

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 • 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

SYSTEM INTEGRATION ENGINEER | AUTONOMOUS DRIVING KIT
Nov. 2021 – Present | Austin, TX, USA

- Leading 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.
- Spearheading system issue troubleshooting, **RCA**, and resolution
- Developed live sensor validation component in **C++** to estimate lidar range and FOV on vehicle platform

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 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 (**AEB**) 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

- 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^[1] 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**