# KARTHIK KALIDAS

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## PROFESSIONAL SUMMARY

Technical leader with 6 years of experience driving end-to-end development of autonomous vehicle platforms. Skilled in HIL infrastructure, sensor integration, and large-scale test automation, enabling faster, safer, and more scalable deployment of autonomy software across engineering and product teams.

## WORK EXPERIENCE

**Senior Systems Engineer, Test Automation** Jan 2025 – Present
*Torc Robotics, Dallas–Fort Worth, TX*

- Spearheading HIL validation roadmap across 5 autonomy teams, boosting system test coverage by **70%**
- Leading team of **7** engineers, delivering 15+ HIL features per release through efficient sprints and reviews
- Deployed fully automated robotic HIL testing via CI/CD using temporal workflows, achieving zero-touch software flash, mission validation, and mode engagement in under **20 mins**
- Improved truck HIL uptime and stability from 30% to **99%** through proactive monitoring and fault isolation

**System Integration Engineer, Autonomous Driving Kit** Nov 2021 – Jan 2025
*Torc Robotics, Albuquerque, NM*

- Led rapid integration and deployment of autonomy platform in collaboration with **Daimler Truck** for mass production
- Developed patented sensor setup station for full sensor set configuration in under **12 mins** with remote diagnostics
- Commissioned **4** vehicle generations with self-developed tooling, optimized workflows, and thorough documentation
- Spearheaded system issue troubleshooting, RCA, and resolution, resolving **100+** critical system issues

**Test Engineer, On-Road Testing** Jan 2021 – Nov 2021
*Torc Robotics, Albuquerque, NM*

- Deployed instrumentation, infrastructure, and sensor calibration as defined by vehicle test plans
- Tuned and optimized longitudinal and lateral controllers, reducing autonomous disengagements by **30%**

## PUBLICATIONS

2025 - Systems And Methods For Automatic Sensor Configuration, 139906-05801
2025 - A Cloud-Based Platform For Automatic Sensor Configuration, 139906-08501
2021 - Simulation Framework for Testing Autonomous Vehicles, SAE Technical Paper 2021-01-0118

## EDUCATION

**The Ohio State University, Columbus, OH** Dec 2020
Master of Science, Mechanical Engineering GPA: 4.0/4.0

**Indian Institute of Technology (IIT) Bombay, India** Aug 2019
Bachelor of Technology, Mechanical Engineering CPI: 8.4/10.0

## SKILLS

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|---|---|
| **Languages** | C/C++17, Python, Go, JavaScript |
| **Frameworks** | ROS1/2, TensorFlow, OpenCV, Jenkins, AWS, Temporal |
| **Tools** | Docker, Bazel, Linux, Git, MATLAB, CANape, SolidWorks |

## AWARDS

2024 – Employee of the Quarter Q2, Torc Robotics
2021 – Employee of the Quarter Q1, Torc Robotics
2019 – Formula Student Award, IIT Bombay Racing
2018 – Institute Technical Citation, IIT Bombay
2015 - All India Rank 606, JEE Advanced