Rohan Dalvi

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EDUCATION

University of Michigan Ann Arbor, MI
BSE in Mechanical Engineering, Minor in Computer Science Expected Graduation: April 2021
3.289 GPA (Dean's List, Winter 2019)
Relevant Coursework: Design and Manufacturing I, Thermodynamics I, Elec. Circuits, Systems, and Applications

EXPERIENCE

BorgWarner Inc. **|** Engineering Intern May 2019 – August 2019

- Utilized Artemis Suite and Excel to conduct long-term investigation into abnormal torque fluctuation with level and FFT analysis, and presented findings to engineers to determine preventative maintenance schedule
- Wrote a MATLAB script to process and graph dyno temperature and torque data for correlation analysis, and also a script to automate spin loss data entry and analysis saving 30 minutes per batch of spin loss tests
- Supported the preparation and running of NVH testing of 6 transfer cases on a dyno in a semi-anechoic chamber
- Conducted transfer case rebuilds, post-testing teardowns, and reports on the condition of parts for analysis
- Expanded NVH dyno torque cell calibration records from 1 to 10 years by researching vendor repair records

Personal Coding Projects | github.com/rohdalvi July 2017-Present

- Created a personal website to display my skills and experiences while also improving my HTML and CSS skills
- Created a predictor for March Madness games with Python that utilizes .csv input and basic machine learning
- Currently working through Udacity's Intro to Machine Learning course utilizing Python

The Village Workshop | Intern June 2016-August 2016

- Created a sign for workshop use to advertise lumber for sale using Autodesk Inventor and a CNC machine
- Assembled a cart for moving plywood and tools around the workshop by using a CNC machine to cut out components and basic power tools to assemble it

ACTIVITIES

Michigan Electric Racing (Formula Electric SAE) | Steering System Lead September 2017-Present

- Redesigned steering system with Siemens NX to reduce weight by 10% and increase reliability while being able to handle ANSYS-simulated 80Nm torque load, helping the team take 2nd place at Formula North
- Researched options for steering design and geometry to match potential budgets of $750 and $150
- Analyzed flaws of previous steering design and prepared documentation for new members that set design goals
- Used MATLAB to analyze tire data to perform Ackerman angle calculations
- Utilized Solidworks to CAD 2018 steering system and mount within chassis, as well as to CAD a sensor mount

ENGR 250: Design and Manufacturing I | Squad Leader January 2019-April 2019

- Led a team of 5 students in the design and manufacturing of a robot for a competitive game by scheduling meetings, machine shop time slots, and design reviews while keeping track of deadlines
- Designed robot to given constraints with Solidworks, and was responsible for 60% of final CAD design
- Manufactured and assembled robot by utilizing a knee mill, lathe, laser cutter, and waterjet

EECS 280: Programming and Intro. Data Structures (Piazza Classifier) | Student January 2018-April 2018

- Created a machine learning classifier in C++ that sorted Piazza student forum posts by topic
- Wrote functions to pre-process data to be fed to classifier and test cases to check exception handling logic

ENGR 100-150: A River Runs Through It | Engineer In Training January 2018-April 2018

- Aimed to prevent erosion of a riverbank by reducing stream velocity by 44% with a rock vane
- Designed rock vane capable of withstanding 40N of force in Solidworks and conducted Finite Element Analysis

TECHNICAL SKILLS

Applications | Solidworks, Siemens NX, ANSYS, HEAD Acoustics Artemis Suite, Git, Ultimaker Cura
Languages | MATLAB, C++, Python, HTML, CSS