

## Sunya Afrasiabi

sunyafr@seas.upenn.edu | (716) 588-1219

### Education

<b>University of Pennsylvania</b> , BS in Mechanical Engineering	Sept 2024 - May 2028
• <b>Relevant Coursework:</b> Thermal-Fluids Engineering, Statics and Strength of Materials, Python Programming, Intro to Mechanical Design, Linear Algebra, Differential Equations, Probability	
<b>University at Buffalo</b> , Gifted Math Program	Sept 2023 - April 2024

### Experience

<b>NASA L'SPACE Proposal Writing &amp; Evaluation Experience</b> , Radiation Team Lead	Fall 2025 - Present
• Develop innovative solutions to the limitation of radiation-resistant materials in HDPE composites; gaining hands-on experience in technical proposal composition, project evaluation, and NASA's mission review process.	
• Competing for up to \$10,000 in funding to further develop the proposed project concept.	
<b>Mars Rover Club</b> , Chassis Team	Jan 2025 - Present
• Developing detailed chassis models and component assemblies using SolidWorks in preparation for the University Rover Challenge.	
• Authoring sections of technical design proposals and research reports for internal preparation.	
<b>Engineers Without Borders</b> , Farm Committee	Jan 2025 - Present
• Helped design and construct a vacuum-powered seed cleaner for Novick Urban Farm, automating seed-chaff separation to improve post-harvest efficiency.	
• Constructed a greenhouse with a team of 5, enabling year-round crop cultivation.	
<b>Wharton Undergraduate Aerospace Club</b> , Research & Innovation Committee; Consulting Committee	Jan 2025 - Present
• Analyzing aerospace market trends and emerging technologies to identify and present new business opportunities through collaborative research projects.	
<b>Penn Astronomical Student Association</b> , Outreach Director	Sept 2025 - Present
• Assisted in running weekly telescope nights, developed telescope operation skills, and coordinated inter-club events to promote astronomy on campus	
<b>MyStory Program</b> , Founder and Project Lead	Aug 2020 - June 2024
• Founded a non-profit initiative, securing \$24k+, managed a team of 30+ volunteers, established partnerships with 20+ community organizations.	

### Employment

<b>Quaker Mascot, University of Pennsylvania</b>	September 2024- Present
• Engage hundreds as the mascot, applying strong interpersonal skills, adaptability, and on-the-spot judgment to enhance live event experiences	

### Papers

<b>Linear Algebra Foundations of Neural Networks</b> , University of Pennsylvania	August 2025
• Wrote an expository research paper linking advanced linear algebra concepts to neural network architectures, training algorithms, and real-world robotics applications. ( <a href="#">Link to file</a> )	
<b>Aviation Solutions for Wildlife Prevention</b> , Wharton Undergraduate Aerospace	May 2025
• Co-authored an investor-oriented whitepaper on UAVs, AI wildfire prediction, and aerospace innovations, framing \$6.4B+ market opportunities and potential \$5B annual cost savings. ( <a href="#">Link to File</a> )	

### Skills

**CAD:** SolidWorks, Onshape    **Programming:** Python, HTML    **Tools:** Microsoft Office, MailChimp, Jekyll, Git