Rounak S Kaveri

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Professional Summary

Final-year Mechanical Engineering student at BMS College of Engineering (VTU) with hands-on experience in 3D component design, structural simulation, and manufacturing process fundamentals. Proficient in SolidWorks for part and assembly modelling, and ANSYS for FEA-based structural validation. Familiar with multi-material design principles across plastics, metals, and composites. Seeking an engineering role where I can contribute to component development, design validation, and manufacturing process improvement in an automotive environment.

Education

BMS College of Engineering, VTU *2023 – 2027*
Bachelor of Engineering — Mechanical Engineering CGPA: 7.5 | Bengaluru, Karnataka

Dr. R.B. Patil Mahesh PU College *2021 – 2023*
Pre-University — Science (PCMB) Aggregate: 80% | Hubli, Karnataka

J.S.S. School *2021*
Secondary Education (SSLC) Aggregate: 85% | Hubli, Karnataka

Projects

Design and Simulation of a Slotted Aerofoil — Multi-material Geometry Study | *SolidWorks, ANSYS Fluent* *2024*

- Modelled a slotted aerofoil geometry in SolidWorks, applying constraint-driven design to achieve precise slot geometry while maintaining structural integrity of the profile.
- Conducted steady-state fluid simulations in ANSYS Fluent to map pressure distributions and flow behaviour across varying operating conditions directly applicable to fluid management component validation.
- Performed iterative geometry refinement based on simulation feedback, improving performance metrics while optimising material usage consistent with a DFM (Design for Manufacturability) mindset.
- Documented the full design-to-simulation workflow, covering mesh strategy, boundary conditions, and result interpretation in a structured engineering report.

Experience

Upagraha Satellite Club, BMSCE *Nov 2024 – Present*
Structures Engineer Bengaluru, India

- Designed load-bearing structural components for a CanSat payload in SolidWorks, applying material selection and mass optimisation principles relevant to high-volume component design.
- Validated component designs using ANSYS FEA under vibration and thermal loading methodology directly transferable to automotive component qualification testing.
- Revised component geometry iteratively based on simulation results, improving structural margins while reducing material volume; demonstrated trade-off analysis between weight, strength, and manufacturability.

FALCONS Multimedia Club, BMSCE *Mar 2025 – Present*
Club Coordinator Bengaluru, India

- Managed cross-functional coordination across 10+ concurrent workstreams for UTSAV 2026, a 3-day institutional event demonstrating project planning, stakeholder management, and delivery under deadline.
- Coordinated documentation, streamlined communication workflows, and facilitated team briefings for a 100+ member volunteer team.
- Led sponsorship outreach and brand partnership negotiations with companies including Samsung, ITC, and emerging consumer brands; developed pitch materials and managed relationship timelines.

Technical Skills

CAD / Design	SolidWorks (parts, assemblies, GD&T aware drawings)
Simulation / FEA	ANSYS (structural, thermal, vibration), ANSYS Fluent (fluid flow, RANS)
Manufacturing	Manufacturing Process Planning, Material Selection, Composite Manufacturing, Injection Moulding fundamentals, Metal Forming basics
Materials	Plastics, Rubber, Metals, Fibre-reinforced composites properties and processing
Programming	Python (basic scripting), MATLAB (basic)
Tools	MS Office Suite, Adobe Suite, technical report writing

Languages & Linguistic Abilities

English	Professional proficiency (Technical writing, business communication)
Kannada	Native proficiency (Fluent in speaking, reading, writing)
Marathi	Intermediate proficiency (Conversational, reading competency)
Hindi	Native proficiency (Fluent in speaking, reading, writing)

Personal Details

Date of Birth	20 April 2005
Nationality	Indian
Gender	Male
Permanent Address	Hubballi, Karnataka, India