Pramod Tharu

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Summary

I'm a third-year Aeronautical Engineering student with solid experience in CAD software like Autodesk, SolidEdge, and CATIA, and hands-on knowledge of CFD using ANSYS Fluent. I'm intrested about aerodynamics, thermodynamics, and tackling complex problems with math. I'm looking for an opportunity to apply my technical skills, work on innovative projects, and continue learning and growing in the aerospace industry.

Education

B.Tech (Aeronautical Engineering) 2022-Present
Acharya Institute of Technology

Higher Secondary Education Year-2022
Himalayan Whitehouse International College

Secondary Education Year-2020
Bardiya Academy and Polytechnic Research Center

Skills

- CAD Software: Proficient in Autodesk, Solid edge, CATIA
- CFD Tools: Experience with ANSYS Fluent
- Aerodynamics & Thermodynamics
- Finite Element Analysis (FEA)

Certification

- Python Programming
- Digitalisation in Aeronautical and space
- Digitalisation in Aeronautical
- Digitalisation in the Aerospace Industry
- Digitalisation in space Research

Link : https://github.com/tharupramod/pdf-viewer

Projects

Hexacopter Drone Development
Built and tested a fully functional hexacopter, improving flight stability by 15% and control accuracy by 10% through calibration and real-time adjustments. Developed a troubleshooting framework with monitoring tools for efficient performance evaluation.

Wind Turbine Blade Optimization
Designed and analyzed a 10m wind turbine blade using the NACA 4415 airfoil. Optimized blade solidity by integrating aerodynamic flaps, improving efficiency and lift performance. Utilized CAD and CFD tools (Solid Edge & ANSYS Fluent) for modeling and flow simulation.

Drone Detection and Tracking using Computer Vision
Developed a real-time drone detection system using YOLOv12 and DeepSORT. Trained on 9,500+ labeled images via Roboflow, achieving 98.3% mAP@50. Integrated a Raspberry Pi 4B with a Pi Camera on a drone for live video streaming and dual-axis tracking using servo-controlled mount.

Link: https://github.com/tharupramod/project-drone-viewers/tree/drone