Harshit Aneja

LinkedIn: https://www.linkedin.com/in/harshit-aneja1701/ Mail: harshit17196@gmail.com
Portfolio: https://harshit17196.github.io/ Phone: +1-469-996-3785

EDUCATION

The University of Texas at Dallas, Richardson, USA — May 2021
Master of Science in Mechanical Engineering (Johnson School Merit Scholar) — **GPA 3.56/4.0**

Guru Gobind Singh Indraprastha University, New Delhi, INDIA — July 2018
Bachelor of Technology in Mechanical and Automation Engineering — **75.46%**

SKILLS

Design : SolidWorks **(Certified SolidWorks Associate),** AutoCAD**,** Autodesk Inventor, CATIA, Creo, Revit, ProE, NX
Simulation : ABAQUS, Ansys (FEA), APDL, MATLAB, Simulink, Minitab
Programming : LabVIEW, Python, C++, C, HTML, CSS

WORK EXPERIENCE

Manufacturing Engineer | Schlumberger, TX, USA — Aug 2021- Present
- Standardizing the stator mold tooling using DFM to facilitate injection of elastomer for the manufacturing of stators.
- Designed Value Stream Mapping on MS Visio to reduce the lead time by 18% for the manufacturing of stators, rotors and bearings.
- Creating SWIs for different processes to ensure compliance with HSE; analyzing stator drawings on CreO; creating process routes on Enovia GEMS and Oracle for ease of manufacturability of the products.

Teaching Assistant, Department of Mechanical Engineering | University of Texas at Dallas, TX, USA — Aug 2020 – May 2021
- Freshman class of 100 students; managed discussion board and graded tests and assignments on a daily basis.
- Sophomore class of 150 students in Statics and Dynamics; worked on LaTex for formulating assignment and test solutions.

Mechanical Engineer Intern | Shakti Foundry and Engg. Works , INDIA — Aug 2018 – Feb 2019
- Implemented the results of research project 'Optimization of Casting Parameters using Taguchi Method'; optimized casting parameters and brought down casting rejections from 8% to 3%.
- Applied GD&T (ASME Y14.5) standards in designing taper lock pulleys and pin bush couplings on SolidWorks to minimize casting defects; executed power distribution network for the installation of Induction Furnace for melting cast-iron.

Manufacturing Engineer Intern | Suneel Auto Comp Pvt Ltd, **INDIA** — Jul 2017 - Aug 2017
- Worked at sheet metal workshop of 'Maruti Suzuki Pvt Ltd', conducted quality checks of about 20 sheet metal components such as fender, body side and doors as per ANSI standards.
- Initiated DFMA principles to reduce part count; collaborated in designing jigs and fixtures for material handling and ensured lean manufacturing practices are followed; increased production on assembly line by 6%.

Mechanical Engineer Intern | Indosolar Limited, **INDIA** — Jun 2017 - Jul 2017
- Documented the deposition rate of bus bar printing on solar cells every hour to reduce power consumption and cost.
- Assisted design team in creating a substitute conveyor belt on SolidWorks along the main line; increased energy efficiency by 4%.

PROJECTS

Design of an Exoskeleton Chair (Self project)
- Designed and simulated a **CAD** model of an energy efficient exoskeleton chair using **SolidWorks**, used complaint mechanism to limit linkages instead of hinged joints, manufactured the prototype using Fused Deposition Modeling method.

Wheel hub assembly analysis for Formula SAE Cars
- Designed the wheel upright assembly on **SolidWorks** and analyzed it on **ABAQUS** to improve power transmission for Aluminum 7075 T6 and CFRP materials. Calculated the maximum deformation and stresses incurred on the assembly under the effect of longitudinal forces; identified methods to additively manufacture the assembly.

Investigation of powder flow in Directed Energy Deposition process (Self project)
- Dynamic movement of the powder flow particles was simulated using **ANSYS**-Fluent, evaluated for DPM concentration and velocity magnitude and compared under different nozzle structures, feed angle and flow rate.

Analysis of cantilever beam for plane stress using Ansys APDL and MATLAB (Self Project)
- Optimized a cantilever beam for plane stresses using **MATLAB** and **Ansys Q4** and **Q8** elements for different mesh densities. Computed error in analytical and simulation results for maximum deflection of the beam on log-log scale plot.

Optimization of Casting Parameters using Taguchi Method
- Prominent casting parameters and their effects on casting defects were identified. Sand testing methods were used to vary the values for each parameter and samples were cast for experimentation. **Minitab** analysis was conducted to identify the optimal values according to L-9 array.

ACTIVITIES & ACHIEVEMENTS

- **Treasurer, Indian Students Association**, University of Texas at Dallas. June 2020-May 2021
  Managing budget and financial related activities of the association.
- Published a **research article** in **International Journal of Mechanical and Production Engineering Research and Development** (Vol 8, Issue 4, August 2018), a Scopus Indexed Journal.
- Participated in the **National Service Scheme** camp Jan-Apr 2016
  Undertook social service activities like cleaning of slum areas and organization of activities to promote literacy.