ANMOL VERMA

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B.Tech Mechanical Engineering student | Core design and Structural analysis | Smart systems

CAREER OBJECTIVE

Mechanical Engineering student with hands-on experience in Mechanical design, CAD and CAE, 3D parts, assembly and surface modeling, basic structural analysis, and integrated hardware–software projects involving sensors, automation, and data dashboards, and IoT-based system integration. Seeking core engineering, mechanical designer, or trainee roles.

TECHNICAL SKILLS

CAD and CAE

- **AutoCAD**: 2D drafting, detailing and layouts
- **SolidWorks**: 3D part design, assemblies and surface modeling
- **ANSYS**: Basic structural analysis (stress, strain, deformation) and Meshing
- Understanding of Boundary Conditions, Loading, Supports and simulation result interpretation

IoT, Embedded and Automation

- Sensor interfacing and actuator control using Arduino and ESP32 for real-time monitoring and automation
- Real-time data acquisition and transmission using MQTT/HTTP concepts for IoT-based applications
- Development of basic monitoring dashboards using Firebase Realtime Database and Qt Designer

Software and Tools

- Python (basic to intermediate), Firebase (Realtime database), Qt Designer (dashboard UI)
- Arduino IDE, Tinkercad, Blynk
- AutoCAD, SolidWorks, ANSYS, Fusion 360

PROJECTS

Three-cylinder Radial Steam Engine (3D Assembly){Link}

Tools: **SolidWorks**

- Modelled individual components including cylinder, crank, piston, etc. with accurate dimensions.
- Created a constraint-based 3D assembly to study mechanism motion and part interaction.

Multi-use Cart (Patent Pending) {Link}

Tools: **SolidWorks / AutoCAD**

- Designed a complete mechanical draft addressing usability and load handling requirements.
- Developed component-level models and full assembly, ensuring fit, alignment, and functionality.

IoT-Based Real-Time Baby Monitoring System {Link}

Tech Stack: **ESP32 / Sensors / Cloud / Dashboard**

- Designed a real-time monitoring system integrating sensors with ESP32 for data acquisition.
- Implemented data flow and control logic for condition monitoring and system response.

Local Server Implementation on ESP32 {Link}

Tech Stack: **ESP32 / Embedded C / Networking Concepts**

- Implemented a local server on ESP32 for real-time data acquisition and system communication.
- Designed basic chat room and attendance system for uses in any organizations.

EDUCATION

Bachelor of Technology – *Mechanical Engineering*		Nov 2023 – Present
Rajkiya Engineering College, Banda		
Senior Secondary Education (Class XII)	78.00%	2021 – 2022
Secondary Education (Class X)	85.67%	20219 – 2020

WORK EXPERIENCE

Mechanical Design Intern (AutoCAD) – Academy of Skill Development {Link} 1 Sep 2025 - 30 Oct 2025

- Executed **2D CAD drafting** and detailing of residential floor plans using **AutoCAD**.
- Produced dimensioned layout drawings following basic drafting standards and documentation practices.
- Improved proficiency in design interpretation, drawing accuracy, and CAD workflow management.

WORKSHOPS AND ACHIEVEMENTS

- **Attended** and **conducted** various workshops and training sessions on a wide range of domains as **volunteer** and **coordinator** over the span of **2.5 years** in IoTVerse Club and MDAC, REC Banda
- Project Exhibition **Winner**(Team Leader) in **TECHNIKA'25** conducted by HBTU Kanpur
- SolidWorks Design Challenge **Winner** in **CAD Challenge 2.0** conducted by Mechanical Design & Analysis Club
- SimulaThon **Winner** in **RoboMania'24** conducted by IoTVerse Club
- IoT Innovation Challenge **Runner-Up** in **Hackfest'23** conducted by SDC & IoTVerse Club
- AutoCAD Design Challenge **Winner** in **CAD Challenge 1.0** conducted by Mechanical Design & Analysis Club