Adithya Mohan

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Education

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

- GPA: 1.7

Bachelors in Mechanical Engineering (B.Eng) ***Sept 2012 – May 2016***
Anna University, India

- GPA: 2.3

Experience

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.
- Created URDF/xacro simulation models and ML models using OpenCV, Keras, TensorFlow.
- Implemented cloud workflows using AWS Robomaker and Sagemaker.
- Built full-stack applications with React.js frontend and NGINX-based backend.
- Built machine learning solutions with OpenCV, Keras, and TensorFlow.
- Assisted in debugging and testing software systems.

Master Thesis Student *Regensburg, Germany*
Innok Robotics GmbH *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 *Chennai, India*
Flex India Pvt Ltd *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