

EDUCATION

Columbia University/BS Mechanical Engineering

Fu Foundation School of Engineering and Applied Science | GPA: 3.52

New York, New York

Expected 2026

Raritan Valley Community College/Associates Degree

Health Sciences

Branchburg, New Jersey

2018-2022

Somerset County VoTech/High School Diploma

The Academy for Health and Medical Sciences

Bridgewater, New Jersey

2018-2022

Honors: NX CAD Design Certification, Genes in Space Honorable Mention, National Scholastic Art & Writing Silver

Skills: SolidWorks, 3D Printing, MATLAB, Thermal Desktop, Laser Cutting, Milling, Lathe, Python, Java

Relevant Coursework: Aerospace Human Factors, Machining, Solid Mechanics, Fluid Mechanics, Thermodynamics

LEADERSHIP EXPERIENCE

Columbia Space Initiative

NASA RASCAL Competition Team Lead

September 2022 – Present

- Conduct team meeting twice a week to design a large-scale lunar south pole prospector with a team of 15 students
- Collaborate on a seven-page proposal, SolidWorks CAD modeling of innovation, create video presentation for submission
- Led development of detailed mission architecture, CONOPS, budgets, risk matrix, TRL table, and validations

Cubesat Structures Lead

March 2023 – Present

- Teach members systems engineering, organize subteams, delegate tasks, plan integration, vibration and thermal testing
- Create 6U full and simplified CAD, thermal simulations on Thermal Desktop, analyze results and design thermal systems
- Design a second 1U mission for testing of optical instruments for launch in 2024 with a group of ~50 students
- Present progress during design reviews to engineer and non-engineer audiences, write grant proposals for funding

Columbia Formula SAE

Body Lead, Frame Body Aero

September 2022– September 2024

- Conduct weekly teamwork sessions to review progress, delegate tasks, and teach technical skills in CAD and testing
- Ensure rules compliance, complete thorough documentation, design reviews, coordinate livery design and body finishing
- Model front wing, nose cone, and mounts in SolidWorks, analyze and optimize aerodynamics in Ansys, test body materials

WORK EXPERIENCE

NASA Psyche Inspired

Intern, Iridium Class

September 2024 – May 2025

- Complete 4 artworks that highlight NASA's Psyche mission as a mission ambassador to be posted on social media
- Interact with Psyche scientists and engineers, and complete ASU's "The Process & Lifetime of a Space Mission" course

L'SPACE Mission Concept Academy (MCA)

Lead Systems Engineer

May 2024 – August 2024

- Lead interdisciplinary virtual team of 6 engineers and integration of all subsystems through MCR, SRR, MDR, and PDR
- Design a rover capable of traversing and prospecting lunar volatiles within PSRs at the Lunar South Pole using trade studies
- Develop rover CAD, CONOPS, and Block Diagram, use JMARS, select COTS parts, develop testing and manufacturing
- Earn skill badges in Teaming, Requirements, Project Management, Systems Topics, Risk Management, and Heat Transfer

Space Dynamics Laboratory

Intern, University Nanosatellite Program Mission Concept Academy

May 2023– August 2023

- Collaborate with four university students to learn systems engineering to plan, design, and engineer a 6U cubesat for launch
- Create budgets, design payload, model thermal and pointing systems, develop mission requirements, present design review
- Continue towards 2027 launch throughout school year with new members of the larger Columbia Space Initiative club

STEM Enhancement in Earth Sciences (SEES)

Intern, NASA Astronomy Redshift team

May 2021 – August 2021

- Collaborate to gather distant galaxy data through the SDSS catalog including morphology, coordinates, redshift
- Interpret data using Python, form conclusions, discuss with a research mentor, and present at the SEES symposium

Pinot's Palette Princeton

Paint & Sip Art Instructor

January 2022 – June 2022

- Train for two months as an assistant, practice introduction, teaching techniques, and complete paintings to be taught
- Open studio, welcome customers, arrange seating and supplies, organize and record supply storage