John Doe

john.doe@gmail.com | jdoe.dev | github.com/johndoe-aero

Summary

Experienced aerospace engineer with 5+ years in thermal analysis and structural optimization. Proven track record of leading cross-functional teams and delivering innovative solutions that reduce design time by 40% and improve system performance. Expert in satellite thermal management, spacecraft structural analysis, and advanced simulation techniques.

Skills

CAD & Design: Siemens NX, CATIA V5, SolidWorks, Fusion 360, AutoCAD, Inventor
Analysis & Simulation: Thermal Desktop, Abaqus, LS-DYNA, STAR-CCM+, ANSYS Fluent, MSC Nastran
Programming: Python, MATLAB, C++, Rust, Fortran, VBA
Data & Visualization: Pandas, NumPy, Matplotlib, Plotly, Jupyter, Power BI
Tools & Platforms: Git, Docker, Linux, AWS, Jenkins, Jira, Confluence
Specialized: Thermal Management, Finite Element Analysis, CFD, Optimization Algorithms

Education

Massachusetts Institute of Technology (MIT) – Ph.D. in Aerospace Engineering June 2020
Stanford University – Master of Science in Aeronautics and Astronautics June 2016
University of California, Berkeley – Bachelor of Science in Mechanical Engineering May 2014

Experience

Senior Aerospace Engineer, Boeing – Seattle, WA March 2020 – Present

- Led structural optimization of 787 wing components, reducing weight by 15% while maintaining safety margins
- Implemented machine learning algorithms for fatigue life prediction, improving accuracy by 25%
- Managed $2M budget for advanced materials research and testing programs
- Coordinated with international suppliers across 8 countries for composite manufacturing
- Published 3 peer-reviewed papers on advanced composite structures

Thermal Systems Engineer, NASA – Greenbelt, MD June 2018 – February 2020

- Designed thermal control systems for James Webb Space Telescope instruments
- Performed Monte Carlo thermal analysis with 10,000+ simulation runs
- Reduced instrument operating temperature variation by 40% through innovative heat pipe design
- Collaborated with ESA and CSA engineers on international space missions

Projects

ThermalOpt - Satellite Thermal Optimization Tool github.com/johndoe-aero/thermal_opt

- Open-source Python package for automated satellite thermal design optimization
- Integrates genetic algorithms with Thermal Desktop API for multi-objective optimization
- Used by 200+ engineers across NASA, ESA, and commercial space companies
- Featured in AIAA Journal of Spacecraft and Rockets
- Reduces thermal design iterations from weeks to hours

AeroSim - High-Performance CFD Server github.com/johndoe-aero/aerosim

- Built distributed CFD simulation server in Rust for aerospace applications
- Handles 100+ concurrent simulations with automatic load balancing
- Deployed on AWS with Kubernetes orchestration
- Achieved 3x performance improvement over legacy FORTRAN implementation
- Used in production by 5 aerospace companies