

Dhairya Prajapati

(+91) 7622879092 | Mail | LinkedIn | GitHub | Portfolio

Projects

1.) AgriDrone

[\(Github Link\)](#)

Developed a custom S550 hexacopter for agricultural monitoring using individually sourced components to gain hands-on experience in hardware integration, flight control, and sensing. Integrated a thermal camera with an onboard NVIDIA Jetson Orin Nano running ROS2 and MAVROS for autonomous control. Ongoing work includes incorporating Intel RealSense D435i and LiDAR for perception-driven navigation, with plans to validate algorithms in simulation and deploy a full ROS2 stack on real hardware.

2.) KrishiCobot

[\(Github Link\)](#)

Developed Krishi Cobot, an autonomous smart farm management system for the e-Yantra Robotics Competition at IIT Bombay, securing 3rd place in the Krishi Cobot theme. Integrated a UR5 robotic arm and eBot for tasks like fertilizer handling, crop inspection, and delivery using ROS2. Implemented multi-robot coordination with vision-based inspection and LiDAR navigation, validated in simulation and real hardware.

3.) RosRobo

[\(Github Link\)](#)

Developed a custom ROS2 package to bridge simulation and real hardware for mobile robotics. Implemented ESP32/Arduino interfaces for real-time control and built ROS2 nodes using a publisher-subscriber architecture. Tested workflows in Gazebo with seamless deployment to physical hardware, demonstrating end-to-end robotics development and rapid prototyping.

Experience

Project Trainee - UAV Modeling & Simulation

(16th August, 2025 - 16th September, 2025)

SkylineSpace

Completed a 4-week UAV design program covering flight dynamics, aerodynamics, stability, coordinate systems, and UAV configurations. Designed multiple UAV models using SolidWorks and ANSYS, including quadcopters, fixed-wing, and blended wing systems with NACA airfoil propellers. Developed an F450 quadcopter frame and performed FEA (stress-strain, thermal, factor of safety) and basic CFD simulations to evaluate structural integrity and aerodynamic performance, culminating in a full end-to-end UAV design project.

Achievements

- Finalist, **e-Yantra Robotics Competition (eYRC) 2025–26** (secured 3rd position in Krishi Cobot theme)
- Grand Finalist, **Smart India Hackathon (SIH) 2024**
- Global Nominee, **NASA Space Apps Challenge 2024** (top 10% of local events)
- **SSIP Project Grantee (3×)** for consecutive R&D projects

Technical Skills

- **Software & Languages:** C++, Python, Git, Linux, CMake, GDB, CAD, Blender, Visual Studio
- **Robotics & Simulators:** ROS2, Gazebo, MuJoCo, MAVROS, Ardupilot
- **Hardware & Embedded:** Jetson Orin Nano, ESP32, Arduino, Pixhawk, Thermal Camera, Intel RealSense D435i, Oak-d-lite

Certifications

- NVIDIA Deep Learning Institute: Getting Started on AI with Jetson Nano.
- Skyline Space: Professional Certification in Drones and UAV Technology.

Education

Sarvajanik College Of Engineering & Technology

(June 2023 – Present)

Bachelor of Technology in Computer Engineering | CGPA: 9.32 (Till 5th Sem)