Siddhesh Shailesh Rajput

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SKILLS

- **Software**: SolidWorks, Creo Parametric (Pro/Engineer), AutoCAD, CATIA V5, ANSYS, ABAQUS, Quindos, RAM Elements, RAM Connections
- **Computer skills**: MATLAB, Microsoft Office (Excel, Word, PowerPoint, Project, Outlook)
- **Fabricating skills**: CNC Machining (G&M codes programming), Welding, Cutting, Grinding, Drilling and Milling
- **Lean Six Sigma tools:** DFMEA, Root Cause Analysis, 5S, Control Charts, VOC, Hypothesis Testing, Value Stream Mapping

PROFESSIONAL EXPERIENCE

Mechanical Engineer: Pneu-Mech Systems Mfg. Inc., Statesville, NC **July 2019-Present**

- Identified and effectively solved a major design bottleneck generating a $20k loss using DMAIC principle.
- Eliminated a $35k inventory waste using Fishbone Diagram and optimized inventory space by 20%. Supported the team of 10 by developing and modifying project charter, and managed schedule for projects worth $5 million using MS Project.
- Headed engineering calculations to design motors, burners, pumps, centrifugal fans, and ductwork of automotive paint finishing equipment like pre-treatment washer, ovens, and booths in accordance with ASHRAE standards.
- Collaborated with sales, manufacturing, and installation team to Design to Cost, Design for Manufacturability and Design for Assembly. Drafted and generated bills of material and 2D drawings for parts and assemblies on AutoCAD and SolidWorks.

ACADEMIC PROJECTS

Vision Inspection System: Graduate Design Project, Schaeffler Group USA **August 2018 – May 2019**

- Designed CAD models of various components of the electro-mechanical sub-system using Creo Parametric (Pro/Engineer) to meet customer product requirements. Prepared 2D and 3D drawings using geometric dimensioning and tolerancing (GD&T).
- Designed and selected stepper motors and linear motion drive according to force/torque calculations for optimum results.
- Chose quality material to reduce cost by 60%. Performed manual stress/strain calculations on the parts and finite element analysis on CAD models on ABAQUS to evaluate von Mises Stress and deformation under static and dynamic load.
- Generated purchasing orders and bill of materials for the electro-mechanical sub-system. Handled 3D printing operation.

Analysis of a bar fixed at one end: Finite Element Analysis Project, UNC Charlotte **May 2018**

- Developed a MATLAB code for one-dimensional analysis of a bar fixed at one end and free at left end to take user input and perform modal analysis using Gauss Quadrature rule and dynamic analysis using a Heaviside function.
- Analyzed the cause of error, calculated and plotted the displacement and stress values in the time loop for dynamic analysis

LEADERSHIP AND CAMPUS EXPERIENCE

Suspension Department Head, Team DJS Kronos India, BAJA STUDENT INDIA **March 2015-February 2016**

- Led the sub-team of 7 students out of the team of 30 for the continuous improvement of design for manufacturability, cost, and weight of the components. Reduced the overall weight of the system by 40 lbs. and conducted manual testing of the parts.
- Designed and modeled steering upright and double wishbone suspension system to improve machinability on SolidWorks. Performed static analysis and dynamic analysis to improve life cycle and reduced stress by 20 % on ANSYS Workbench.
- Generated bill of materials (BOM) and design failure mode and effect analysis (DFMEA) report. Communicated within the sub-team to achieve the goal in time as per project plan and collaborated with other sub-teams to design for assembly.
- Team secured **8th** position overall and **1st** in Maneuverability event in BAJA STUDENT INDIA 2016.

Member, Team DJS Kronos India, BAJA STUDENT INDIA **March 2014- February 2016**

- Performed design calculations of spring, modeled spring-mass-damper system and selected optimum shock absorber.
- Designed and fabricated double wishbone suspension on SolidWorks. Drafted 3D & 2D CAD into drawings using geometric dimensioning and tolerancing (GD&T) and generated Design Verification Plan and Report.

EDUCATION

Master of Science in Mechanical Engineering (GPA: 3.8/4.0) **May 2019**
The University of North Carolina at Charlotte, Charlotte, NC

Bachelor of Engineering in Mechanical Engineering (GPA: 3.3/4.0) **May 2017**
University of Mumbai, Mumbai, India

Relevant Coursework: Project Management, Finite Element Analysis, Mechatronics, Machine Design, Advanced Manufacturing Processes and Equipment, Gear Manufacturing and Metrology, Machine Tool Metrology, Material Technology, Heat Transfer

CERTIFICATIONS

- **Certified SolidWorks Professional-Mechanical Design**: Dassault Systemes **May 2020**
- **Certified SolidWorks Professional-Advanced Sheet Metal**: Dassault Systemes **May 2020**
- **Lean Six Sigma Green Belt**: Six Sigma Global Institute **May 2019**
- **Catia V5 with GD&T:** CADD Centre Training, Mumbai **May 2017**