

Rohit Menon

PhD Candidate in Robotics
University of Bonn, Humanoid Robots Lab

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[Google Scholar](#) | [ResearchGate](#) | [GitHub](#)

Education

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| Ph.D. in Computer Science (Ongoing) | 2022 – Present |
| <i>University of Bonn</i> | <i>Bonn, Germany</i> |
| <ul style="list-style-type: none">• Focus: Active Perception, Semantic Mapping, and Uncertainty-Aware AI for Agricultural Robotics.• Advisor: Prof. Dr. Maren Bennewitz, Humanoid Robots Lab. | |
| M.Sc. in Automation and Robotics | 2012 – 2015 |
| <i>TU Dortmund University</i> | <i>Dortmund, Germany</i> |
| <ul style="list-style-type: none">• Master's Thesis at DLR (German Aerospace Center) on Shared Autonomy for Assistive Robotics. | |
| B.E. in Electrical Engineering | 2004 – 2008 |
| <i>University of Mumbai (SPCE)</i> | <i>Mumbai, India</i> |
| <ul style="list-style-type: none">• Silver Medal for academic excellence in the Bachelor's Program. | |

Professional Experience

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| Research Associate | 2022 – Present |
| <i>Humanoid Robots Lab, University of Bonn</i> | <i>Bonn, Germany</i> |
| <ul style="list-style-type: none">• Leading research on autonomous fruit mapping and multi-arm manipulation in the PhenoRob Cluster of Excellence.• Developing evidential deep learning frameworks for uncertainty-aware semantic surface mapping. | |
| Founding Engineer & Group Lead (AI in Manipulation) | 2019 – 2022 |
| <i>NEURA Robotics</i> | <i>Metzingen, Germany</i> |
| <ul style="list-style-type: none">• Spearheaded the AI division focusing on industrial manipulation and human-robot engagement.• Developed deep-learning based pick-and-place systems and multi-sensor fusion for collision avoidance. | |
| Researcher (Robot Control) | 2015 – 2019 |
| <i>DFKI (Robotics Innovation Center)</i> | <i>Bremen, Germany</i> |
| <ul style="list-style-type: none">• Contributed to EU projects (Hybr-IT, TransFIT, NeTTUN) on mobile manipulation and trajectories.• Served as DFKI Project Coordinator for the EIT Digital project iLevator (2016). | |
| Senior Executive (Engineering & Commissioning) | 2008 – 2012 |
| <i>Siemens Ltd</i> | <i>Thane, India</i> |
| <ul style="list-style-type: none">• Led large-scale industrial automation projects, focusing on drive control schemes and commissioning of complex machinery.• Developed AC/DC drive control schemes, PLC programming, and HMI designs. | |
| Master Thesis Student | 2014 – 2015 |
| <i>DLR - German Aerospace Center</i> | <i>Wessling, Germany</i> |
| <ul style="list-style-type: none">• Developed shared autonomy interfaces for assistive robotic hands. | |

Teaching Experience

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| Humanoid Robotics | Summer 2025 |
| <i>University of Bonn</i> | <i>Bonn, Germany</i> |
| <ul style="list-style-type: none">• Redesigned core lectures on manipulation and perception.• Managed exercise design, conducting exams, and the grading process. | |
| Cognitive Robotics (Probabilistic Robotics) | Winter 2022 – 2024 |
| <i>University of Bonn</i> | <i>Bonn, Germany</i> |

- Acted as a stand-in lecturer for key sessions on probabilistic robotics.
- Lead TA: Designed course assignments and exams; managed grading and practical programming projects.

Honors & Awards

- **Best Poster Award**, IROS Workshop on Perception and Planning for Mobile Manipulation (2025).
- **Deutschlandstipendium**, Awarded by the German Federal Government (2013).
- **Silver Medal**, Bachelor in Electrical Engineering, SPCE, University of Mumbai (2008).
- **Ratan Tata Scholarship**, Awarded for excellence in engineering (2006 – 2008).

Selected Publications

- **Menon, R.**, Schmiede, Y., Bennewitz, M., Blum, H. “Open-Vocabulary and Semantic-Aware Reasoning for Search and Retrieval of Objects in Dynamic and Concealed Spaces.” *IROS Workshop on Perception and Planning for Mobile Manipulation*, 2025. (**Best Poster**)
- **Menon, R.**, Dengler, N., Pan, S., Chenchani, G.K., Bennewitz, M. “EvidMTL: Evidential Multi-Task Learning for Uncertainty-Aware Semantic Surface Mapping from Monocular RGB Images.” *IROS*, 2025.
- **Menon, R.**, Dengler, N., Bennewitz, M. “GO-VMP: Global Optimization for View Motion Planning in Fruit Mapping.” *IROS*, 2025.
- Lenz, C.*, **Menon, R.***, et al. “Hortibot: An Adaptive Multi-Arm System for Robotic Horticulture of Sweet Peppers.” *IROS*, 2024.
- Marangoz, S.*, **Menon, R.***, et al. “DawnIK: Decentralized Collision-Aware Inverse Kinematics Solver for Heterogeneous Multi-Arm Systems.” *IEEE Humanoids*, 2023.
- **Menon, R.**, et al. “NBV-SC: Next Best View Planning Based on Shape Completion for Fruit Mapping.” *IROS*, 2023.

Professional Service

- **Reviewer**: IEEE RA-L, IJRR, ICRA, IROS, CASE, Humanoids, RSS 2026.

Public Engagement

- **Pint of Science (Bonn)**: “From Pixels to Peppers: Active Perception in Robotic Agriculture” (2025).
- **WDR Bonn**: Television interview on the HortiBot system and the future of robotics (2025). [[News Report](#)]
- **ICRA@40 Live Demo**: Live demo of fruit mapping at the ICRA 40th anniversary, Rotterdam, NL (2024). [[Event Link](#)]
- **Visit of NRW State Premier Hendrik Wüst**: Showcased robotics at the Humanoid Robots Lab (2024). [[News Report](#)]
- **Interactive Robot Demonstrations**: Nacht der Technik (Science Night) and Wissenschaftsfest (Science Festival) (2024 – 2025).