

ALAN PRASANTH SAM

MECHANICAL ENGINEER • ASPIRING DESIGN ENGINEER

+91 965 333 2012 | alanprasanthsam@gmail.com | Mulund (W), Mumbai
LinkedIn: linkedin.com/in/alanprasanthsam
Portfolio: https://aps.alanns.com

PROFESSIONAL SUMMARY

Mechanical Engineer graduate with hands-on experience in CAD modelling (SolidWorks, AutoCAD, Fusion 360), prototype development, and production processes across automotive, transformer manufacturing, and independent design projects. Skilled at converting concepts into manufacturable, tolerance-accurate designs.

CORE TECHNICAL SKILLS

CAD & MODELLING

SolidWorks · AutoCAD 2D · Fusion 360 · 2D drawings · 3D part modelling · assemblies

MANUFACTURING

Winding · soldering · welding · cutting · grinding · buffing · assembly · packaging

DESIGN FOUNDATION

Engineering drawing · dimensions & tolerances · design for manufacturability · prototyping

PRODUCTION & QUALITY

Basic inspection · SOP compliance · shop-floor coordination · industrial safety · CNC fundamentals

ENGINEERING PROJECTS

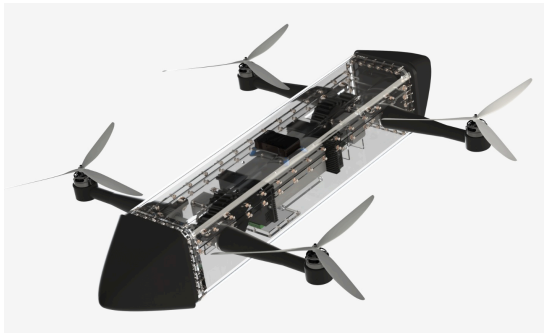
Shape-Morphing Aerial–Aquatic Drone (Final Year Project)

Lead Mechanical Design & CAD Development | Team of 3

- Led mechanical design and CAD development within a 3-member team, owning the reconfigurable propulsion architecture and structural design end-to-end.
- Designed and modelled the complete assembly in SolidWorks and Fusion 360, including a custom mechanism enabling seamless transition between aerial flight and underwater operation.
- Applied structural design principles and lightweight geometry choices to balance strength with aerodynamic and hydrodynamic performance.
- Directed prototype development, coordinating component integration and assembly across the team.
- Oversaw structural and functional validation testing to confirm the transition mechanism performed as designed.

Potential applications: defence reconnaissance, search & rescue, environmental monitoring and inspection of difficult-to-access locations.

Tools & Technologies: SolidWorks, Fusion 360, CAD Assembly Design, Structural Analysis, Prototype Development, Mechanical Design, DFM, Product Development



ENGINEERING EXPERIENCE

Mechanical Design & Production Project | Moonstar India | Kottarakkara, Kerala | 2021–2022

- Manufactured 24V 40VA transformers — winding, soldering, welding, assembly, and quality inspection.
- Prepared and modified 2D/3D CAD models using AutoCAD and Fusion 360 to support product understanding, visualisation and production work.
- Performed basic process and visual quality checks and coordinated with technicians during production-floor activities.

3D Product Visualisation Project | Alann's Advertising Agency | Mumbai | Client: Intime Fire Pvt. Ltd.

- Recreated existing firefighting equipment product lines as accurate 3D models for product presentation, marketing and branding applications.
- Converted product references into clean, presentation-ready CAD assets in collaboration with the creative team.

EDUCATION & CERTIFICATIONS

B.TECH — MECHANICAL ENGINEERING

St Thomas College of Engineering and Technology
Kozhuvalloor, Kerala | 2026

HIGHER SECONDARY

MGM Residential Public School | 2022

SECONDARY

MGM Residential Public School | 2020

- **SolidWorks:** 50-hour certification, CAD Center - Kochi
- **AutoCAD 2D:** 50-hour certification, CAD Center - Kochi
- **CNC Programming & Machining:** 14-day internship
- **Additive Manufacturing:** NIT Calicut, 25-hours
- **Natural Refrigerant HVAC Seminar:** IIT Madras
- **Mechanical Engineering Trainee:** Brakes India Pvt. Ltd.

LANGUAGES English · Malayalam · Hindi | Open to relocation