

Nithin Rajan

Robotics Engineer with extensive experience in developing and implementing cutting-edge robotic systems and automation solutions. Skilled in **C++**, **Python**, **ROS 1/2**, and various sensor technologies, with **Practical expertise in Simulation, Sensor Calibration**, and **Real-time data processing**. Proven ability in system **automation testing**, **Embedded systems**, and **Self-driving vehicle technologies**. Strong leadership in team management, algorithm optimization, and delivering high-quality project outcomes. Successfully executed complex projects across **Automotive**, **Infotainment**, and **Educational robotics** sectors.



Work History

2022-07 -
Current

AUTOMATION AND VALIDATION SPECIALIST,

TATA ELXSI, Trivandrum, India

- Leading the System Qualification Testing and Automation team, driving efficiency and quality in testing processes.
- Developed comprehensive validation plans, outlining objectives, timelines, and resource requirements for successful project execution.
- Support and Training to the ADAS interns team for the Internals projects, in area of the **ROS1/ROS2** with the **C++ implementation** in the areas of **Localization & Navigation**, **Robot Arm Manipulation[Move IT]**, **Image Processing** and **Sensor Calibration & Simulation[Gazebo]**.
- Developed **CANoe** configurations and created panels for features and diagnostics in **Ethernet**, **CAN**, and **LIN** communication in **CANoe 16**.
- Analyzed system and software requirements to develop SYS4 (System Integration Testing) and SYS5 (System Testing) test cases.
- Investigated automation feasibility for test cases related to both features and diagnostics.
- Utilized CAPL scripting to automate test cases for features and diagnostics in **CANoe 16** and **VTest Studio**.
- Designed and executed **Hardware In Loop** (HIL) testing using VT cards to simulate the OHC board and capture critical data values.

Contact

Current Address

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Forwarding Address

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Phone

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LinkedIn

<https://www.linkedin.com/in/nithin-rajan-57407210>

Skills

- Python ●●●○○
- C ●●●●○
- C++ ●●●●○

- CAPL Scripting 
- CANoe 
- VTest Studio 
- ROS1 / ROS2 
- JIRA 
- Git proficiency 
- Linux 
- Arduino Programming 
- UDS 
- CAN 
- LIN 
- Ethernet 

2019-05 -
2021-09

Personal Details

Date of Birth: 19/07/1989

Nationality: Indian

Marital Status: Married

Visa Status: Sponsor Visa
Available in UAE from Sept-25

Languages

English 
Upper
intermediate
(B2)

Malayalam 
Bilingual or
Proficient (C2)

Hindi 


- Developed diagnostic and feature scripts for **CAN** and Ethernet communication using **Python programming** and **BDD framework**.
- Created comprehensive test plans to guide test execution.
- Monitored the progress of SYS5 test case creation and automation scripting efforts.
- Troubleshoot and resolved issues encountered during test execution.
- Reviewed test cases and scripts, ensuring accuracy and updating traceability documentation.
- Assisted in the preparation of regulatory submissions by providing validation-related documentation, contributing to successful approval outcomes.

SENIOR SOFTWARE ENGINEER

DEEVIA SOFTWARE INDIA PVT LTD, Bengaluru, India

- Ported **C implementation** to PP (Pixel Processing) implementation for the Trailer Tracking Test.
- Optimized and tested the Bilinear Interpolation Algorithm in the PP implementation for the Trailer Tracking Test.
- Developed resolutions for different camera views as specified by the Customer.
- Created and tested golden images for various camera views based on updated software requirements from the BMW team (BEGU generation offline tool).
- Integrated and tested software components on the embedded platform.
- Created project release packages, uploaded code for Gerrit review in **GITHUB**, and maintained the project repository.
- Monitored, updated, and resolved bugs reported in **JIRA** tickets..
- Delivered unit-tested systems within customer-prescribed timeframes.
- Collaborated with fellow engineers to evaluate software and hardware interfaces.

SOFTWARE ENGINEER

Tamil	Intermediate (B1)	2019-05	DEEVIA SOFTWARE INDIA PVT LTD, Bengaluru, India	<ul style="list-style-type: none"> Developed a ROS1 MoveIt model for the Panda Arm robot, incorporating a custom-made vacuum gripper. Optimized trajectory planning within the OMPL interface. Integrated the OMPL interface for a new planner. Developed the C++ implementation of datalogging for different parameters across various modules for the Rear Camera project
	 Intermediate (B1)	2017-12 - 2018-09	ROBOTIC ENGINEER ROBOWARE TECHNOLOGIES LLP, Bengaluru, India	<ul style="list-style-type: none"> Developed, tested, and optimized existing algorithms using ROS for the Wipod, executed on the Arduino embedded platform. Researched, implemented, and tested the Navigation, Localization, and 3D mapping stack in ROS. Delivered demonstrations of the L-3 Wipod vehicle model to customers. Programmed Arduino for vehicle movement and LIDAR actuation. Tested and calibrated LIDAR and Laser sensors for the Navigation stack in ROS.
		2015-06 - 2016-12	Robotics Engineer NOVATECH ROBO PVT LIMITED, Bengaluru, India	<ul style="list-style-type: none"> Delivered comprehensive training sessions on fundamentals of electronics, embedded systems (8051), and Arduino programming, along with simulation tools like Proteus8 and MATLAB. Organized and facilitated interactive workshops featuring platforms such as Novabot, LEGO Mindstorms, 8051 development boards, Arduino, and MATLAB, enhancing technical skills among students and peers. Engineered a variety of robotic solutions—including autonomous mobile robots, robotic arms, and drones—for real-world academic applications.

- Improved robotic system efficiency by designing and implementing hardware upgrades.
- Utilized simulation software to validate proposed solutions before physical implementation, reducing development time and costs.
- Built, configured or tested robots or robotic applications.
- Tested features, documenting findings, modeled trends, and submitted reports.

Education

2015-06

Master of Technology: Robotics

SRM University - Chennai, India

- Completed the post-graduation from SRM University, Chennai with an 8.732/10 CGPA

2011-07

Bachelor of Technology: Electrical And Electronics Engineering

Calicut University - Thrissur, India

- Completed the Under Graduation from Calicut University with 61% of the aggregate.

Certifications

- Certifications in **ROS1 / ROS2** [Navigation, Manipulation, Localization and Sensor Fusion]-Udemy
- Certifications in **C++** - Udemy
- Certifications in **Python** - Udemy

Declaration

I hereby declare that the above-written particulars are true to the best of my knowledge and brief.

NITHIN RAJAN