

Haitish Gandhi

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EDUCATION

Embry-Riddle Aeronautical University Honors Program (ERAU), Daytona Beach, FL

- B.S. Aerospace Engineering || Minor in Computer-Aided Design & Manufacturing

Fly Legacy Aviation, Philadelphia, PA

- Private Pilot's License

Dec 2026

GPA: 3.64/4.00

July 2022

TECHNICAL SKILLS

Systems Engineering: MBSE Principles, Verification & Validation, Trade Studies, Risk Analysis, Systems Integration, Requirements Development

Design & Simulation: CATIA V5, SolidWorks, MATLAB, Simulink, ANSYS Fluent, Siemens NX, STK, Fusion 360, 3DEXPERIENCE, Markforged

Programming & Software: Python, MATLAB, C++ (Arduino), LaTeX, Microsoft Office Suite, SAP, Linux, PowerShell, PID Control, IBM DOORS

PUBLICATIONS

- Design and Simulation of HyDroQuad – A Drone Quadraped Hybrid Robot

DOI: 10.2514/6.2026-1119

- Planetary Locomotion Systems for Enhanced Mobility Through Hybrid and Adaptive Methods.

DOI: 10.2514/6.2025-98207

- Applications of Bio-Inspired UAVs for Enhanced Aerial Capabilities.

DOI: 10.2514/6.2024-85665

WORK EXPERIENCE

Collins Aerospace RTX – Systems Engineering Intern || Cedar Rapids, IA

May 2026 – Present

- Execute integration, verification, and validation (IV&V) activities for Flight Management System (FMS) and airborne Data Link capabilities using hardware-in-the-loop (HIL) environments and aircraft laboratory test rigs to evaluate navigation, guidance, communication.
- Execute operational test scenarios involving flight planning, ADS-C contract establishment, waypoint progression, and Data Link messaging using FANS and ATN technologies to verify interoperability between Flight Management System and communication subsystems while validating performance against system requirements.
- Develop Python-based automation tools and engineering workflows to support software verification and simulation activities, including creating a structured prompt library that enables AI tools to generate communication scenario scripts for newly embedded simulation files, reducing manual scripting effort and standardizing test development.
- Investigate and troubleshoot Integration Management System (IMS) hardware boards by analyzing BIOS configurations, identifying root causes of boot failures, and supporting hardware validation and corrective action efforts.

Collins Aerospace RTX – Operations Systems Engineering Co-op || Melbourne, FL

Jun 2025 – Dec 2025

- Managed the development life cycle of a new cross-training management tool, from gap analysis to deployment, to ensure efficient allocation of operator skills and prevent disruptions in the process flow, that increased operational flexibility and boosted productivity by 3%.
- Architected and managed the framework for a site-wide ideas improvement program, establishing a clear process architecture for idea submission, review, and implementation that enhanced employee-led innovation using kanban ideology.
- Led the verification and validation of manufacturing cell layouts against 5S standards through the formal assessment of 9 distinct work cells.
- Developed and documented formal Standard Operating Procedures (SOPs) for the cross-training and continuous improvement systems; facilitated system deployment by training managers and Integrated Product Team (IPT) leaders on new protocols.

Academic Advancement Center - Tutor & Teaching Assistant || ERAU

Aug 2023 – Apr 2026

- Tutored undergraduate engineering students in MATLAB, CATIA V5, statics, dynamics, and solid mechanics.

PROJECT EXPERIENCE

HyDroQuad Project || Space Robotics and Generative Estimation Lab || Principal Investigator

Jan 2025 – Present

- Led a 3-member team developing a hybrid aerial-ground robotic platform, defining system architecture, requirements, interfaces, and verification strategy from concept through prototype demonstration.
- Performed system modeling, CFD simulations using ANSYS Fluent, and data analysis using MATLAB and Python to conduct trade studies, evaluate design alternatives, and optimize system performance against mission requirements.
- Developed a Python-based parametric modeling tool to evaluate propulsion, power, and payload architectures against mission requirements, enabling rapid trade studies, performance analysis, and requirements-driven design decisions for a hybrid aerial-ground robotic platform.
- Managed the project lifecycle using agile methodologies, overseeing hardware/software integration, verification and validation (V&V), risk assessment, configuration management, and system-level testing while documenting technical requirements and test procedures.

NASA L'SPACE Academy NPWEE Proposal Writing || Lead Systems Engineer

May 2024 – Aug 2024

- Led a 10-member multidisciplinary team to develop a thermal protection system concept for atmospheric re-entry, producing a complete proposal package and technical design review submission.
- Performed requirements decomposition, allocation, architecture development, and trade studies supporting system design decisions.
- Modeled a honeycomb tile structure with a regenerative cooling system for efficient thermal management, using Siemens NX CAD.

INVOLVEMENT

American Institute of Aeronautics & Astronautics || Events Outreach Officer / Member – ERAU

Apr 2024 – Dec 2025

Honors Students Association || Alumni Liaison Officer – ERAU

Aug 2024 – June 2025

CERTIFICATION

- CATIA V5 Specialist
- STK Level 1 (Ansys Systems)
- 3DEXPERIENCE Associate
- CRLA – Certified Tutor (ERAU)
- CORE Apprentice (Collins Aerospace)

AWARDS & HONORS

- Ignite Grant for Research (2025)
- AIAA Third Place Award (SP 2024)
- ERAU Dean's List (Present)
- Presidential Scholarship (Present)
- Undergraduate Research Scholarship

TECHNICAL INTERESTS

- Space Mission Design & Analysis
- Satellite Systems Engineering
- Spacecraft Dynamics & Control
- Autonomous UAV Systems
- FPV Drone Design & Flight