Pramod Tharu

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Summary

Final-year Aeronautical Engineering student with strong proficiency in design and analysis software including SolidWorks, AutoCAD, CATIA, ANSYS Fluent, and OpenFOAM. Skilled in aerodynamics, thermodynamics, and computational methods, with proven ability to apply mathematical approaches to solve complex engineering problems. Seeking to leverage technical expertise and project experience in design, simulation, and analysis within 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

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

Skills

- CAD Software: Proficient in AutoCAD, Solid edge, CATIA,solidwworks.
- CFD Tools: Experience with ANSYS Fluent , OpenFOAM
- Python
- Finite Element Analysis (FEA)
- Computer Vision

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

Portfolio:https://portfolio-main-gold-nine.vercel.app/