

Mahesh S

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WORK EXPERIENCE

MICROSOFT - XBOX, WEARABLES AND SURFACE

Product Design Engineer - industrial Design

SEATTLE, WA

01/2024 - PRESENT

- Developed industrial design concepts and prototypes into production-ready Class-A CAD surfaces for high-volume consumer hardware, balancing aesthetic intent, and manufacturing constraints.
- Led early-stage design development for wearables and Xbox peripherals, applying advanced 3D surfacing, ergonomic studies, and product design principles to translate design goals into manufacturable concepts.
- Collaborated with engineering, prototyping, and manufacturing teams to develop plastic and metal part designs, evaluate materials, and resolve DFM/DFA challenges while maintaining industrial design intent.
- Led the transition of 4+ hardware projects from prototype to mass production over 24 months, partnering with overseas manufacturers and using Creo, Autodesk Alias, and FEA to achieve a 20% reduction in ramp-up defects and a 15% acceleration in launch schedules.
- Applied computational design and parametric modeling workflows using Dynamo to rapidly explore design variations, optimize complex geometries, and generate manufacturable concepts

SHIFT ROBOTICS Inc.

Design Intern

PITTSBURGH, PA

06/2023 - 08/2023

- Redesigned product components and simplified assembly architecture by consolidating parts into a two-part structure, achieving a 40% reduction in production costs.
- Contributed to next-generation wearable product development through ergonomic studies, material selection, and DFM/DFA analysis to reduce wearer fatigue and improve ease of donning and doffing.
- Collaborated with mechanical engineering and prototyping teams to validate design changes through tolerance analysis, iterative prototyping, and supplier feedback.

AUTOMOTIVE DESIGN EXPERIENCE

Hero Moto Corp | Suzuki India Ltd | Adroit Designo Ltd

Alias Modeler /Digital Sculptor

GURGAON, INDIA

07/2018 - 05/2022

- Developed high-precision 3D CAD models and Class-A surfaces for instrument panels, electronic components, and mechanical assemblies, integrating aesthetic requirements with engineering and manufacturing constraints.
- Applied Autodesk Alias, DFM/DFA, statistical tolerance analysis, and FEA to optimize geometry, manufacturability, assembly integration, and product quality for high-volume production.
- Collaborated with contract manufacturers to integrate displays, sensors, acoustics, batteries, and antennas into mechanical enclosures while maintaining ergonomic requirements and high-cosmetic surface quality.
- Delivered end-to-end design solutions for automotive and mobility programs, from ideation and prototyping through Class-A production models, incorporating ergonomics and thermal-management considerations.

EDUCATION

CARNEGIE MELLON UNIVERSITY

Master of Integrated Innovation for Products & Services- Advanced study

Coursework:- Integrated Product Development, Electromechanical system design

PITTSBURGH, PA

12/2023

MAHATMA GANDHI UNIVERSITY

Bachelors in Mechanical Engineering

KOTTAYAM, INDIA

05/2017

SKILLS & INTERESTS

CAD & SURFACING: Autodesk Alias, Siemens NX (UG NX), PTC Creo, Autodesk VRED

PRODUCT DESIGN: Class-A Surfacing, 3D CAD Modeling, Industrial Design Development, Design Intent Capture, Ergonomics, Product Visualization

MANUFACTURING & ENGINEERING: DFM/DFA, Plastic & Metal Part Design, Material Selection, Tolerance Analysis, FEA, Prototype Development, Manufacturing Integration

COMPUTATIONAL DESIGN: Dynamo, Parametric Modeling, Design Automation