ATIF IQBAL

Mechanical Design Engineer — Drones, EV Systems & Precision Mechanisms

Bengaluru, India (relocating to Australia) | +91 9999164412 | atifiqbal08@gmail.com | LinkedIn | Portfolio

Visa status: Occupation Mechanical Engineer (ANZSCO 233512) on Core Skills Occupation List; Engineers Australia assessment in progress; seeking employer sponsorship (subclass 482) or commencing on points-tested PR.

PROFESSIONAL SUMMARY

Mechanical design engineer with 5+ years taking electro-mechanical products from concept to production across drones, electric vehicles and precision machinery. Reduced component costs 51% through HPDC die design, delivered an AIS-156-compliant 3.2 kWh EV battery pack, and designed a drone assembly line scaling to 500+ units/month. Strong in SolidWorks, Creo, GD&T (ASME Y14.5) and FEA validation (Ansys/Nastran). Led teams of up to 6 engineers.

KEY SKILLS

- CAD & design: SolidWorks, PTC Creo, Fusion 360, Inventor, GD&T to ASME Y14.5, tolerance stack-up, design for HPDC/injection moulding/sheet metal
- Analysis: Ansys (structural, modal, thermal, Fluent), Nastran FEA, fatigue and life estimation
- Manufacturing & NPI: DFM/DFMA, assembly line design, BOM management, PDM, supplier development (incl. Shenzhen sourcing), ESD-safe facility layout
- Programmes: production ramp planning (20/100/1,000 units/month), ICAT vehicle certification, AIS-156 battery compliance
- Certifications: Certified Ansys Professional; Certified Lean Management Professional

PROFESSIONAL EXPERIENCE

Mechanical Solution Engineer

Apr 2025 – Present

Skylark Drones — Bengaluru, India

- Designed a modular drone assembly line targeting 500+ units/month, optimising takt time, scalability and cost
- Performed FEA-based life estimation of propellers and static/modal/fatigue analysis of drone frames, feeding results into thickness, ribbing and material selection
- Built SKU and part-coding logic across mechanical, electrical and sensor modules, enabling accurate warehouse and WIP tracking
- Scouted suppliers in Shenzhen, China to resolve part shortages and establish long-term sourcing relationships
- Partnered with EMS contract manufacturers for NPI, transferring product and process knowledge for SMT and box-build

Program Head — Mechanical Systems

Dec 2022 – Apr 2025

Apeiron Mobility — Bengaluru, India

- Led a 6-engineer team designing and building 6 beta electric vehicle prototypes; 2 vehicles submitted for ICAT roadworthiness certification
- Designed a 3.2 kWh removable EV battery pack compliant with AIS-156, plus a 2.5 kWh pack validated through FEA
- Completed 12,000 km durability programme on second prototype; executed Nastran stiffness and fatigue analysis on chassis and headstock
- Created production BOMs and manufacturing drawings for 20/100/1,000 units-per-month ramp scenarios
- Developed EV wire-harness prototype with routing and nailboard drawings; eliminated reverse-current faults via TVS-diode RCA

Mechanical Design Engineer / Solutions Expert

Dec 2020 – Dec 2022

Emflux Motors — Bengaluru, India

- Designed aluminium HPDC die to NADCA guidelines, cutting component cost 51%

- Took a BLDC smart ceiling fan from prototype to certified production
- Re-designed e-rickshaw gearbox to reduce weight, eliminate noise and resolve interference
- Designed sheet-metal enclosures and heatsinks with thermal analysis for DC-DC converters
- Mentored 3 engineers; implemented ASME Y14.5 drawing standards

EDUCATION

M.Tech (Automobile Engineering) + B.Tech (Mechanical & Automation), Dual Degree — Amity University, Noida, 2020 (CGPA 8.2/10)

B.Sc Physics (Hons) — Delhi University, 2015

SELECTED ACHIEVEMENTS

- Vice-Captain & Chief Design Engineer, Amity BAJA Racing (SAE) 2018–19
- First place, ASME-chapter CAD design competition; published research on metal-matrix nanocomposites
- Languages: English (fluent), Hindi (native), German (A2)

Referees available on request.