VISHWARAJ PRAVIN KOLGE

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SUMMARY

5 years of experience in engineering design and development. Drove $560K in cost savings through design improvements. Adept at full product lifecycle management and cross-functional collaboration. Working knowledge of hydraulics, fluids, and thermal engineering. Experience in supplier and customer interactions, product validation, and technical documentation.

WORK EXPERIENCE

White Drive Motors and Steering – Design Engineer, Hopkinsville, KY, USA   *Apr '24 – Present*
- Resolved hydraulic motor design and field issues, boosting quality, reliability, and manufacturability
- Developed and maintained motor test specifications and load curves, ensuring functional integrity and reliability
- Orchestrated end-to-end project to insource hydraulic motor sub-components due to supplier issues, driving 50% cash-flow retention – managed timeline including CAD/BOM updates, material procurement, PPAP, and testing
- Validated design and supplier changes through controlled testing, enabling 30% COGS savings
- Managed engineering changes and product lifecycle by leveraging NX CAD, SAP, Teamcenter PLM, and ProjectLibre to develop and maintain technical documentations, minimizing design risks and post-change issues

T.RAD North America, Inc. – Design Engineer, Hopkinsville, KY, USA   *Apr '21 – Apr '24*
- Executed 6 product development projects for automotive heat exchangers, ensuring optimal feasibility, performance, reliability, manufacturability, cost-effectiveness and customer satisfaction
- Implemented 56 engineering changes within deadlines with a 98% first-pass approval rate, minimizing rework hours
- Achieved 96% reduction in defects rate of stamped metal parts through structured problem-solving approaches
- Drove VA/VE initiatives, achieving $560K in cost savings while upholding product integrity and quality
- Designed and optimized sheet metal and plastic molded components for manufacturing and assembly, collaborating closely with manufacturing, production, quality, and suppliers to ensure cost-effective solutions
- Executed 6 DFMEA analyses to identify and mitigate potential risks, enhancing product quality and reliability
- Performed FEA and CFD analyses using ANSYS, driving optimized design solutions for complex thermal systems
- Developed comprehensive product specifications and test plans, coordinated prototype builds and testing, and resolved failures, ensuring compliance with internal standards, safety regulations, and customer requirements

UNC Charlotte, Computational Mechanics Lab – Researcher, Charlotte, NC, USA   *Jul '20 – Apr '21*
- Generated 100+ ABAQUS FEA models with cohesive elements, improving analysis efficiency
- Automated modeling processes with Python scripting to generate unique model variations per run

Wolfe Underline Design – Design Engineer Co-op, Mooresville, NC, USA   *Nov '19 – Dec '19*
- Applied reverse-engineering techniques using gauges and calipers to create parts and drawings in SolidWorks

Enventys Partners – Product Development Intern, Charlotte, NC, USA   *May '19 – Aug '19*
- Designed, built, and tested prototypes for closet lighting IoT system, contributing to successful launch at CES 2020
- Developed electronic enclosure designs using SolidWorks, employing rapid prototyping techniques

SKILLS

- **Engineering:** Thermal Management, Heat Transfer, Hydraulics, Strength of Materials, Machine Design, FEA, CFD
- **Manufacturing:** Metal forming and stamping, plastic injection molding, casting, machining, surface and heat treatment
- **Technical:** Specification development, product testing and validation, failure analysis, prototyping, VA/VE, CAD modeling, drawing preparation, BOM management, GD&T ASME Y14.5, technical report and documentation
- **Problem-Solving:** Failure Mode and Effects Analysis (FMEA), 8 Disciplines (8D), Root Cause Analysis (RCA)
- **Project Management:** Project planning and monitoring, process and resource optimization, Product Lifecycle Management (PLM), cross-functional collaboration, effective communication
- **Tools:** NX, SolidWorks, Creo, CATIA, SAP, Ansys, Python, MATLAB, Minitab, Teamcenter, ProjectLibre, MS Office

EDUCATION

University of North Carolina at Charlotte, Charlotte, NC, USA   *Aug '18 – May '20*
Master of Science (MS) in Mechanical Engineering   GPA: 4.0 / 4.0

University of Mumbai, Mumbai, MH, India   *Jul '13 – May '17*
Bachelor of Engineering (BE) in Mechanical Engineering   GPA: 8.0 / 10.0