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* — May 2020
→ *College of Engineering | Bachelor of Science ♦ Mechanical Engineering* — May 2020
→ Honors College, Deans List, Top 5%

Work History

Tesla ♦ Palo Alto, CA | *Chassis Controls Firmware Intern* — Aug – Dec 2018

→ Utilized Apache Airflow and SuperSet to automate scripts to collect and visualize fleet analytics.
→ Created pull requests for improvements based off investigations of VDC faults and alerts.

Bosch ♦ Plymouth, MI | *Automated Driving Intern* — May – Aug 2018

→ 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 ♦ Evart, 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.

Wheels, Hubs & Uprights Project Leader — Aug 2016 – May 2017

→ 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 — Jan 2016 – July 2018

→ Increased knowledge of vehicle dynamics and its complexity through Optimum G seminar
→ 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

Powertrain Team Member — Sept 2015 - Jan 2016

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

Rebuilt 1929 Ford Model 'A' | *Father and Son Project* — May 2008 – Present

→ 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

Engineering Design Day | *Project Manager and Lead Developer* — Nov 2015-Dec 2015

→ 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

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	Visual Basic	Metal Fabrication	AutoCAD	SketchUp
MIG Welding	C & C++	Mill Machining	Inventor	NX 10
TIG Welding	Python	Lathe Operation	Revit	ANSYS Workbench