System-Level Testing · Root Cause Analysis

EXPERIENCE

Lead Mechanical Engineer — Athlete Management Technologies

May 2025 – Present

San Diego, CA

- Sole mechanical engineer owning hardware end-to-end across a product line of charging case variants (multiple form factors) plus separate new product development — from ambiguous requirements through detailed CAD, fabricated prototypes, integrated systems, and validated test, staying responsible at every stage
- Performed structural and thermal FEA to evaluate loads, stiffness, and thermal behavior; turned analysis results into design decisions before cutting any hardware
- Produced detailed GD&T-toleranced drawings and mechanical design packages with DFM/DFA principles embedded from day one — practical to fabricate, assemble, inspect, and maintain
- Assembled and integrated prototype electromechanical systems on the shop floor; troubleshoot failures hands-on and fed lessons directly back into the design — achieving ~30% durability improvement
- Managed rapid prototyping operation (FDM and SLA) — 10–20 hardware iterations per program, reducing development cycle time ~50%; personally post-processed, fitted, and tested each iteration
- Worked directly with electrical engineers to define interfaces, coordinate PCB packaging, route connectors, and manage thermal clearances across multiple prototype builds

Thermal Design & Test Engineering Intern — Wavious LLC

Jun 2021 – Feb 2022

San Diego, CA

- Developed thermal models and performed first-principles analysis on high-performance electronic hardware; designed and executed physical test setups to validate models against real hardware
- Collected and analyzed test data to drive design changes — improving system thermal performance by 35°C through simulation-informed design iterations

PROJECTS

FireWatch — Autonomous Wildfire Suppression Drone System — Provisional Patent Filed

Apr 2025 – Present

- Designing full mechanical hardware for a two-vehicle autonomous system — airframe structures, propulsion mounts, launcher interface, and payload integration across mothership and suppression drone
- Personally building V1 suppression drone from CAD through physical prototype; provisional patent filed on the tower launcher interface and drone architecture

TrackTechPro — Brake Temperature & DAQ System — Completed

- Designed, wired, and installed a custom Arduino DAQ system integrating thermocouples at all four brake corners and an IMU; built enclosure, routed harness, and mounted on vehicle — hardware and firmware developed independently

EDUCATION

MBA, Cal Poly Pomona · GPA: 3.9 / 4.0

2024 – 2025

BS Aerospace Engineering, UC San Diego

2019 – 2023