

# Karthik Kalidas

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## INTERESTS

ROBOTICS  
HARDWARE IOT  
SYSTEMS ENGINEERING

## EDUCATION

### THE OHIO STATE UNIVERSITY

M.S. MECHANICAL ENGINEERING  
Columbus, OH, USA  
Graduated Dec 2020 | GPA: 4.0/4.0

### IIT BOMBAY

BTECH. MECHANICAL ENGINEERING  
Mumbai, India  
Graduated Aug 2019 | CPI: 8.4/10.0

### ONLINE

- Udacity Self-Driving Car Nanodegree
- Udacity AI For Healthcare Nanodegree

## TECHNICAL SKILLS

### LANGUAGES

Comfortable: • C++ • Python • Go  
Familiar: • Java • JavaScript • SQL

### SOFTWARE

- ROS2 • Bazel • CMake
- Docker • AWS • Linux • Temporal
- MATLAB • CANape • CANalyzer
- SolidWorks • Onshape • ANSYS
- Jama • Cameo • Jira

## RESPONSIBILITIES

GRADUATE TEACHING ASSOCIATE  
Multidisciplinary ME Lab, OSU, 2020

DEPARTMENT ACADEMIC MENTOR  
ME Department, IITB, 2017

## AWARDS

- 2024 Employee of the Quarter, Q2
- 2021 Employee of the Quarter, Q1
- 2018 Institute Technical Citation
- 2015 All India Rank 606, JEE Advanced
- 2015 KVPY Scholarship Recipient

## HOBBIES

- Jiu-Jitsu
- Adventure Sports
- Mindfulness
- Tinkering

## WORK EXPERIENCE

### TORC ROBOTICS

#### SENIOR SYSTEMS ENGINEER | TEST AUTOMATION

Jan. 2025 – Present | Dallas-Fort Worth, TX, USA

- Leading technical roadmap for HIL testing across the organization
- Automated robotic HIL testing via CI/CD for faster, reliable validation
- Established standalone test stage framework using Temporal workflows

#### SYSTEM INTEGRATION ENGINEER | AUTONOMOUS DRIVING KIT

Nov. 2021 – Jan. 2025 | Albuquerque, NM, USA

- Led rapid integration and deployment of autonomy hardware platform in collaboration with **Daimler Truck** for mass production
- Developed patented sensor setup station for complete sensor set configuration in under ~**12 mins** with remote diagnostics monitoring
- Commissioned over 3 vehicle generations using self-developed tooling, optimized workflows, and comprehensive documentation
- Spearheaded system issue troubleshooting, RCA, and resolution

#### TEST ENGINEER | ON-ROAD TESTING

Jan. 2021 – Nov. 2021 | Albuquerque, NM, USA

- Executed comprehensive test plans to identify system limitations, collecting pertinent data to drive continuous improvements
- Played key role in deploying supplementary instrumentation, infrastructure, and sensor calibration as defined by test plans
- Active involvement in tuning and optimizing longitudinal and lateral controllers, improving vehicle performance in diverse driving conditions

### KPIT TECHNOLOGIES Pune, India

#### ADAS INTERN

May 2018 – Jul. 2018

- Designed and tested rapidly deployable hardware to enable Automatic Emergency Braking in passenger vehicles
- Received Pre-Placement Offer (PPO) to join full-time based on internship progress and performance

## KEY PROJECTS

### PEDESTRIAN COLLISION AVOIDANCE FOR AUTONOMY

#### M.S. THESIS | ADVISOR: PROF. AKSUN GUVENC, OSU

Aug 2019 – Dec. 2020 | Columbus, OH, USA

- Designed software stack to simulate autonomous shuttles to operate at the Ohio State School of Blind
- Developed pedestrian motion models and tracking algorithm using Interacting Multiple Model filter
- Conference paper<sup>[1]</sup> published and presented at **SAE WCX**, 2021

### FORMULA STUDENT

#### IIT BOMBAY RACING | CHIEF MECHANICAL OFFICER

Sep 2016 – Aug. 2019 | Mumbai, India

- Led overall mechanical system design, manufacturing, integration and performance testing of an electric racecar with a focus on electromechanical powertrain, high-voltage battery, cooling system
- Presented at the prestigious Design Event and Cost Event to leading motorsport professionals at Silverstone Circuit, **FS UK '19**