

Nikhil Bhorkade

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👤 ABOUT ME

I am a Robotics & Automation Engineering student passionate about developing intelligent robotic systems. With hands-on experience in ROS2, SLAM, and autonomous navigation, I strive to integrate perception, control, and automation to solve real-world challenges.

🧠 TECHNICAL SKILLS

Robotics & Simulation

- ROS2, SLAM & Navigation, Gazebo, Rviz

Programming & AI

- Python, C++, OpenCV, Machine Learning, MATLAB

Design & CAD

- Fusion 360, SolidWorks, RoboAnalyzer

Hardware & Integration

- Embedded Systems, Control Systems, Sensor Integration, Hardware Prototyping, Pneumatics

📁 PROJECTS

1) DuoSanBot: An Intelligent Dual-Mode Sanitization Robot with Autonomous Navigation (Ongoing B.E Project)

Developing DuoSanBot, an autonomous dual-mode sanitization robot with ROS2-based navigation, ultrasonic sensors, and pump/UV-C disinfection.

2) Autonomous Mobile Robot (06/2025 – 07/2025)

Developed ROS2 nodes for differential drive navigation with autonomous path-following (20% error reduction) and validated in Gazebo & RViz.

3) Smart Vacuum Cleaner (05/2024 – 09/2024)

Engineered an IR-based obstacle detection system with autonomous cleaning algorithms (20% faster) and validated robustness across 10+ indoor environments.

🎓 EDUCATION

BE in Robotics and Automation Engineering (Pursuing), SPPU

7.86 | 2026

XII (HSC), S.S.G.M College, Kopergoan

66.50 | 2022

X (SSC), S.M.V Yeola

85.40 | 2020

📜 CERTIFICATIONS & TRAINING

- ROS2 Framework – Robotry
- Python Programming – Deutsche Bank CSR & Rubicon Foundation
- Pneumatic Controls – SMC Training Center, Pune