

Soham Patil

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EDUCATION

IIIT Hyderabad, Robotics Research Center <i>MS by Research, Computer Science</i> • CGPA: 10.0/10 Advisor: Dr. Spandan Roy	Jul 2024 – Present <i>Hyderabad, India</i>
MIT World Peace University (MIT-WPU) <i>B.Tech, Computer Science</i> • CGPA: 8.55/10	Jul 2019 – Jul 2023 <i>Pune, India</i>

PUBLICATIONS

NoContactNoWorries: Estimating Contact through Vision and Proprioception for In-Hand Dexterous Manipulation [website] S. Patil, A. Das, S. Bhosale, S. Roy	<i>IROS 2026</i>
AnyViewDex: View-Invariant Dexterous Manipulation from RGB Observations [website] [arXiv] S. Patil, O. S. Gunjal, S. Bhosale, A. Chavare, R. S. Hora, S. Roy	<i>preprint</i>
Aerograb: A Unified Framework for Aerial Grasping in Cluttered Environments [arXiv] S. P. Singh, N. S. Nair, S. Ujjawal, S. Mishra, S. Patil, R. D. Yadav, S. Roy	<i>IROS 2026</i>

EXPERIENCE

Google Summer of Code @ ros2-control [code] <i>Open-Source Contributor</i>	2025 <i>Remote</i>
Built hardware-diagnostics support for <i>ros2_control</i>: a standardized health/fault-reporting API, new ROS messages (HardwareStatus, HardwareDeviceStatus), a unified Actuator/Sensor/System interface, and default diagnostic nodes with CLI tooling. Mentors: Dr. Bence Magyar, Sai Kishor Kothakota.	
Robotics Research Center, IIIT Hyderabad <i>Research Intern</i>	Feb – Jul 2024 <i>Hyderabad, India</i>
Built an in-house collaborative robot arm and an end-to-end pipeline for testing custom controllers on hardware, supporting research on adaptive/robust control.	

TEACHING

Teaching Assistant , IIIT Hyderabad: Mobile Robotics (CS7.503), Planning & Navigation (EC4.403), Systems Thinking (EC5.202)	2024–present
Teaching Assistant (NPTEL), IIIT Hyderabad: Perception & Planning for Aerial Vehicles	2025
Instructor , RRC Robotics Summer School: ROS deployment (teleoperation, autonomous navigation)	2025

HONORS & AWARDS

DD Robocon , India's national stage of ABU Robocon (the Asia-Pacific university robotics championship)	2020–23
Winner (2020), representing India at the international final; ranked 2nd (2023) and 4th (2022) nationally among 150+ teams. - Led a team designing and building complete competition robots from scratch each season across mechanical design, custom electronics, firmware, motor control, and autonomy; built an in-house integrated actuator matching commercial specs at ~half the cost, a wheeled-odometry module (<4% error), and ROS 2 / Nav2 autonomy on register-level AVR/TM4C firmware.	
MATLAB Winners Circle : omni-drive robot modeling and control in MATLAB/Simulink	2020

TECHNICAL SKILLS

Programming	C, C++, Python
Machine Learning	PyTorch, NumPy, OpenCV, Isaac Lab, MuJoCo
Robotics	ROS 2, ros2_control, Nav2, MoveIt2, Gazebo, RViz
Embedded	STM32, TM4C, AVR MCUs and peripherals (CAN, PWM)
Tools & DevOps	Linux, Git, Docker, Ansible, GitHub Actions, CI/CD