SHRUTHI SURESHKUMAR

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EDUCATION

Northeastern University, Boston, MA GPA: **3.4**/4.0
Candidate for Master of Science in Mechanical Engineering *May 2021*
Coursework: Elasticity and Plasticity, Computer-Aided Design and Manufacturing and Lean concept and applications
Activities: Society of Women Engineers (SWE) - Member

Hindustan University, Chennai, India GPA: **3.8**/4.0
Bachelor of Technology in Aeronautical Engineering *May 2017*
Coursework: Finite Element Analysis, Computer Aided Design and vibrations.
Activities: 1 of 4 team representing India to compete in Hackathon "Hack the North" conducted by the University of Waterloo, Canada.

SKILLS

Mechanical Engineering: Lean Manufacturing, GD&T, wiring harness schematics, Root cause analysis, FMEA, DFMEA, technical data & report generation, Quality Management system, Experimental modal testing and data acquisition, Part manufacturing, G code, Detail & assembly drawings, ASME and ISO standards, 2D/3D modeling. Finite element analysis, Electrical power generation and distribution, Connector and wire gauge selection, Flammability testing, HEV, PDCA, DMAIC and dynamic Signal analysis.
Software: AutoCAD, Solidworks, Mentor Graphics (2D Wiring routing and drafting), Creo Parametric, CATIA, MATLAB, Python, ANSYS Workbench, M+P VibRunner (Vibrational Analysis), MS Office
Certification: Master Diploma in Automotive Design, CSWA, CSWP, LAI Lean Academy.

PROFESSIONAL EXPERIENCE

Axiscades Engineering Technologies Ltd., Bangalore, India *July 2017 – August 2019*
Electrical Wiring Interconnect System (EWIS) Designer
- Involved in design, integration and development of 120+ electrical wiring harness with AC & DC power generation using Mentor Graphics, a 2D design tool for Bombardier Global 7500/8500 series.
- Performed quality checks, finalized hardware circuit and conducted training to improve the cross-functional team for 5 interns.
- Created electrical system schematic dataset using system interface diagram to include connectors and wire gauges.
- Implemented design changes in Engineering Change Notice (ECN) of wiring diagram and involved in preparation of BOM, wire harness list, design rule check and internal quality check through macro in excel platform.
- Effectively interacted with customer for troubleshooting technical issues related to aircraft equipment wiring.

Flammability Certification Support
- Collaborated with design approval engineers to create test report and review test plan documents as per FAR 25.853, FAR 25.855 and FAR 25.856 standards for certification from transport Canada.

ACADEMIC PROJECTS

Improving quality process in flammability testing with lean concepts *March 2020*
Northeastern University, Boston, Massachusetts
- Improved plant layout as per Value stream mapping and implemented process automation to reduce process time by 10%-14.2%.
- The failure rate during quality check was reduced to 5%, further reduced rework and followed 5S ideologies in file management.

CAD Modelling on One-wheel Skateboard *March 2020*
Northeastern University, Boston, Massachusetts
- Reverse engineered one-wheel electric skateboard by changing its material, design of hub-frame section and enhanced safety features.
- Verified design and FEA simulations, further generated the mold and NC toolpath with G code for the hub section and frame structure.

Structural Investigation on the scaled model of advanced launch vehicle *December 2016- May 2017*
Indian Space Research Organization, Sriharikota, India
- Designed the brackets holding strap-on boosters to the core of an advanced launch vehicle system by scaling to 1:12.8 ratio.
- Evaluated stresses and buckling load of the spacer frame for motor chambers considering thick cylinder theory.
- Simulated experimental load testing using hydraulic power packs, hot flow model test on the launch vehicle.
- Computed stress distribution and peak value of power spectral density generated by random loading, further verified with FEA.
- Simulated modal analysis using data acquisition to interpret the graphical representation of various mode shapes were performed using MATLAB program to determine natural frequency and modal damping.

ACTIVITIES

Smart India Hackathon 2019, *Evaluator* *March 2019*
- Supported hackathon event by working as an evaluator to shortlist three top teams as per organization's problem statement.