Anoop Subramanya

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Innovative mechanical engineer specializing in design and analysis, passionate about optimizing systems through advanced CAD modeling, simulation, and collaborative engineering, seeking to drive innovation in a mechanical design role.

EDUCATION

University of Colorado, Boulder — Jan 2024 – Dec 2025(Planned)
Master of Science in Mechanical Engineering
- GPA: 3.6
- Relevant coursework: Design for manufacturability, Finite Elemental analysis, Computational Fluid Dynamics, Mechanical behaviors of materials, Advanced product Design

Acharya Institute of technology, Bangalore, India — Aug 2019 – May 2023
Bachelor of Engineering in Aeronautical Engineering
- GPA: 3.5
- Relevant coursework: Aerodynamics, Control Systems, Aircraft Propulsion Systems, Robotics and UAV Design

TECHNICAL SKILLS

CAD and Simulation tools: AutoCAD, SolidWorks, GD&T, DFM, Ansys workbench & APDL, Abaqus
Programming: Python, C-Programming, MATLAB
Others: Microsoft Office Suite,3DPrinting

PROFESSIONAL EXPERIENCE

University of Colorado, Boulder — Jan 2025 – May 2025
Graduate Course Assistant for MCEN 5228 Advance Dynamics
- Graded assignments, exams, and projects with precision by utilizing MATLAB for automated analysis and evaluation, ensuring accurate assessment and timely feedback.
- Developed course materials in collaboration with faculty to create interactive simulations, raising student engagement and improving conceptual understanding of dynamic systems.

Government Flying Training school
Intern Trainee — Aug 2022 – Sept 2022
- Performed detailed inspections and preventive maintenance on Cessna and TECNAM aircraft, strengthening operational safety and reliability by 15% through rigorous quality checks.
- Diagnosed mechanical issues and implemented performance optimizations, reducing aircraft downtime by 20% through efficient repairs and strict adherence to quality standards.
- Collaborated with senior engineers to analyze and refine advanced systems, ensuring 100% compliance with regulatory documentation while expanding expertise in aviation mechanics.

PROJECTS

CFD Analysis of Heat Sink Cooling Performance
Project Lead — Jan 2025 – May 2025
- Simulated thermal performance of aluminum finned heat sinks under forced convection using Phoenix CFD solver in a Conda environment.
- Implemented meshing and boundary conditions for airflow scenarios to optimize heat dissipation efficiency.
- Used Para-View for post-processing to visualize temperature gradients and streamline thermal management insights, resulting in a 22% performance improvement in passive cooling efficiency.

Free-Piston Linear Generator
Mechanical Design Engineer and Logistics Manager — Aug 2024 – Dec 2024
- Engineered a high-efficiency free-piston linear generator, leveraging advanced mechanical design and simulation tools to improve energy conversion productively by 18%.
- Collaborated with cross-functional teams to troubleshoot and refine design iterations, improving reliability by 22%.
- Utilized SolidWorks, Ansys Workbench, and GD&T principles to ensure manufacturability and operational excellence.

Novel design of Laptop stand with modular cooling system
Project Manager — Nov 2024 – Dec 2024
- Led mechanical design and development of a modular cooling system for laptops, translating user requirements into a flexible, user-centric product.
- Conducted thermal and mechanical testing, increasing device cooling efficiency by 25%.
- Created detailed 3D models and technical drawings using SolidWorks, ensuring manufacturability and optimizing assembly processes for cost efficiency and easy assembly, improving adaptability for diverse user needs by 30%.

Reverse engineering of a Dyson bladeless fan (DP-01)
Project Manager — Aug 2024 – Oct 2024
- Conducted in-depth reverse engineering analysis of the Dyson DP-01 bladeless fan, identifying key engineering principles and potential improvements, enhancing airflow economy by 12%
- Proposed design optimization in airflow dynamics and energy consumption, improving overall energy utilization by 17% while maintaining performance standards.
- Recommended design refinements to enhance manufacturability and reduce production complexity by 10%.

LEADERSHIP & INVOLVEMENT

CU Recreational center
Joint board member — Oct 2024 – Present
- Advocated for graduate and professional students on recreation, well-being, and policy matters.
- Ensured transparent communication between GPSG, the Recreational Board, and students.