Bhargav Sanchania

bhargav.sanchania@karsindesign.com Oldenburg, Lower Saxony

Driving license: Class B Willing to relocate

PROFILE

Mechanical Engineer (M.Sc.) with 3+ years of experience driving the development of mechanical components and assemblies from requirement specification through concept design to manufacturing release. Proven track record in mechanical design, FEM-based validation, and product optimization across packaging machinery, gripping systems, lightweight structures, and industrial equipment. Combines hands-on design expertise with advanced simulation capabilities, enabling independent verification and optimization of designs without reliance on dedicated analysis teams. Experienced in contributing to lead design responsibilities across the full product development cycle, collaborating with manufacturing and cross-functional stakeholders to deliver robust, manufacturable, and cost-efficient solutions.

WORK EXPERIENCE

Mechanical Design Engineer in Packaging Tools & Systems, 11.2025 – 04.2026
Sealpac GmbH | Oldenburg, Lower Saxony

- Owned the complete mechanical development of packaging machine assemblies, from requirement specification through detailed design and manufacturing release using 2D and 3D-**Autodesk Inventor**
- Delivered design solutions that improved functionality, manufacturability, and cost estimation through systematic application of Design for Manufacturing (DfM)
- Independently validated assembly designs using FEM analyses, accelerating development cycles
- Managed engineering documentation, manufacturing drawings, BOMs, and release processes within Autodesk Vault, ensuring design quality and traceability
- Defined requirement specifications, coordinated supplier communication, and managed engineering change releases

Simulation Engineer in Research and Development (Master's Thesis), 03.2024 – 03.2025
Schunk SE & Co. KG | Brackenheim, BW

- Led structural FEM investigations for gripping systems, providing critical insights into component strength, durability, and service life
- **Master thesis:** Developed a Python-based automation framework for FE modeling of bolted joints and VDI 2230 strength verification within ANSYS Mechanical
- Reduced engineering effort for bolted-joint analysis by approximately **65%**, significantly accelerating simulation workflows and improving repeatability
- Conducted parametric design studies for precision mechanics and optimization projects that enhanced component performance while balancing manufacturability and structural requirements
- Consulted design department with simulation insights for better structural design decisions

Design & Development Engineer - CAD & Structural Optimization (Working Student), *AZL-Aachen GmbH | Aachen-NRW* 10.2023 – 01.2024

- Developed parametric CAD models for advanced lightweight battery housing concepts and structural components using SolidWorks
- Contributed to weight reduction and structural optimization initiatives of enclosures through FEM-based evaluation and iterative design improvements in ABAQUS
- Maintained high-quality engineering documentation & drawings for development projects

Mechanical Designer in Hygienic Mechanical Systems (Working Student), *Kubota Brabender Technologie GmbH | Duisburg-NRW* 10.2021 – 09.2023

- Designed mechanical systems and customer-specific special components in Autodesk Inventor, from concept development to manufacturing release
- Delivered and maintained manufacturing drawings with GD&T, order-specific bills of materials, and standard parts lists in the ERP system
- Developed Prototypes with 3D printing, deployed into implementation, and optimized existing designs in close collaboration with manufacturing and assembly
- Adaptation of existing designs to customer requirements, considering manufacturability and cost
- Continuously coordinated with suppliers regarding standard purchased parts and specific out sourced parts

Mechanical Design Engineer in Machine Tool Engineering, 07.2017 – 09.2018

Vekaria Engineering Works Private Limited | Jamnagar, India

- Designed complex parts and assemblies for automatic milling machines in PTC Creo, considering manufacturability and cost efficiency
- Created manufacturing drawings, bills of materials, and ISO-compliant documentation with version control
- Implemented design changes per customer specifications in coordination with manufacturing

CORE COMPETENCIES

Design & Development

Mechanical design & assembly development, Design for Manufacturing (DfM), Detailed design & drawing creation 2D/3D CAD, Prototype development & commissioning, Additive manufacturing (3D printing), Component optimization & variant development, Precision mechanics, DG&T & tolerance analysis, Product Data Management (PDM/PLM)

FEA & Simulation

FEM structural analysis (strength & service life), Verification and validation (V&V), FE modeling & meshing, Topology optimization (Altair OptiStruct), Magnetic field analysis (ANSYS Maxwell)

SKILLS

3D CAD Software

Autodesk Inventor, SolidWorks, PTC Creo, CATIA V5, Siemens NX

Other Tools

MS Office, Autodesk Vault (PDM), PTC Windchill (PLM), APplus (ERP), Cura (3D printing)

FEA Software

ANSYS Mechanical, ABAQUS

Programming Languages

Python, MATLAB

EDUCATION

M.Sc. Computational Mechanics (GPA: 2.0), 10.2020 – 03.2025 | Essen

University of Duisburg-Essen

- Finite Element Method (FEM)
- Structural mechanics

B.Tech Mechanical Engineering (GPA: 2.0), *Lovely Professional University* 08.2014 – 05.2017 | India

- Manufacturing technology
- Computer-Aided Design (CAD)

CERTIFICATES

- **Project Management Foundation:** PMI
- **CATIA V5 Full training:** CETPA Infotech

LANGUAGES

- English (Fluent)
- German (Proficient - continuously improving)