

KAUSHAL NARAYAN BUDANUR

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EDUCATION

Master of Science, Mechanical Engineering

North Carolina State University, Raleigh, North Carolina

August 2022 – May 2024

Relevant Courses: Finite Element Analysis 1, Digital Manufacturing, Project Management, Engineering Design Optimisation

CGPA:3.66/4.0

Bachelor of Engineering, Mechanical Engineering

Visvesvaraya Technological University, Belagavi

September 2018 – July 2022

Relevant Courses: Design of Machine Elements, Mechanics of Machines, Finite Element Methods, Total Quality Management

CGPA:8.46/10 (First Class with Distinction)

EXPERIENCE

Precision Engineering Consortium-NCSU, Raleigh, Graduate Research Assistant

December 2022 – Present

- Engaged in an ongoing initiative enhancing the precision of lens thickness measurements for VR devices with responsibilities consisting of overseeing the design and fabrication of critical components, as well as crafting tool paths and MATLAB code.
- Upgraded a CNC machine's encoder system on one axis by inspecting encoders, procuring parts, and machining custom mounts for seamless integration onto the CNC machine.
- Collaborated on projects involving the creation of intricate CAD models for machining and 3D printing, as well as the development of tool paths for diamond turning of Aluminium.

Greaves Technologies Limited, Bengaluru, Mechanical Engineer Intern

March – April 2022

- Collaborated with the R&D team to contribute to the design and development of plastic body panels for an upcoming electric motorcycle, focusing on enhancing its aesthetic appeal and functionality.
- Demonstrated strong project management skills by overseeing the end-to-end process of creating the design, validating the injection moulding tool, and checking fit on prototypes of the electric motorcycle.
- Designed a specialized apparatus to assess the durability and performance of the motorcycle's throttle to ensure its reliability and safety under various operating conditions.

Bharat Electronics Limited, Bengaluru, Project Intern

August – September 2021

- Assisted in the design process and conducted a structural comparison of the lower mount on the Lynx U2 Fire Control System.
- Performed Finite Element Analysis comparing the previous generation Lower Mount to the newly designed Lower Mount on Ansys, and the result obtained indicated an 18% improvement in the structural stability and establishing newly designed Lower Mount was a superior substitute for the OEM lower mount.

ACADEMIC PROJECTS

Project Management, North Carolina State University

- Led the product design engineering efforts in a comprehensive mock project and was responsible for defining key features and specifications of the proposed product.
- Collaborated with the team to create Gantt charts, perform budgeting, and conduct PERT analysis, resulting in a well-structured project plan and a successful stakeholder presentation.

Finite Element Analysis-1, North Carolina State University

- Assembled stress and strain analysis simulations for structures made of isotropic materials on ANSYS APDL.
- Calculated stiffness, displacement, stresses, and strains of isotropic materials using MATLAB.

TECHNICAL SKILLS

Core Competencies: product design and development, FMEA, mechanical sub-assemblies, assembly drawings, root cause analysis, sheet-metal design, data analysis, problem solving skills, circuit boards, project management, stress and strain analysis, lead time reductions, static and dynamic structural analysis, fluid dynamics, engineering drawings, GD&T, drafting, Precision engineering and Manufacturing.

Software: SolidWorks, Autodesk Fusion 360, Ansys Workbench, Siemens UGNX, CAD, CAM, Microsoft Office Suit, MATLAB, Microsoft Project, JMP

Programming Languages: Python, C

CERTIFICATIONS

- Machine Learning Foundations certification, Coursera, May 2021
- Lean Six Sigma White Belt Certification, The Council for Six Sigma Certification, Apr 2022
- Quality Management for Operational Excellence, Project Management Institute, Jul 2023