

Roshan Mohan

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Design Engineer with experience in designing and shipping physical products in high-stakes environments.
Industry experience in leadership roles working in the intersection of battery design and mechanical engineering.

EXPERIENCE

Lead Mechanical Design Engineer

Apr 2019 - Jun 2023

Nunam

Bangalore, India

A technology company backed by Audi, pioneering advancements in lithium-ion battery energy storage.

- Led a cross-functional team to deliver the mechanical design, analysis, and production of three lithium-ion battery products for clients including Audi AG and TATA Motors.
- Managed mechanical design from concept to production, including solid modeling, failure analysis and testing to ensure high reliability.
- Conducted DFM reviews to optimize sheet metal, injection molding, and machined components for high-volume manufacturing, reducing production costs by 75%.
- Designed and tested enclosures and harness for vehicle onboard battery health monitoring hardware.
- Designed mechanical subsystems meeting UL and AIS safety standards for shock and thermal performance.
- Worked closely with suppliers and manufacturing teams in Asia, coordinating timelines and quality control, ensuring superior performance while minimizing costs.

Mechanical Design Engineer

Oct 2017 - Apr 2019

Biodesign Innovation Labs

Bangalore, India

A med-tech startup supported by the Government of India.

- Spearheaded the mechanical design of Respiraid, a Class 3 critical care medical device, now in use in 500+ ICUs.
- Led design reviews to ensure reliability, ensuring adherence to rigorous safety standards.
- Co-authored the patent for Respiraid's electro-mechanical drive design (USPO No. 20200261672).
- Developed a cost-effective CPAP breathing circuit specifically for pediatric pneumonia treatment, used in a controlled clinical study of 50 patients.

Design Engineer

Feb 2017 - Oct 2017

Nunam

Bangalore, India

- Designed and prototyped a 500Wh solar-powered battery for off-grid use based on extensive field research in Eastern India.
- Managed the development cycle, including design validation and testing for field deployment.

EDUCATION

University of California Berkeley, College of Engineering

Berkeley, California

Master of Design in Engineering

Expected Graduation: Dec 2024

- GPA 3.83
- Masters Thesis: Rapid Volumetric 3D Printing for Sustainable Consumer Electronics
- Graduate Student Instructor for the Department of Nuclear Engineering (ENGIN 125)

Mahatma Gandhi University

Kerala, India

Bachelor of Mechanical Engineering

Graduation Date: May 2016

- Outstanding Performance Award, 2016

SKILLS

3D Design- SolidWorks, Fusion 360, CATIA, NX.

Drafting- ASME Y14.5M, Geometric Dimensioning and Tolerancing, AutoCAD.

Analysis- Ansys, SolidWorks Simulation, DFM, DFMEA.

Prototyping- 3D Printing, Silicone Casting, Laser Cutting,

Programming & Embedded Systems- Arduino, Raspberry Pi, Basics of Python & C++.

Manufacturing- CNC Machining, Sheet-metal, Milling, Water-jet cutting, Carpentry, Metalworking, Injection Molding- Soft and Hard Tooling, Casting.