

# Ramakrishna Tikka



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## Profile

Mechanical engineer pursuing a Master's in Mechatronics and Robotics, skilled in CATIA, ANSYS, and SolidWorks. Experienced in automotive design, CAE, and process automation. Multilingual, with hands-on exposure to manufacturing, 3D printing, and cross-functional teamwork. Eager to innovate.

## Education

10/2024 – present  
Schmalkalden, Germany

### **Mechatronics and Robotics | Master Hochschule Schmalkalden**

Currently pursuing a Master of Engineering in Mechatronics and Robotics at Hochschule Schmalkalden, Germany, gaining specialized knowledge in automation control with Siemens TIA and ROS using Linux, Python, and C++. Building on mechanical engineering background to develop integrated solutions for advanced manufacturing and robotics applications.

08/2017 – 07/2021  
Visakhapatnam, India

### **Mechanical Engineering | Bachelor Anil Neerukonda Institute of Technology and Sciences**

Completed a Bachelor of Technology in Mechanical Engineering at ANITS with an 8.09 CGPA, building a strong foundation in core engineering principles. Gained hands-on experience in advanced CAD and simulation tools. Developed practical skills through industry-oriented projects and internships, including mechanical design, 3D modeling, and manufacturing processes, preparing for advanced studies and engineering roles.

## Work Experience

10/2021 – 06/2023  
Hyderabad, India

### **Assitant system Engineer Tata Consultancy Services**

- Designed and developed mechanical components and assemblies using CATIA, focusing on high-precision 3D modeling and 2D drawing creation for automotive applications, ensuring compliance with cross-functional team (CFT) requirements.
- Led the design and optimization of seat mounting structures and upper body components for vehicle safety systems, including curtain airbag integration and rear passenger seat anchorage, directly contributing to enhanced occupant safety and system reliability.
- Conducted CAE analyses to validate and optimize designs, iteratively improving product performance and meeting stringent automotive standards.
- Utilized macro programming in CATIA V5 to automate repetitive design processes, increasing efficiency and reducing design cycle times.
- Coordinated benchmarking studies for vehicle safety feature implementation (e.g., 6-airbag systems, 3-point seatbelts), systematically analyzing data to identify opportunities for design improvements.
- Managed projects from concept through completion, collaborating with cross-functional teams to ensure timely delivery and clear communication of technical information to both technical and non-technical stakeholders.
- Identified and addressed process bottlenecks by modifying existing designs and proposing innovative solutions, contributing to continuous improvement initiatives.

## Work Experience

07/2020 – 02/2025  
Visakhapatnam, India

### Intern Hanuman Engineering Works

- Diagnosed mechanical issues in industrial machinery and developed detailed technical reports to guide maintenance and process improvement.
- Created 3D models from 2D projections using CATIA V5R23, supporting the manufacturing of parts via CNC machining and 3D printing.
- Participated in the end-to-end product development lifecycle, from design to manufacturing, ensuring product quality and adherence to specifications.

## Projects

01/2025 – present  
Schmalkalden, Germany

### Team Member Pen Plotter

As part of my ongoing studies at Hochschule Schmalkalden, I am currently working on a pen plotter project that integrates mechanical design, rapid prototyping, and programming. The project began with the conceptualization and detailed modeling of the pen plotter using SolidWorks, where we designed all key mechanical components to ensure precision and ease of assembly. These components were then fabricated using 3D printing technology, allowing for quick prototyping and iterative testing of the design. At present, I am in the process of developing the control code that will enable the automated movement and plotting functions of the device. This project not only demonstrates my proficiency in CAD modeling and additive manufacturing but also reflects my ability to manage a multidisciplinary engineering task from initial concept through to functional realization.

## Skills

### – TECHNICALSKILLS

CATIA	Solidworks	ANSYS	SQL
Python	MATLAB	Linux	C++
ROS	Git Hub	ERP systems	Motosim

### – LANGUAGES

English (C2)	German (B1)	Hindi (C2)	Telugu (C2)
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## Achievements

- Part of the Schmalldiwalli team responsible for organizing the Diwali event at the university, contributing to event planning and execution.
- Member of the technical team, coordinating technical aspects and ensuring smooth operation during the event.
- Participated in an industrial visit to CATL in Arnstadt, gaining insights into the manufacturing process of electric vehicle battery cells, including their packaging and assembly as complete units.