

EDUCATION

B-Tech, Mechanical Engineering MIT Academy of Engineering CGPA- 8.01/10	2023-Present
10th SSC Percentage – 94.80% LTT English Medium School Khed, Ratnagiri	2010- 2020
12th CBSE Rotary English Medium School Khed, Ratnagiri	2020- 2022

Projects

- Low-Cost Optimized Myoelectric Prosthesis using EMG Sensors with Raspberry Pi & ROS Integration**
Designed and built a gesture-controlled prosthetic hand using surface EMG sensors, Raspberry Pi for signal processing, and ROS for motor control.
- Bi-Directional Digital Twin of a SCARA Robot (Ongoing)**
Building a real-time digital twin in Gazebo (ROS) to mirror physical SCARA robot kinematics and dynamics. Implementing bidirectional data flow for calibration, predictive maintenance, and performance optimization. Integrating ESP32-based sensor telemetry and Python-based visual feedback loop for error correction
- Improved Cold Storage System for Onion to Minimize Storage Losses**
Designed an improved storage structure with enhanced ventilation crate system. Analyzed environmental parameters (temp, humidity, airflow) in onion storage chambers and redesigned ventilation system using Arduino-based sensors. Analyzed and validated the model using Ansys Workbench

TECHNICAL LEADERSHIP & COMPETITION EXPERIENCE

Captain Team Ashwamedh Micro Category SAE DDC 2025-26 <i>Aero Club MITAOE</i>	2026
<ul style="list-style-type: none">Achieved Overall AIR Rank 1 as part of a 10-member team designing and building an lightweight (<1.5 kg) aircraft for SAE DDC Micro Class. Spearheaded aerodynamic efficiency improvements by integrating vortex generators, supported by CFD simulations (ANSYS Fluent).Managed budget allocation, sponsor outreach, and coordination across structures, propulsion, and avionics sub-teams.	
Vice-Captain Team Ashwamedh Micro Category SAE DDC 2024-25 <i>Aero Club MITAOE</i>	2025
<ul style="list-style-type: none">Oversaw the design and fabrication of a 2 motor configuration VTOL-capable micro aircraft with gear-motor pods for vertical lift and horizontal cruise. Focused on maximizing payload-to-empty-weight ratio, the key competition metric.Mentored 8 junior members in Fusion 360, composite layup, and flight testing procedures.	
Airframe Lead Team Blitzkrieg Regular Category SAE DDC 2023-24 <i>Aero Club MITAOE</i>	2024
<ul style="list-style-type: none">Contributed to airframe design and CFD analysis for 4kg-class aircraft with 72-inch wingspan, optimized for precision payload drop missions.	

TECHNICAL SKILLS

- 3D Design – Fusion 360, AutoCAD, Catia (3D Experience), Cura
- Simulation & Analysis Software – Ansys, Simscale, XFLR5, ROS, Gazebo
- Programming Languages- C++, Python (Libraries: NumPy, Pandas, Matplotlib), MATLAB
- IoT & Embedded Systems: Arduino, ESP32, Raspberry Pi, MQTT
- Documentation Tools: MS Word, MS PowerPoint, Canva

SOFT SKILLS

- Languages-** English (Professional), Hindi (Professional), Marathi (Native),
- During my internship, I strengthened essential soft skills such as **effective communication, adaptability, and time management** in a dynamic, high-pressure environment. I collaborated with cross-functional teams to solve complex problems, consistently meeting deadlines and delivering results.

COURSES & CERTIFICATIONS

Ansys

The training consisted of Introduction to Finite Element Analysis (FEA), Understanding Concepts at Work & Installing Ansys, Introduction to Ansys Software, Static Structural Analysis, Thermal, & Buckling Analysis, Case Studies, and Final Project modules.

Personal Details

Gender- Female | **Date of Birth** – 31 March 2005 | **Emails** – neha992038@gmail.com