**Vimal Choudhary**

**Email:** Vimalchaudhary95@gmail.com **Mobile No:** 313-442-6169

**Professional Summary:**

* Proficiency in creating 3D CAD part models, assemblies, surfacing, and 2D drawing using CAD tools
* Proficient in applying the concepts of **Finite Elements Methods** (FEM/FEA) in evaluating the vehicle performances and **optimize their design**, **Additive Manufacturing**, **CNC Programming, Lean Six Sigma, ISO 13485**
* Quick learner with excellent interpersonal communication skills and problem-solving analytical skills.Proficient in cross-functional team communication

**PROFESSIONAL EXPERIENCE**

**Manufacturing Process Associate, Thermo Fisher Scientific, PA June 2020 – Present**

* Validated the process and performed the **risk assessment,** and implemented **lean tools** to reduce the wastes
* Monitored production processes and worked with production personnel to create standard work procedures, enhance flow, and implemented Lean concepts (**5S, Kaizen, One Piece Flow, Root Cause Analysis**)
* Collected the data from the **quality technicians** & proposed the correction and prevention action plan for **deviation**
* Working with project teams to prepare **engineering drawings** using **SolidWorks** that detail plans and specifications for customer
* Reviewed and updated validations (**IQ/OQ/PQ** protocols), **Standard Operating Procedures (SOP**), **technical reports,** and final reports for new products, and processes
* Good understanding of the **cGMP**, **OSHA**, and process validation-risk assessment by studying the process

**J.P Steel Centre, Mumbai June 2017- December 2017**

* Generate costing and final quote for **customer submission** utilizing the established process and performed Audits
* Produced documentation (**BOM**) to support sales and working with vendors to maintain the flow of materials
* Instruct and assist workers on the shop floor and maintain in-time delivery
* Completed the reports and documentation like purchase orders and **coordinate with customers and suppliers**

**Manufacturing Processes Mechanics, Wayne State University December 2019**

* Created a bracket using **SolidWorks** and then calculated the load capacity of the bracket using **Hypermesh** and **ABAQUS**
* Determined the **deflection** at the loading point and **stress analysis** of the same bracket using different mesh sizes
* Studied the effect of mesh density on the same model varying from coarse to a fine mesh
* Determined the **buckling load** of the bracket and proposed how to improve the buckling capacity

**Composite of Material, Wayne State University December 2018**

* Created and implemented a design plan for wind turbine laminate design
* Analyzed various iterations of angle ply carbon fiber composite by using **Tsi-Hill failure criteria** for successful turbine blade
* Assumed wind loading and **calculated stresses** in each ply on the laminate using **MATLAB** and **C++**

**Thermal Analysis of Flip-Chip Package, Wayne State University December 2018**

* Created the **3D model** using **AutoCAD** and carried out **Finite Element Analysis** using **Hypermesh** and **Ansys**
* Analyzed the effect of manufacturing induced defects on the **fatigue life** of Flip-Chip package subjected to thermal cyclic loading
* Thermal **stresses and strain** for fatigue life were calculated using a simplified and reduced model for two different packages with and without impurities.

**EDUCATION**

**Master of Science in Mechanical Engineering August 2018 – April 2020**

Wayne State University, Detroit, Michigan

**Bachelor of Technology in Mechanical Engineering May 2013 – April 2017**

Don Bosco Institute of Technology, Mumbai

**Skill Set**

* **Technical Skills:** Manufacturing Techniques, Process Cycle Time Reduction, GD&T, DFMEA, Product Lifecycle Management (PLM), Sheet Metal Design, Fatigue Analysis, PFMEA, Injection Molding, 3D Modeling, ECN
* **Software skills:** Word, Excel, PowerPoint, C++
* **Design:** SolidWorks, Siemens NX, CATIA, PTC Creo **Certification:** AutoCAD

**CAE:** Hypermesh, Ansys, MATLAB, Abaqus

**VOLUNTEER EXPERIENCE**

**Student Assistance, Wayne State University (Detroit, MI) November 2018 – April 2020**

* Performed inbound and outbound package audits, prepare and submitted reports on time
* Facilitated data collection and information gathering with clients (Corvias, Corq, etc.) using Microsoft Access
* Appropriately communicating with the Community Director, Office service Clerk, Resident Advisers, and Desk assistant regarding building updates
* **Awarded desk assistant of the month In November 2019, April 2020**