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**PROFESSIONAL SUMMARY**

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I am a senior level Mechanical Engineering undergraduate student with an interest in electric vehicles, proficient with design tools with 2 years of relevant engineering experience through an internship, numerous projects and extracurricular involvement.

**Relevant Experience:** 2 years  
**Design Tools:** SolidWorks, NX/Unigraphics, AutoCAD, Visio  
**Programming:** MATLAB, C, Arduino  
**Foreign Languages:** Japanese, Bengali

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**EDUCATION**

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**Bachelor of Science, Mechanical Engineering**  
Wayne State University

**Anticipated:** May 2019  
**Major GPA:** 3.26/4.00

**Relevant Coursework:** Machine Element Design, Thermal Fluid Systems Design, Mechanical Vibrations

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**RELEVANT EXPERIENCE**

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**HORIBA Instruments Inc. – Automotive Test Systems (Troy, MI.)**

**Engineering Intern (May 2017 – Present)**

Designed and drafted full assembly drawings and system interconnect diagrams, and prototype components for driveline and engine test systems with SolidWorks and Visio for technical proposals and customer presentations; Developed a mechatronics component library to aid System Engineers and to optimize the project proposal quotations process for customers

**Wayne State University (Detroit, MI)**

**Peer Mentor – BE 1500 (May – Aug. 2017)**

Assisted instructor with teaching of an introductory MATLAB programming class, and held office hours to aid students with homework, assignments and examinations.

**EcoCAR3 – Wayne State University (Detroit, MI.)**

**Mechanical Engineering Team Member (Jan. – Sep. 2017)**

Collaborated with 15 peers to convert a 2016 Chevrolet Camaro to a hybrid-electric performance vehicle; Designed and fabricated custom vehicle components using Siemens NX for powertrain system integration and refinement; Refined the cooling system by optimizing the cooling loop routing to maintain proper flow of coolant through key powertrain components

**Wayne State University – College of Engineering Summer Camp (Detroit, MI. USA)**

**Student Counsellor (Jun. – Aug. 2016)**

Introduced primary school students from the Greater Detroit Area to robotics with LEGO WeDo and LEGO EV3; Taught students of grades 5 through 8 computer programming with Alice, Hour of Code and Little Bits; Accompanied students on field-trips to STEM related exhibitions in groups of 20-30 students and ensured their safety

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**ENGINEERING PROJECTS**

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**Cabin Hot Air Purging System for Passenger Vehicles (May 2018 – Present)**

*Wayne State University – Academic Design Project*

Collaborated with 4 peers to design a system to autonomously purge hot air from the cabin of a mid-size SUV; Performed voice of customer and patent research, as well as thermal-fluid analysis to create possible system designs; Created Parameter and Boundary diagrams using Visio to show interactions of the system with its surroundings and users; Drafted system design concept drawings using Siemens NX and performed CFD analysis using ANSYS Fluent

**Dual-Output Torque Multiplier Gearbox for Industrial Mixers (Feb. – Apr. 2018)**

*Wayne State University – Academic Design Project*

Collaborated with 3 peers to design a torque multiplier gearbox for an electric motor that is needed to power two mixers; Performed gearbox component specifications calculations using MATLAB and Excel based on given project constraints; Researched and selected appropriate electric motor, gearbox components, materials and lubricants for components; Designed gearbox components based on the constraints and calculations using Siemens NX and SolidWorks

**Synopsis of Automobile Nano-Particle Emission and Measurement in Bangladesh (Aug. 2016)**

*American Association of Bangladeshi Engineers & Architects - Technical Paper and Presentation*

Researched automobile nanoparticle PM emissions data and measurement methods in Bangladesh; Drafted a policy implementation of conducting PM emission measurements in key city locations based on research, and designed a public broadcast system for sharing measurements using the internet and cellular alerts; Documented a technical paper and presented findings and proposal at the 2016 Biennial Convention in Detroit, MI