

## Short Profile

Robotics & AI Master's student at the Technical University of Munich (TUM) with practical experience from BMW and Siemens. Skilled in C++, Python, and PyTorch for developing AI-driven robotics and machine learning applications. I have an international background: of Asian heritage, born in Norway, and raised in Germany. Outside of work, I enjoy practicing calisthenics and jogging, reading philosophy, and writing poetry.



## Leonardo Maglanoc

### Robotics & AI Researcher



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### Research Interests

- Humanoids, manipulators, drones
- 3D computer vision and SLAM
- Safety in robotics with formal verification
- Computational neuroscience
- Robotics foundation models

### Programming

#### Python (PyTorch, ROS2)



#### Linux (Git, Docker)



#### C++



#### Java



### Languages

#### German (mother tongue)



#### Norwegian (mother tongue)



#### English (C2)



#### French (B1)



## Work Experiences

Sep 2025 - Present	- Master Thesis Student	Foundation Robotics, Munich, Germany, full-time
	Master's thesis at <a href="#">humanoid robotics startup</a> on <i>Language-Guided Dexterous Grasping for Task-Oriented Manipulation with 3D Foundation Models</i> .	
Feb 2025 - Aug 2025	AI/ML Research Intern	BMW Group Research, Munich, Germany, full-time
	Development of neuro-inspired computing architecture called <a href="#">Oscillatory Neural Networks (ONNs)</a> in collaboration with IBM. Executed a user study with a tactile hardware prototype and collected dataset from 10 participants. Designed Python/PyTorch-based ONN-simulators and applied them to collected dataset as an ONN-based Human-Vehicle Interaction AI demonstrator.	
Apr 2023 - May 2024	Robotics Research Assistant	Technical University Munich, Germany, part-time
	Making physical human-robot interaction (pHRI) provably safe with formal verification. Implementation of kinematics and trajectory planning algorithms. Contributions to <a href="#">research paper</a> in review for top robotics journal (T-RO).	
Nov 2020 - Apr 2021	CS Teaching Assistant	Technical University Munich, Germany, part-time
	Teaching responsibilities for introduction to informatics. Basics of object-oriented programming with Java and general problem-solving in computer science. Correcting weekly coding homework and exams.	

## Education

Apr 2023 - Present	- M.Sc. Robotics, Cognition, Intelligence	Germany	Technical University Munich,
	Interdisciplinary Master of Science program of the Departments of Informatics, Electrical Engineering, and Mechanical Engineering. Knowledge in robot control, perception, and machine learning. Personal specialization in robotics and computer vision.		
Feb 2024 - Aug 2024	Siemens Mentoring Programme	Siemens, Munich, Germany	
	Career-building by Siemens senior-executives for ambitious students. Presented the hackathon project <a href="#">Smart 3D Printing with Machine Learning</a> at Siemens RIE Munich Conference and almost got 1st place.		
Sep 2019 - May 2023	B.Sc. Informatics	Technical University Munich, Germany	
	Bachelor of Science in computer science with a minor in mathematics. Specialization in mathematical modeling, cyber-physical systems, and artificial intelligence. Bachelor Thesis at Chair for Robotics: <i>Provably Safe Human-Robot Interaction for Manipulation using Power and Force Limiting</i> (Grade: 1.3).		

## Projects

Oct 2023 - Feb 2024	Autonomous Drone Practical	Technical University Munich, Germany
	The goal was for the user to be able to set the goal position with a haptic device, the Novint Falcon Haptic Device, and then an AR Drone 2 to autonomously reach the goal while avoiding obstacles. <a href="#">Video demo</a> (Grade: 1.0).	