

Harshal Kulkarni

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Summary

Results-driven engineer excels in design optimization and management, showcasing expertise in innovative, manufacturing-oriented design.

Education

Master of Science in Interdisciplinary Engineering (Focusing Mechanical Engineering)

Trier University of Applied Sciences

Mar 2023 - Present

Trier, Germany

Bachelor of Engineering in Mechanical Engineering

Savitribai Phule Pune University

Jul 2015 - May 2020

Pune, India

Technical Skills

Software - SOLIDWORKS, CATIA, ANSYS, HYPERMESH

Languages - Python, MATLAB, Simulink

Version Control - 3D Experience

Experiences

Product Development Engineer

Jan 2022 - Mar 2023

Ikran Aerospace and Technologies Pvt Ltd

Pune, India

- Optimized **design and R&D** budget to improve resource allocation, contributing to enhanced company profitability and operational efficiency.
- Led end-to-end new **product development** for drones, streamlining processes from design to production, resulting in notable gains.
- Revitalized design concepts using CAD and MATLAB/Simulink, leading to a 20% increase in on-time product delivery and heightened client satisfaction, aligning with company goals.
- Managed successful production of a hexacopter and **prototyped** a vertical take-off landing aircraft with SolidWorks, ANSYS, and SIMULIA, diversifying the company's product portfolio and positively impacting profitability.

Design Engineer

Sep 2020 - Dec 2021

Om Metals and Engineers

Pune, India

- Revamped and modernized existing machinery, leading to a significant boost in **production efficiency**.
- Effectively managed and delivered turn-key projects, showcasing adept project execution skills that played a vital role in the overall success of the company.
- Collaborated closely with the manufacturing team, addressing their challenges and gaining valuable insights into the **practical aspects of design** from a manufacturing standpoint. This collaborative effort not only improved team dynamics but also played a crucial role in refining designs for enhanced manufacturability.

Working Student

Dec 2017 - Aug 2020

Confio Engineering Solutions Pvt Ltd

Pune, India

- Innovated machine tooling, fixtures, and prototypes, optimizing manufacturing processes for increased efficiency.
- Executed diverse machining tasks, **enhancing productivity** in both basic and complex production setups.
- Pioneered the development of Special Purpose Machines (SPM), **streamlining operations** for specialized manufacturing solutions.
- Led client specifications gathering, aligning manufacturing considerations, and optimizing techniques.
- Engineered car parts for events like M-BAJA, SUPRA, EFFICYCLE, GOKART, ensuring compliance with industry standards and enhancing product performance through versatility and **problem-solving**.

Projects

Designing and Manufacturing of **Rear Suspension** of Vehicle of Team ProTron

Germany, Aug 2023 - Present

Conceptual design of **Wheelbase Extension** Mechanism of MP3 Scooter

Germany, Apr 2023 - Oct 2023

Development of **Vertical Takeoff and Landing UAV**

India, Jul 2019 - Feb 2020

Development of **Onion Farming Vehicle**

India, Sep 2018 - Mar 2019

Development of BAJA Buggy for **SAE India** competition

India, Apr 2017 - Feb 2018

Extracurricular activities

- **Performer in Ramanbaug Yuva Manch EV** (Dhol-Tasha-Dhwaj Pathak, cultural representative organisation)
- Enthusiastic follower of **Formula One**