RUSHIKESH RAJENDRA KHARADE

864-569-5241 | rkharad@g.clemson.edu | https://www.linkedin.com/in/rushikeshkharade/

PROFESSIONAL SUMMARY

Automotive Engineering graduate student with experience in Dynamic vehicle testing, wheel alignment and end of the line operations. My profile includes professional experience as Manufacturing Engineer at General Motors and exposure to vehicle dynamic testing and controls. Currently seeking an intern opportunity in Vehicle Autonomy and Controls to reinforce my knowledge in the field of Automotive Engineering.

EDUCATION

Clemson University || MS in Automotive Engineering **Greenville, South Carolina** || May 2021

Courses: Motion Planning, Automotive Stability and Safety Systems, Autonomy: Science and Systems, Control Systems

Savitribai Phule Pune University || BE in Mechanical Engineering **Pune, India** || May 2018

GPA: 3.71/4.00

WORK EXPERIENCE

General Motors || Manufacturing Engineer **Pune, India** || Oct 2018 – Jun 2019

- Directed a team of 34 members as a Group Leader for Trim related operations ensuring smooth functioning of the line and effective problem solving and balanced trim line for optimum output using APS (Assembly Processing System) tool
- Implemented and monitored Global Manufacturing System (GMS) requirements such as process control plans, 5S and process failure mode element analysis which helps in risk mitigation and maintaining BIQ (Build-in-Quality) Level IV
- Analyzed quality data along with Plant Manager to decide the strategy to improve plant DRR (Direct Run Rate) and DRL (Direct Run Loss)
- Coordinated Throughput Improvement Process (TIP), Practical Problem Solving (PPS), Quality, Kaizen wall and Change Management systems

Enpro Industries Pvt Ltd || Project Trainee **Pune, India ||** Jul 2017 - Jun 2018

- Designed and developed an Earth-Air Heat Exchanger model and implemented the design on-site to attain energy efficiency of 17%, thus reducing the electricity consumption and developing an alternative for the HVAC system as well

Mahindra Vehicle Manufacturers Ltd || Summer Intern **Pune, India ||** Jun 2017 - Jul 2017

- Monitored SMED and ADC-ATC time at Press Shop and reduced SMED time from 12 to 8 mins to increase 400 strokes/day
- Worked on MINITAB for Process Optimization at the Gemba and increased OLE at the Press Shop by 10%

Bajaj Auto Ltd || Vocational Trainee **Pune, India ||** Dec 2016 - Jan 2017

- Designed and developed a tackle for the lifting of Avenger handlebar using a pneumatic balancer reducing fatigue, conveyor delay and increased productivity of workers
- Determined millipore values of various engine components and tested K10 Cylinder head, Cylinder block, Crankcase. Implemented SPWM (special purpose washing machine) to lower millipore values under 5mg

ACADEMIC PROJECTS

Adaptive Cruise Control and Autonomous Lane Keeping Oct 2019 – Dec 2019

- Developed cruise control, boundary tracking, and collision avoidance using the signal sensing and processing, filtering techniques, and advanced control methods for a RC car

Designing a Battery-Electric Vehicle Oct 2019 – Dec 2019

- Analyzed various powertrain, driveline and occupant packaging layouts in compliance with J1100 standards to design BEV model in MATLAB and SolidWorks
- Finalized a model for range, top speed, acceleration time and vehicle cost to maximize profit

Kalman Filter for sensor fusion of ultrasonic sensors Aug 2019 – Oct 2019

- Sensor fusion by using Kalman Filters was implemented to fuse the data coming from multiple ultrasonic sensors
- Kalman Filter parameters were tuned to achieve a stable and relatively fast convergence

Design and Analysis of Earth-Air Heat Exchanger (EATHE) Jul 2017 – June 2018

- Designed and successfully tested an FEA solver for 2D Heat transfer problems with the results and values obtained using commercial software ANSYS and further analyzed in MATLAB
- Designed a PID controller for effective functioning of the EATHE for the commercial building
- Electricity consumption reduced by 3684 kWh annually

TECHNICAL SKILLS & INVOLVEMENT

C++/C || MATLAB || Simulink ||Siemens NX || Python || ANSYS || Arduino || R || Microsoft Office components

Languages known: English, Marathi, Hindi, German (**GOETHE B1 level certificate**)

PUBLICATIONS

- R. Kharade, "Regenerative Braking in Automobiles", IJET - Volume 3 Issue 6, pp. 216-221, Dec 2017
- R. Kharade et. al., "Design and Transient Analysis of Earth-Air Heat Exchanger", IJREAM – AMET, pp. 284-289, 2018