AKSHAY HOLE

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Professional Summary

- Highly motivated Automotive Engineer looking to reinforce my knowledge in the automotive field and pursue research and development work in the domain of Vehicle Autonomy specifically, Motion Planning and Control.

Education

MASTER OF SCIENCE IN AUTOMOTIVE ENGINEERING | CLEMSON UNIVERSITY | May 2021

- Related coursework: Motion Planning, Autonomous Driving Technologies, Autonomy Science and Systems (ROS), Vehicle Stability/Safety Systems, Automotive Electronics, Automotive Manufacturing Systems, Automotive Systems Overview, Automotive Business Concepts

BACHELOR OF ENGINEER IN MECHANICAL ENGINEERING | PUNE UNIVERSITY | May 2018

- Related coursework: Mechatronics, Automobile Engineering, Mechanical Systems Design, CAD/CAM Automation, Strength of Materials, Industrial Engineering and Project Management, Machine Design, Theory of Machines

Core Competencies

- Technical Skills: C, Python, C++, Object-Oriented, Arduino, MATLAB, Siemens NX, ROS, Git, Linux, Simulink, Technomatix Plant Simulation 13, Microsoft Office
- Key Areas: Motion Planning, Controls, Autonomous Vehicles, Robotics, Simulation, Deep learning, Computer Vision, Systems Integration and Sensor Fusion

Work Experience

AUTOMOTIVE ENGINEERING STUDENT | CLEMSON UNIVERSITY | AUG 2019 - PRESENT

- Autonomous F1 Car: Deployed Adaptive Cruise Control and Autonomous Lane-Keeping System algorithms on Traxxas 1/10th Car using Arduino.
- Sampling-Based Local Navigation: Implemented the sampling-based velocity approach for local navigation to avoid collision of agents.
- Localization of a cylindrical object by fusion of two ultrasonic sensors.
- Design of a battery electric-vehicle in MATLAB and Simulink with powertrain, vehicle dynamics, body-in-white, packaging, human factors and systems integration considerations.

ENGINEER TRAINEE | TATA MOTORS | DEC 2016 - DEC 2017

- Tested emissions of vehicles in a state-of-the-art Chassis Dynamometer lab and monitored product safety within the Bharat stage 4(BS4) norms, leading to safer environmental products.
- Project: Design of a work holding device for a drilling machine

  Constructed a work holding device for high torque drilling machine and fabricated in the carpentry shop. Before fabrication I prepared a complete CAD model using CATIA for optimum use of material and space.
- Project: Design of a Brake-caliper frame for a poka-yoke system

  Developed a system that would help to assemble the brake and also make the job error-proof.
- Project: Design of Crankshaft tray and Connecting rod tray

  Constructed a tray that assisted in the efficient processing of the crankshafts.