SHIFAT TAUSHIF

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EDUCATION

University of Michigan-Dearborn | College of Engineering and Computer Science — Sep. 2019 – Present
Master of Science in Engineering – Mechanical Engineering

Wayne State University | College of Engineering — May 2019
Bachelor of Science – Mechanical Engineering — Major GPA: 3.42/4.00

TECHNICAL SKILLS

CAD Software: CATIA V5, Zuken CR-5000, SolidWorks, UG NX
Engineering Software: MATLAB, Microsoft Excel VBA, Python, LabVIEW, Microsoft Visio
Foreign Languages: Japanese, Bengali

PROFESSIONAL EXPERIENCE

Sumitomo Electric Wiring Systems, Inc. | York Township, MI. — Jun. 2019 – Present
Design Engineer

- Created automotive wire harness routing designs for Toyota vehicles using CATA V5 as a resident engineer at Toyota R&D facility.
- Maintained 2D and 3D wire harness design data on Toyota CAD system throughout project phases with CATIA V5 and CR-5000.
- Investigated quality and workability problems in Toyota vehicles at customer site and applied effective countermeasures.
- Designed and performed laboratory benchmark tests for wire harnesses with respect to customer and internal requirements.
- Assisted Sales and Project Management members with RFQ process by performing cost calculations of design changes.
- Participated in vehicle teardowns and VE/VA activities, and studied potential VE/VA design items to keep products profitable.
- Communicated with Japanese counterparts of both Sumitomo and Toyota and utilized language fluency to negotiate projects.

HORIBA Instruments, Inc. | Troy, MI. — May 2017 – Apr. 2019
Engineering Intern

- Assisted a team of 4 system engineers with project proposals and responding to RFQs from potential customers.
- Designed dynamometer test stands for performing brake testing based on customer input and project specifications.
- Prepared 2D and 3D models, system diagrams and rendered images of HORIBA products using SolidWorks and MS Visio.
- Performed FEA on designed components using SolidWorks to ensure components meet operation and structural requirements.
- Generated system interconnect diagrams for driveline and engine test systems using Microsoft Visio for use in project proposals.

WSU Hybrid Warriors EcoCAR3 | Detroit, MI. — Jan. 2017 – Sep. 2017
Mechanical Engineering Team Member

- Converted a 2016 Chevrolet Camaro into a Level 2 Autonomous Plug-In Hybrid-Electric vehicle with a team of 15 peers.
- Utilized competition rules, federal regulations, and vehicle performance to select and integrate an upgraded brake system.
- Designed powertrain components (housings, mounting structures, wire harness, cooling loops) with UG NX.
- Performed assembly, integration and maintenance of vehicle powertrain components, engine, electric motor and battery pack.
- Represented the team at final competitions and presented the status of vehicle and engineering decisions made to a panel of judges.

LICENSES AND CERTIFICATIONS

Python for Everybody Specialization | University of Michigan (via Coursera) — Jul. 2020
Remote Pilot Certificate, Small Unmanned Aircraft System | Federal Aviation Administration — Feb. 2020
CATIA Wire Harness Design Certification | Toyota Motor Company — Aug. 2019

PROJECTS / CONFERENCE PRESENTATIONS

Design and Modeling of Autonomous Vehicle using Simulink | Wayne State University, ME 4420 — Fall 2018

- Designed a Level 2 Autonomous Vehicle controller with Simulink utilizing state-flow charts and control loops in a team of 2.
- Developed controls and behaviour trees using Simulink to account for the functional requirements of day-to-day highway driving.
- Utilized MATLAB to generate plots and graphical representations for a driving scenario for the control and independent vehicles

Aftermarket 360º View Camera System for Passenger Vehicles | Wayne State University, ME 4500 — Fall 2018

- Collaborated with a team of 3 in the design of a $400 aftermarket 360º view camera system for passenger vehicles.
- Designed custom 3D-printed components with UG NX and used an Arduino controller for interfacing and controls.
- Created APQP documentation (DFMEA, DVP&R) to ensure quality and functionality, and to optimize system function.

Synopsis of Automobile Nano-Particle Emissions and Measurement in Bangladesh | AABEA Conference 2016 — Summer 2016

- Researched automobile Nano-Particle emissions data and measurement methods in Bangladesh, and historical effect on health.
- Discussed the causes of excessive Nano-Particle emission, historical trends, and methods of measuring Nano-Particle emissions.
- Proposed policy of measuring PM emissions in key location and sharing the data over public broadcast systems to raise awareness.
- Presented technical paper and presentation at the 2016 convention in Detroit, MI. to a panel of engineers and government officials.