

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

## Professional Experience

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

## Teaching Experience

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

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- **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

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- **Menon, R.**, et al. “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

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

## Public Engagement

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- **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).