

# Karthik Kalidas

🏠 Albuquerque, NM | ✉ karthik.kalidas@gmail.com | 🌐 karthikkalidas.github.io

## INTERESTS

ROBOTICS  
PRODUCT DESIGN  
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

### UDACITY

- Self-Driving Car Nanodegree
- AI For Healthcare Nanodegree

## TECHNICAL SKILLS

### LANGUAGES

Comfortable: • C++ • Python • Go  
Familiar: • Java • SQL • Vue.js

### SOFTWARE

- ROS2 • Bazel • CMake
- Docker • AWS • Linux
- 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 Albuquerque, NM, USA

#### SYSTEM INTEGRATION ENGINEER | AUTONOMOUS DRIVING KIT

Nov. 2021 – Present

- Leading rapid integration and deployment of next-generation autonomy hardware stack
- Developed automated configuration station to reduce sensor configuration time by ~80%
- Collaborating with **Daimler Truck North America** to integrate and automate commissioning procedures for mass production
- Actively contributed to enhancing system reliability, issue tracking, and resolution processes
- Developed perception stack calibration and validation processes

#### TEST ENGINEER | ON-ROAD TESTING

Jan. 2021 – Nov. 2021

- Executed comprehensive test plans to identify system limitations, collecting pertinent data to drive continuous improvements
- Played a key role in deploying supplementary instrumentation and infrastructure necessary to capture data 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 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

- Developed 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, and performance testing of an electric racecar with a focus on electromechanical powertrain, high-voltage battery, cooling system, and system integration
- Achieved over **100km** of track testing both nationally and internationally for boosting reliability and performance
- Presented at the prestigious Design Event and Cost Event to leading motorsport professionals at Silverstone Circuit, **FS UK '19**