

Adithya Mohan

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Education

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- Doctor of Philosophy - PhD, Artificial Intelligence (Dr. rer. nat)** *Jan 2025 – Current*
Technische Hochschule Ingolstadt, Germany
- **Dissertation Topic:** A Path Towards Robust Embodied AI for Autonomous Systems: Leveraging DRL and Adversarial Defenses
- Masters in Mechatronics and Cyber Physical Systems (M.Eng)** *Mar 2019 – Mar 2021*
Technische Hochschule Deggendorf, Germany
- **Master's Thesis Topic:** Development of Real-Time Monitoring Tool for the Innok Mobile Robots
 - GPA: 1.7
- Bachelors in Mechanical Engineering (B.Eng)** *Sept 2012 – May 2016*
Anna University, India
- **Bachelor's Thesis Topic:** Engine Oil Pump Test Bench Relocation at Renault Nissan
 - GPA: 2.3

Experience

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- AI Researcher - Project Lead** *Ingolstadt, Germany*
Technische Hochschule Ingolstadt *Mar 2023 – Current*
- Developed complete autonomous driving stack and sensor hardware box for real-world deployment.
 - Implemented control and deep reinforcement learning algorithms for two autonomous cars.
 - Integrated ROS/ROS2 as the central robotic framework.
 - Managed a team of 3 staff and supervised thesis students.
 - Calibrated, time- and spatially-synchronized multi-modal sensors.
 - Research robustness in DRL for autonomous driving under adversarial attacks.
 - Identify critical states in RL and developed ML toolkits for safe AI.
- AI Robotics Engineer** *Munich, Germany*
Franka Emika GmbH *Aug 2022 – Dec 2022*
- Developed and implemented a learning engine for Franka robotic arms.
 - Designed CMake-based C++ packages with thorough unit/component test coverage.
 - Developed ML models and followed SaFe-guided software practices.
- Robotics Software Engineer** *Munich, Germany*
Quantum Systems GmbH *Sep 2021 – Jul 2022*
- Developed path planning algorithms and GUI using PyQt.
 - Built a docking station for autonomous UAV landing using UR10e robots.
 - Designed robotics architecture and state machines for task automation.
 - Led CI/CD integration and unit test pipelines.
 - Trained models to differentiate Quantum Systems drones.
- Junior Robotics Engineer** *Munich, Germany*
ARE23 GmbH *Aug 2020 – Aug 2021*
- Developed ROS-based navigation and path planning modules using AWS Robomaker.
 - Built full-stack applications with React.js frontend and NGINX-based backend.
 - Built machine learning solutions with OpenCV, Keras, and TensorFlow using AWS Sagemaker.
 - Assisted in debugging and testing software systems.

Master Thesis Student

Innok Robotics GmbH

Regensburg, Germany

Feb 2020 – Aug 2020

- Developed a continuous monitoring tool for robot diagnostics.
- Created MySQL databases and implemented error identification systems.
- Automated analysis pipelines and visualizations in Python.

Senior Analyst - Material Planner

Flex India Pvt Ltd

Chennai, India

Jul 2016 – Aug 2018

- Led process automation initiatives and lean (Kaizen) improvements.
- Managed team operations to minimize non-value-added tasks.
- Applied supply chain analytics using R, Python, SQL, Tableau, and VBA.

Publications

The Evolution of Criticality in Deep Reinforcement Learning (ICAART'25)

Feb 2025

Chidvilas Karpenahalli Ramakrishna, **Adithya Mohan**, Zahra Zeinaly, Lenz Belzner

[The Evolution of Criticality in Deep Reinforcement Learning](#) 

Technologies

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

Technologies: ROS/ROS2, AWS, Azure