

# Sayed Zishan Ali

Mechanical Design Engineer

Immediate availability | Fluent in English & German

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## Profile Summary

Mechanical Design Engineer with 4 years of international experience in designing and optimizing precision mechanical systems. Proficient in 3D CAD (AutoCAD, SolidWorks, CATIA V5, Autodesk Inventor) with strong expertise in GD&T, tolerance analysis, design-for-manufacturing and bills of materials. Experienced in FEA analyses (ANSYS) and product lifecycle management. Experienced in technical coordination with interdisciplinary teams, suppliers, and customers. Goal-oriented, precise, and motivated to implement innovative solutions in a future-oriented company.

## Technical Skills

Catia V5 | SolidWorks | AutoCAD | MATLAB | Autodesk Inventor | Excel | Data Visualization | Creo | Windchill | ERP System | Vault | Ansys | Hypermesh | SQL | 3D modeling | 2D modeling | GD&T | Python

## Soft Skills

Customer service | Requirements analysis | Strong Communication | Teamwork | Analytical thinking | Problem solving | Time management | Attention to detail | Adaptability | Mentoring | Quick learner | Creative

## Experience

Astley Signs

Jan.2023-Apr.2024

### Mechanical Design Engineer

United Kingdom

- Led the development and design of complex mechanical and sheet-metal assemblies using AutoCAD, SolidWorks and Autodesk Inventor, applying advanced GD&T and FEM principles, resulting in a 15% reduction in manufacturing errors.
- Performed finite element analyses (ANSYS) to assess stress, deformation, and modal behavior, achieving a 20% increase in component strength and 10% material savings.
- Created and validated complete technical documentation (3D models, 2D drawings, BOMs, tolerance analyses), improving drawing quality by 25% and reducing revision loops by 25%.
- Supported the entire product lifecycle from concept to series production, accelerating time-to-market by 10% through effective cross-functional coordination.
- Collaborated closely with production, quality assurance, and suppliers, improving first-time-right supplier quality by 18%.
- Enhanced process efficiency by introducing and integrating ERP (M1) and PLM (SAP) systems, accelerating documentation and change workflows by 30%.

### CAD ACADEMY

Jul.2018 – Nov.2020

### CAD-Engineer

Bhilai, India

- Design and optimization of over 100 mechanical components using SolidWorks, CATIA V5, and Creo; increased design accuracy by 25%.
- Creation of ISO-compliant 2D drawings, bills of materials, and tolerance chain analyses according to international GD&T standards.
- Conducted CFD analyses (Star-CCM+) for aerodynamic validation and FEA analyses (ANSYS) for structural evaluation of components.
- Development of plastic and sheet metal assemblies, taking into account material properties and manufacturing requirements.
- Management of product and design data in Windchill PLM and Autodesk Vault.

### Accenture

Jun.2017-Jul.2018

### Data Analyst

Pune, India

- Optimized ERP-based processes, improving data accuracy and workflow efficiency by 25%.
- Implemented automated testing solutions, achieving a 70% reduction in manual efforts and faster validation cycles.
- Performed advanced data analysis using SQL and Tableau, delivering actionable insights that supported key business decisions.
- Collaborated with international cross-functional teams, enhancing stakeholder communication and accelerating issue resolution.

## Education

Coventry University,

United Kingdom, 2021-2022

Master's in Automotive Engineering

Chhatrapati Swami Vivekanand Technical University

India,

2013-2017

## Language Course

Deutschkurs B2,

German Institute, Stuttgart

## Projects

### Wind Turbine Gearbox Design | Duration: 3 months

- Modeled a three-stage gearbox in CATIA V5 and finalized designs using Autodesk Fusion 360.
- Identified potential failures and proposed engineering solutions to enhance system robustness.
- Performed torque and stress analysis using ANSYS to evaluate gearbox performance and structural integrity.

### Hatchback Car Rear Wing Design | Duration: 3 months

- Engineered the rear wing using Star CCM+ for aerodynamic simulations.
- Analyzed aerodynamic properties by studying forces, moments, and pressure distributions under varying yaw angles.
- Optimized the wing design to improve performance while maintaining structural efficiency.

### Racing Bicycle Frame Design | Duration: 3 months

- Modeled a high-performance racing bicycle frame in CATIA V5.
- Conducted numerical FEA using MATLAB scripts and performed mesh convergence studies in Hypermesh.
- Applied topology optimization to enhance frame strength and reduce weight.

## Languages

Fluent in English and German.

## Certificates

- Professional AutoCAD.
- ANSYS 14.0 Advance.
- Professional CREO.
- Certificate in Strategic Management and Leadership.
- MATLAB Simulink.

## Additional information

- Fully authorized to work in Germany; No visa sponsorship required.
- Actively learning German to integrate into the German workspace culture.

## Hobbies

- Painting, Chess, Sketching.

Date : 15.Jan.2026

