Muhammad Danyal

Mechanical Design Engineer

engr.danyalarif@gmail.com

+923312382423

Karachi, Pakistan.

linkedin.com/in/muhammad-danyal-arif/

Profile

Design-focused engineering professional with experience leading cross-functional teams in developing electro-mechanical enclosures for projects exceeding USD 10 million. Currently seeking opportunities to apply my expertise in delivering impactful, technically rigorous solutions.

Work Experience

2020/08 – present
Karachi, Pakistan

Deputy Manager (Mechanical Design), *Stingray Technologies Limited*

- Designed and developed IP-55, Aluminum 6061-T6 based Server Racks, PC Racks, and Dual-screen consoles for harsh offshore marine environments.
- Developed thermally optimized network cabinets that sustained reliable operation under elevated ambient conditions while effectively dissipating 2.5–4 kW heat loads.
- Led the end-to-end mechanical design of a remote-controlled targeting platform, incorporating 30+ custom-fabricated parts with tight tolerance control to ensure precision targeting performance in demanding field conditions.
- Reverse-engineered wire rope shock mounts, rigorously complying with MIL-STDs 810, 167, and 901D, achieving a 50% cost reduction.
- Implemented additive manufacturing methods for rapid prototyping, saving up to 90% of rework time due to modifications in later stages.
- Developed comprehensive technical design documentation, including 50+ detailed drawings with GD&T specifications and assembly guides, streamlining the product development cycle and ensuring seamless communication with manufacturing teams.
- Supervised a team of 5 technicians in integrating and installing electro-mechanical systems on client platforms, ensuring compliance with specifications across 10+ deployments.
- Conducted system-level validation including vibration and salt spray testing in accordance with MIL STDs ensuring product durability and reliability under field operating conditions.
- Coordinated cross-functional collaboration with QC, production, procurement, and suppliers to resolve non-conformities and ensure manufactured systems consistently met design intent and performance standards.

2021/01 – present
Karachi, Pakistan

Freelancer - Mechanical Design, *Self Employed*

- Over 100+ successful projects in Product Design, 3D Printing, DFM, Technical Drawings featuring GD&T, and Layout Plan Design.
- Consistently delivered innovative solutions while maintaining an average client satisfaction rating of 95%.
- Reverse-engineered various industrial parts.

2019/08 – 2020/08
Karachi, Pakistan

Trainee Senior Managment, *National Refinery Limited*

- Managed predictive, preventive, and breakdown maintenance for a wide range of industrial equipment, resulting in a 15% increase in equipment efficiency and a 10% reduction in maintenance costs.
- Conducted root-cause analyses for seal and bearing failures in centrifugal pumps, reducing unplanned downtime by 20%, and leading to substantial savings in production losses and maintenance expenses.

2019/04 – 2019/08
Karachi, Pakistan

Mechanical Design Engineer, *Petrochemical Engineering Consultants*

- Performed stress analysis for over 3 plant pipeline designs using CAESAR-II.
- Designed and validated pressure vessels in adherence to ASME BPVC-VIII-1 codes, resulting in a 20% reduction in material costs and a 15% improvement in structural efficiency.

Projects

1. CFD Analysis of flow separation mitigation technique on NACA 0012 | FYP

2. DFM for traffic monitoring radar cabinet | Freelance

3. Kinematic study of different cases of prosthetic knees | Freelance

4. Conceptual design of a UUV | Freelance

5. Conceptual and DFM design of a manned VTOL drone for urban mobility | Freelance

Education

2014 – 2018
Karachi, Pakistan

B.E. Mechanical Engineering | CGPA 3.797, *NED UET*
Major: Thermodynamics, Solid Mechanics, Fluid Mechanics, Computer-Aided Desing (CAD), Clean Energy Technology, Mechanical Vibration, Stress Analysis, Materials

Certifications

CSWA-Mechanical Design
Dassault Systèmes | ID: C-3GZFP5RWVC

CSWA-Additive Manufacturing
Dassault Systèmes | ID: C-UZGW3PSKH4

CSWA-Simulation
Dassault Systèmes | ID: C-FLQ7Z6DPHR

ANSYS Advanced Simulation
MEEKAT/ANSYS/2023/00463

AUTOCAD Mechanical 2D & 3D
Technomen | ID: 0015011

Courses

Foundations of Project Management, *Google | Coursera*

Design for Additive Manufacturing, *Arizona State University | Coursera*

Skills

DFM / DFA | Additive Manufacturing (FDA/SLS) | Reverse Engineering | SolidWorks | ANSYS | AutoCAD | Autodesk Inventor | Seimens NX | 3D Printing | Keyshot | PTC CREO

Languages

Urdu — Native | **English —** Level C1 | **German —** Level A2