Asadullah Khan, MIET

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Eligible to work in the UK under Graduate Route (Post-Study Work) Visa – valid until Feb 2027

Professional summary

Mechanical Design Engineer with experience in 3D CAD modeling, product development, and design optimization. Proficient in SolidWorks, AutoCAD, Creo, and ANSYS for developing cost-effective, manufacturable designs. Skilled in DFM/DFA, tolerance analysis, and PLM-based documentation across concept, simulation, and production stages.

Experience

CAD Design Engineer (Intern), Joyvié Health Ltd – United Kingdom Mar 2024 – Sep 2024

- Designed and developed a consumer product prototype using **SolidWorks** with advanced **parametric and surface modeling** techniques.
- Applied **DFM/DFA principles** and **tolerance stack-up analysis** to improve manufacturability and reduce design cycle time by 30%.
- Created detailed **engineering drawings** with **GD&T** and BOMs in compliance with **BS 8888** standards.
- Produced **3D printed (FDM/SLA) prototypes** and **photorealistic renderings** for design validation and client presentations.

Product Design Engineer, Ismo Biophotonics – Chennai, India Jan 2022 – Aug 2023

- Engineered **opto-mechanical subsystems** and precision components for live-cell imaging and optical instrumentation.
- Developed 3D CAD models, assemblies, and detailed drawings using **SolidWorks** and **AutoCAD** with adherence to **GD&T** and **BS 8888** standards.
- Performed **FEA simulations (ANSYS Mechanical)** to evaluate component stresses, modal behavior, and design reliability.
- Implemented **DFM**, **DFMA**, and **Lean manufacturing** techniques to enhance manufacturability, reduce rework, and control production cost.
- Coordinated with vendors for **CNC machining, sheet metal, and injection-molded components**, ensuring tolerance and finish accuracy.
- Managed design documentation, **Engineering Change Orders (ECO)**, and **BOM revisions** through PLM systems.
- Collaborated with cross-functional R&D and production teams through **Agile workflows (Jira)** and maintained design data using **PLM/PDM tools (Teamcenter)**.
- Supported prototype assembly, testing, and validation activities to ensure mechanical robustness and performance consistency.

Education

MSc Computational Engineering Design – University of Southampton, UK
Focus: CFD (ANSYS), FEA, Design Optimization, Numerical Methods *Tools:* Python (NumPy, Pandas), MATLAB, C, Excel (Advanced)

B.E. Mechanical Engineering – Anna University, India
Graduated with First Class Honours

Projects

Paper-Based Microfluidic Glucose Sensor – Designed a low-cost biosensor (95% accuracy) with microfluidic and optical housing. *Tools: MATLAB, Microfluidics, Optics, App Development*

2-Axis Linear Stage for Live-Cell Imaging – Built a CoreXY precision motion system (20 μm accuracy) integrating STM32 and GRBL firmware. *Tools: SolidWorks, FEA, CNC, Firmware Integration*

Autonomous Drone for Crop Density Evaluation – Developed a lightweight UAV using RGB imaging and embedded systems for precision agriculture. *Tools: MATLAB, Embedded Systems, Image Processing*

Certifications

Dassault Systèmes Certified SolidWorks User (CSWA) – Certification ID: C-FM53QVJNH8

Lean Six Sigma (Green Belt) – In progress via Coursera; focused on process improvement and design optimization

Member – Institution of Engineering and Technology (MIET) – Approved professional membership with IET, UK

Secretary – SAE India Chapter (Anna University) – Led technical workshops and coordinated student–industry collaborations