Rohan Dalvi

248-308-0258
rohdalvi@umich.edu
(US Citizen)
22600 Cyprus Drive
Northville, MI 48167

EDUCATION

University of Michigan   Ann Arbor, MI
BSE in Mechanical Engineering   Expected Graduation: April 2021
3.300 GPA (Dean's List, Winter 2019 and Fall 2017)
Relevant Coursework**:** Design and Manufacturing II, Data-Oriented Programming, Elec. Circuits, Systems, and App.

TECHNICAL SKILLS

Applications | Solidworks, Siemens NX, Autodesk Inventor, ANSYS, ADAMS, Artemis Suite, Git, Ultimaker Cura
Languages | Python, MATLAB+Simulink, C++, SQL, HTML, CSS

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 improve preventative maintenance schedule
- Wrote a MATLAB script to automate spin loss data entry and analysis saving 30 minutes per batch of spin loss tests, as well as a script to process and graph dyno temperature and torque data for correlation analysis
- Executed Noise, Vibration, and Harshness testing of 6 transfer cases on a dyno in a semi-anechoic room with NVH team
- Conducted transfer case rebuilds, post-testing teardowns, and reports on the condition of parts for analysis

Michigan Electric Racing (Formula Electric SAE) | Dashboard Engineer   September 2019-Present
- Responsible for integration of controls systems in a layout that is ergonomically friendly and sturdy
- Designing shockproof and waterproof 3D-printed enclosure for dashboard display and its PCB with Siemens NX
- Creating testing procedure that will check if enclosure is shockproof to 10lbs of force and waterproof to 5 minutes of rain

Michigan Electric Racing (Formula Electric SAE) | Steering System Lead   September 2017-September 2019
- Redesigned steering system with Siemens NX to reduce weight by 10% and increase reliability while being able to handle ANSYS-simulated 80Nm torque load, resulting in the team taking 2nd place at Formula North
- Analyzed and recorded failures of previous steering design and prepared documentation that set new design goals
- Used MATLAB to analyze tire data to perform Ackerman angle calculations for suspension design
- Utilized Solidworks to CAD 2018 steering system and mount within chassis, as well as to CAD a sensor mount

PROJECTS

ME 350: Design and Manufacturing II | Team Member   September 2019-December 2019
- Worked on a team of 4 students to design and manufacture a 4-bar linkage controlled by an Arduino utilizing PID control and IR proximity sensors for a competitive game, finishing in the top 25% of all teams competing
- Performed ADAMS kinematic simulation on linkage to optimize gear ratio of transmission from motor to linkage

ME 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
- Conducted mechanical design of robot to given constraints with Solidworks, and was responsible for 60% of final CAD
- Manufactured and assembled robot in time and under budget by utilizing a mill, lathe, laser cutter, and waterjet

CODING PROJECTS

Personal Coding Projects | github.com/rohdalvi   July 2017-Present
- Currently working on a Python program to pull stock prices from an API, store them in a SQL database, and visualize change in price over time with an interactive Plotly dashboard
- Created a predictor for March Madness games with Python that utilizes .csv input and basic machine learning
- Created a personal website to display my skills and experiences while also improving my HTML and CSS skills

SI 206: Data Oriented Programming (Final Project) | Student   September 2019-December 2019
- Created a Python program in a team of 3 to pull data from 4 APIs, store it in a SQL database, and then plot the data
- Wrote functions that utilized matplotlib and a Google Maps API to visualize data in charts as well as on a map

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