

Tejas Pandit

Portland, Oregon

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Education

- **Purdue University** West Lafayette, IN
Aeronautical and Astronautical Engineering, GPA: 4.00 Aug 2025 - May 2029
 - Relevant coursework includes Linear Algebra, Graphical Communication and Spatial Analysis, Calculus III, Thermodynamics, Aeromechanics, and Differential Equations
 - Dean's List and Semester Honors
 - Sigma Gamma Tau - National Honor Society in Aerospace Engineering
- **Sunset High School** Portland, OR
3.95 Unweighted, 4.55 Weighted GPA Sep 2021 - June 2025
 - Credit in: IB Language and Literature HL: 6, IB Physics HL: 5, IB Biology HL: 6, IB Economics SL: 5, and IB Global Politics SL: 5, IB Spanish SL: 6
 - National Merit Scholarship Finalist

Research

- **Warsinger Water Lab** West Lafayette, IN
Undergraduate Researcher - DUIRI Scholar April 2026 - Present
 - Conducting In-Situ Resource Utilization research within a 6-person team advised by Dr. David Warsinger, supporting Lunar and Martian resource extraction efforts
 - Responsibilities include literature review, figure/diagram ideation and creation, data collection, sensitivity analysis, and model validation through Python and MATLAB
 - Past projects focus on lunar resource extraction, specifically water extraction from lunar regolith (soil) for future moon base applications
 - Current project focuses on perchlorate separation from Martian regolith through membrane-based filtration for the production of energetic materials

Other Relevant Activities

- **MATLAB Ascent Simulation** West Lafayette, IN
Developer Jan 2026 - Present
 - Worked to use MATLAB to develop a rocket ascent simulation
 - Used the MATLAB ODE45 function to model differential equations, variable mass systems, and atmospheric drag
 - Currently focused on implementing/modeling orbital mechanics to add another layer of detail and complexity
- **Propulsion Methods Research** Portland, OR
Lead Author June 2024 - Aug 2024
 - Conducted research on green, sustainable propulsion systems, working to conclude which method is the most efficient and sustainable
 - Found that electric propulsion systems excel in impulse and fuel efficiency
 - Authored a research paper presenting findings

Skills

- Functional Competencies: Thermal Analysis • Materials Characterization • Data Analysis • Engineering Research • ISRU • Lunar Regolith Analysis • Sustainable Space Systems • Scientific Literature Review • Technical Writing
- Technical Tools: MATLAB • Python • Microsoft Excel • Data Processing and Visualization • Experimental Data Analysis • Scientific Data Analysis • CAD