

Sharath N Payyadi

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Summary

Professional with 3+ years of experience in developing robotics applications. Skilled in optimizing software pipelines and delivering robust, scalable solutions for autonomous systems. Proven track record of developing and testing robotics software using C++ and Python with ROS/ROS2 framework. Actively seeking challenging opportunities in autonomous systems and advanced robotics development. Currently transitioning to India and seeking challenging opportunities to apply advanced robotics expertise in dynamic environments.

Experience

AITONOMI AG

Düsseldorf | Apr 2023 – Aug 2025

Software developer – Robotics & Infrastructure Automation

- Developed automation scripts to streamline testing workflows across both software simulations and physical robot platforms, resulting in faster and efficient software releases.
- Implemented a Jenkins pipeline to automate the final software build and containerization into Docker images, enhancing deployment efficiency and consistency.
- Supported and coordinated the on-site commissioning of software during Factory and Site Acceptance Tests (SAT) for the production environment (BMW Germany, NEOM Port, Saudi Arabia).
- Led migration of software stack from ROS1 to ROS2, along with optimizing software stack using ROS2 features like DDS, QoS, lifecycle management.

NODE Robotics GmbH

Stuttgart | Apr 2022 – Dec 2022

Master's Thesis: Traffic management of multiple robots in a Graph Environment

- Focused on improving a shared path planning algorithm for multiple robots in the collaborative work environment.
- Developed and integrated traffic management strategies within a graph-based framework to enhance efficiency in shared robot spaces.
- Implemented the computational methods to improve the system's efficiency and safety, minimizing robot downtime by 10% in shared spaces.

NODE Robotics GmbH

Stuttgart | Sep 2021 – Feb 2022

Student Intern – ROS Backend developer

- Developed backend functionality in ROS for the ROSBAG Player UI tool, for real-time playback and error analysis for production-deployed robots.
- Integrated WebSocket and REST API to enhance system communication, leading to faster data handling and improved performance.

Education

Hochschule Darmstadt

Darmstadt | Sep 2020 – Dec 2022

MS in Electrical and Information Technology

Visvesvaraya Technological University (VTU)

Bengaluru, INDIA | Jul 2016 – Jun 2020

BE in Electronics and Communication Engineering

Projects and Publications

Hochschule Darmstadt

Darmstadt

PICK and PLACE using TIAGo robot

Apr 2021 – Oct 2021

- Evaluated the influence of external factors like lighting on object detection and motion planning.
- Implemented ARUCO marker-based object detection using a computer vision algorithm for pick-and-place of objects using the MOVEIt motion planning algorithm.
- Compared the performance of the motion planning of the robotic arm in a real-world environment vs simulation (Gazebo).

Visvesvaraya Technological University

Bengaluru, INDIA

Disease Detection in Paddy Crop using CNN Algorithm

Jun 2019 – Jun 2020

- Designed and implemented a deep learning-based approach using a CNN algorithm, using a trained KERAS model and OpenCV algorithm to detect plant diseases at an early stage.
- Published a research paper titled "*Disease Detection in Paddy Crop using CNN Algorithm*" in the *International Journal of Recent Technology and Engineering (IJRTE)*, Vol. 8(6), March 2020, DOI: 10.35940/ijrte.F9835.038620 ([Link](#)).

Tequed Labs

Bengaluru, INDIA

Smart City with IoT (24-Hour Hackathon)

Jan 2019

- Won 1st place with 3 peers; utilized the concepts of IoT along with a microcontroller like Arduino.
- Designed an IoT-based system to detect LPG leakage and notify homeowners via GSM module alerts for enhanced safety.

Skills and Leadership

Tech Skills

- Programming languages and framework: C++(17 and above), Python, ROS1, ROS2, OpenCV, Bash, MoveIt, Nav2
- DevOps tools: Jenkins, Git, Bitbucket, Docker, Swarms
- OS: Linux, Windows
- Miscellaneous: Atlassian Suite (Jira, Confluence), Network tools, VPN

Volunteer & leadership Experience

- Planned and conducted programming workshops for fellow students during my undergraduate studies.
- Participated in the university's Buddy Program, assisting incoming students with their arrival and integration into campus life in Germany during the master's program.
- Organized and initiated coding improvement activities at the workplace, like pair programming and workshops about the new tech stacks to improve team skills and collaboration.

Soft Skills

- Languages: English, German
- Core Competencies: Cross-functional team collaboration, Team bonding, Adaptability, Planning and coordination, Strategic planning, and Innovation