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

Karthik Kalidas, 2025, Systems And Methods For Automatic Sensor Configuration, 139906-05801
Karthik Kalidas, 2025, A Cloud-Based Platform For Automatic Sensor Configuration, 139906-08501
Kalidas, K, 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

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