

Jay Yadav

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jayyadaveng.github.io/portfolio/

EDUCATION

Columbia University: <i>Master of Science in Mechanical Engineering</i>	Expected May 2025
<ul style="list-style-type: none">GPA: 4.00/4.00Selected Coursework: Advanced Fluid Mechanics, Advanced Thermodynamics, Robot Machine Learning, Aerospace Human Factors Engineering	
Columbia University: <i>Bachelor of Science in Mechanical Engineering</i>	Aug 2022 – May 2024
<ul style="list-style-type: none">GPA: 4.13/4.00; Summa Cum Laude; Dean's List all semestersSelected Coursework: Fluid Mechanics, Solid Mechanics, Computer Design, Data Science, Aerodynamics, Heat Transfer, Machine Design, Machining, Advanced Manufacturing	
Grinnell College: <i>Bachelor of Arts in Physics</i>	Aug 2019 – May 2022
<ul style="list-style-type: none">GPA: 3.93/4.00; Dean's List all semestersSelected Coursework: Electronics, Electromagnetic Theory, Astrophysics	

WORK EXPERIENCE

Textron Aviation: <i>Advanced Design Engineering Intern</i>	May 2024 – Aug 2024
<ul style="list-style-type: none">Designed a baggage compartment mockup in CATIA V6 to test configurations for new aircraftPerformed industry research and analysis to evaluate new systems for future aircraft	
Textron Aviation: <i>Customer Support Engineering Intern</i>	May 2023 – Aug 2023
<ul style="list-style-type: none">Created a technical troubleshooting system for the Cessna Citation LatitudeUpdated and repaired troubleshooting systems for various Citation jets	
University of Arkansas: <i>Mechanical Engineering REU Research Assistant</i>	May 2022 – Aug 2022
<ul style="list-style-type: none">Designed in SOLIDWORKS and manufactured a lubricant spray coating systemPrepared and analyzed lubricants using 3D Laser and Scanning Electron MicroscopyOptimized a graphite solid lubricant that reduces friction by 50%Mentored by Engineering Dean in weekly leadership and communication sessions	
University of Texas at Austin: <i>Electrical Engineering Research Assistant</i>	Summer 2020, Summer 2021
<ul style="list-style-type: none">Performed research in the Mid-IR Photonics Lab to develop novel infrared detectorsExpanded RCWA simulations in MATLAB to improve IR propagation modellingAutomated Python data collection and analysis to reduce dark current in IR detectors	

EXTRACURRICULAR EXPERIENCE

Columbia Machine Shop: <i>Machining Superuser</i>	May 2023 – Present
<ul style="list-style-type: none">Supervised student machine shop with 3D Printers and CNC mills and lathes	
Columbia University Airplane Club: <i>Member and Chief Design Engineer</i>	Aug 2022 – Present
<ul style="list-style-type: none">Led aircraft CAD in SOLIDWORKS and analysis in Ansys for the Design/Build/Fly competitionImplemented rapid prototypes, parametric modelling, rigorous GD&T and CFD analysisOversaw the 2024 design to Columbia's most successful placement in 10 years	
Columbia Space Initiative Rocketry Team: <i>Airframe Member</i>	Aug 2022 – Present
<ul style="list-style-type: none">Optimized rocket nose and body with Ansys FEA and CFD for the Spaceport America CupDesigned and manufactured carbon fiber rocket fins with layups and a CNC waterjet	
Boy Scouts Of America: <i>Eagle Scout</i>	Aug 2012 – June 2019

SKILLS

- Technical:** SOLIDWORKS (Computer Aided Design and FEA), CATIA V6/V5, Autodesk Inventor, GD&T, Ansys (CFD and FEA), Additive Manufacturing, Python, C++, MATLAB, LaTeX
- Soft:** Analytical Thinking, Communication, Flexibility, Problem Solving, Team Collaboration, Quick Learning