

# ADITHYA MOHAN

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## OBJECTIVE

I work at the crossroads of robotics, safety, and intelligent decision-making and building agents that can learn, adapt, and act reliably even when faced with adversarial inputs. From training DRL agents in simulation to testing them on real vehicles equipped with LiDAR, GNSS, and camera systems, I aim to bridge the gap between research and reality in embodied AI.

## RELEVANT EXPERIENCE

### Technische Hochschule Ingolstadt

AI Researcher - Team Lead [03/2023 - Current](#)

*Developed and led the project of a full autonomous driving stack with ROS2 for real-car deployment and research in DRL under adversarial attacks.*

### Franka Emika GmbH

AI Robotics Engineer [08/2022 - 12/2022](#)

*Designed learning engine and modular C++ test framework for Franka arms. Developed safe ML pipelines and guided safety practices.*

### Quantum Systems GmbH

Robotics Software Engineer [09/2021 - 07/2022](#)

*Path planning GUI with PyQt for UAV landing. Developed drone task automation stack, unit tests, and CI/CD tools.*

### ARE23 GmbH

Junior Robotics Engineer [08/2020 - 08/2021](#)

*ROS-based planning, perception using OpenCV/Keras, AWS workflows, & web deployment. Built internal testing suites.*

### Innok Robotics GmbH

Master Thesis Student [02/2020 - 08/2020](#)

*Developed robot diagnostics tool and visualization pipeline in Python and ROS.*

### Flex India Pvt. Ltd

Senior Analyst [08/2016 - 08/2018](#)

*Led material planning and lean automation initiatives, applying analytics (Python, R, SQL, Tableau) to optimize supply chain operations.*

## SKILLS

**Languages:** C++, C, Python, Matlab, Simulink

**Technologies:** ROS/ROS2, AWS, Azure

## EDUCATION

### Technische Hochschule Ingolstadt

Ph.D. Artificial Intelligence (*Dr. rer. nat.*)

[03/2023 - Current](#), Ingolstadt, GER

### Technische Hochschule Deggendorf

M.Eng. Mechatronics & Cyber Physical Systems

[03/2019 - 03/2021](#), Deggendorf, GER

### Anna University

B.Eng. Mechanical Engineering

[09/2012 - 05/2016](#), Chennai, IN

## SELECTED PUBLICATIONS

- [1] The Evolution of Criticality in Deep Reinforcement Learning (ICAART'25)
- [2] Advancing Robustness in Deep Reinforcement Learning with an Ensemble Defense Approach (ITSC'25)
- [3] UrbanIng-V2X: A Large-Scale Multi-Vehicle, Multi-Infrastructure Dataset Across Multiple Intersections for Cooperative Perception (NeurIPS'25)
- [4] DrivIng: A Large-Scale Multimodal Driving Dataset with Full Digital Twin Integration (IV'26)
- [5] Towards Robust Agents: A Survey of Adversarial Attacks and Defenses in Deep Reinforcement Learning (IEEE ACCESS)

## ACADEMIC ACTIVITIES

REVIEWING for ITSC'25 and IV'26 Conferences

RECENT TALKS: Talk on Adversarial Attacks in Deep Reinforcement Learning: A Call for Robust Defenses.

TEACHING:

- [1] Practical Programming - Python Basics
- [2] Scientific Seminar
- [3] AI Project
- [4] Principles of Autonomy & Decision Making
- [5] Grundlagen der C-Programmierung
- [6] Computer Vision - Practicals