Karthik Kalidas

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

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

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 – Apr. 2023

- 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[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