

Nicholas {Nic} C. Wiggins

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Education

GPA: 3.99/4.00

Michigan State University

- College of Engineering | Bachelor of Science ♦ Computer Science
- College of Engineering | Bachelor of Science ♦ Mechanical Engineering
- Honors College, Deans List, Top 5%

May 2020

May 2020

Work History

Tesla ♦ Palo Alto, CA | Chassis Controls Firmware Intern

Aug 2018– Present

- Assisted engineers with improving methods and analysis of VDC alerts.

May – Aug 2018

Bosch ♦ Plymouth, MI | Automated Driving Intern

- Supported engineers with tooling for troubleshooting planner.
- Aided GUI design, release testing and clean-up of OSS for customer release.

Bosch ♦ Plymouth, MI | Chassis Controls Intern

May – July 2017

- Learned and calibrated Safe Brake to Stop function with the purpose to demonstrate to customers and marketing demonstrations.
- Improved tracking spreadsheet for instrumentation in vehicles.

Springhill Camps ♦ Ewart, MI | Overnight Middle School Camp Counselor

Summer 2016, Aug 2017

- Allowed maturation in the form of a leadership role along with the responsibilities associated with mentoring children.

Experience

Formula SAE Racing Team | Simulation Project Leader

May 2017 – July 2018

- Implemented Pratt & Miller's Lap Time Simulation software (LTS) to create a model of the car to assist in design decisions such as track width and wheel base.
- Utilized Optimum Tire and the LTS to create a representative tire model.
- Led a point study of the competition using LTS to determine vehicle goals.

Aug 2016 – May 2017

Wheels, Hubs & Uprights Project Leader

- Responsible for the design, analysis and part of the manufacturing process of the wheel assembly
- Utilized programs such as NX and ANSYS to model and validate hubs, uprights and components
- Lead team to center locking wheel hub from a three stud design, decreasing system weight by 21%

Suspension Team Member

- Increased knowledge of vehicle dynamics and its complexity through Optimum G seminar
- Expanded understanding of weight distribution through scaling
- Created a jig for manufacturing new push rods
- Optimized method for tire de-beading to shorten process and insure the safety of the wheel shell
- Implemented Magic Formula tire model using MatLab for use in vehicle model

Jan 2016 – July 2018

Powertrain Team Member

- Fabricated multiple muffler end caps for sound and weight testing
- Researched and modeled an external oil reservoir baffling system

Sept 2015 - Jan 2016

Rebuilt 1929 Ford Model 'A' | Father and Son Project

- Pulled motor six times and rebuilt motor once, furthered patience and optimism
- Fabricated leaf spring mounts as well as an intake manifold and exhaust headers

May 2008 – Present

Engineering Design Day | Project Manager and Lead Developer

- Developed "SweetMate" an Android mobile app to coordinate bathroom times for suite-style dorms
- Implemented NFC tags, PubNub Publish-Subscribe messaging and MIT App Inventor

Nov 2015-Dec 2015

Volunteering

Cru with Filter of Hope

March 2018

- Grew people skills installing water filters for impoverished families in Cuba.

Scholarships

MSU College of Engineering - Thomas and Marilyn Culpepper Engineering Endowed Scholarships

July 2018

- Honored for academic achievement

Alan Mulally Leadership in Engineering Scholarship Candidate

March 2017

- One of ten selected from MSU based off of GPA, communication skills and leadership roles.

Technical Skills

Arc Welding
MIG Welding
TIG Welding

Visual Basic
C & C++
Python

Metal Fabrication
Mill Machining
Lathe Operation

AutoCAD
Inventor
Revit

SketchUp
NX 10
ANSYS Workbench