BHAVESH PARKHE

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SUMMARY

Mechanical engineering graduate student with 2.5 years of experience in engineering design. Worked and excelled in projects that require a multidisciplinary engineering approach in a team-based environment. Highly motivated to utilize experience with advanced mathematical techniques to solve practical problems.

SKILLS

Programming skills	: MATLAB, C, Python, Linux, Git, Arduino, OpenCV
Modeling and analysis	: CATIA V5, CREO Parametric, Solidworks, ANSYS Structural, OpenFAST
Other skills	: NI LabView, Simulink, Finite Element Analysis, System Identification, Raspberry Pi

EDUCATION

Udacity **December 2019**
Self Driving Car Nanodegree
Modules completed : Lane finding using OpenCV, Traffic Sign Classification

University of Massachusetts Amherst **December 2019**
M.S., Mechanical Engineering, (GPA – 3.64/4.00)
Thesis : Identification and control of Roll-2-Roll flexible electronic printing process

University of Mumbai, India **August 2014**
B.Engg., Mechanical Engineering, (Grade: First Class)
Thesis : Computational and experimental analysis of temperature separation in vortex tube

Thakur Polytechnic, India **July 2011**
Diploma, Mechanical Engineering, (Grade: First Class with Distinction)

RELEVANT PROJECTS

System identification and predictive control in Roll-2-roll printing **Ongoing**
Intelligent Sensing Lab, UMass Amherst

- Performed system identification of control parameters for micron-scale roll-2-roll printing of flexible electronics
- Computed a black box model and simulated the process with 93% accuracy which enabled implementation of predictive control algorithms

Autonomous bot for MIT Duckietown **Fall 2018**
Embedded Systems Lab, UMass Amherst

- Designed an autonomous bot with lane navigation and path planning capabilities to navigate through checkpoints in a miniature town (MIT's Duckietown Project - duckietown.org)
- Successfully demonstrated lane finding and pedestrain detection alongside 6 other bots with zero accidents

Drilling tool failure prediction using machine learning **Fall 2018**
Intelligent Sensing Lab, UMass Amherst

- Performed data acquisition and processing of machine vibration using NI DAQ 6000, Labview and MATLAB
- Extracted features, attributed it to different tool failure modes using statistical quality control and machine learning which resulted in a 95% failure detection accuracy in test data

PROFESSIONAL EXPERIENCE

TAAL Technologies, Bangalore, India **November 2014 – June 2017**
Design Engineer

- Designed Volkswagen and BMW exhaust systems using CATIA v5 for a major emmision systems manufacturer
- Brainstormed 2 new concept designs for the rear muffler with the onsite plant engineers and successfully advanced them to the production stage
- Performed rigorous quality checks and maintained appropriate best practices documentation which resulted in a 100% positive feedback over 8 quarters