

VALENTINO CATTANEO

32 Hilltop Drive, West Lafayette, IN | +1 (561) 866-6924 | Portfolio: <https://valencast9.github.io/>

EDUCATION

Purdue University, College of Engineering
First-Year Engineering. GPA 4.0/4.0

Relevant Coursework: CS 15900 (Fall 2024), ECE 26400 (Spring 2025)

West Lafayette, IN
Graduation Date: May 2028

Northlands School

IB Diploma 36/45, Ranked 1/55 in Class. GPA 9/10. SAT 1540.

Buenos Aires, Argentina
Graduation Date: December 2024

PROFESSIONAL EXPERIENCE

Mathematical Olympiads Tutor, Northlands School, Buenos Aires, Argentina

March 2024 – July 2024

- Taught Mathematical Olympiad problem-solving techniques to a group of 15 Olympics of ages 13 – 18.
- Guided students through difficult competition problems to address doubts and enhance their understanding.
- Explained key principles and theories of Combinatorics and Geometry for application in competitions.
- Collaborated with the Math Department to align teaching strategies and optimize student performance.
- Structured and delivered well-organized lesson plans, leveraging extemporaneous speaking skills.

Psychologist Assistant, Lucila Sorzana, Remote, Argentina

March 2024 – July 2024

- Organized and modified psychologist's agenda of +50 patients ensuring timely appointment coordination.
- Registered and calculated monthly finances using Excel, optimizing the payment process and efficiency.
- Communicated with clients to coordinate appointments, receive session payments and address inquiries.

LEADERSHIP AND INVOLVEMENT

Vice President, GoAERO Purdue, Purdue University

August 2024 – Present

- Lead a team of 20 in drafting the proposal report for our one-passenger eVTOL for the GoAERO Competition.
- Utilized power sizing equations to create a power diagram showcasing each flight phase in MATLAB.
- Developed battery capacity and discharge rates for the aircraft's batteries based on our sizing algorithm.
- Validated motors and propellers available in the market by comparing bench test data with sizing outputs.
- Participated in concept generation, downselection, mission strategy planning, and ConOps development.
- Met with professors weekly to consult technical aspects of the design and update the status of the team.
- Managed the team's financials, creating budgets and contacting vendors to discuss lead times and prices.

Head Boy, Northlands School

February 2023 – December 2023

- Supervised all student-related activities and organizations and managed their interactions with administration.
- Dealt daily with administration to secure spaces, time and resources for said projects and activities.
- Conducted school-wide assemblies and delivered speeches to students, faculty, and parents of all Northlands.

Chief Engineer, NorLatSat, Northlands School

March 2022 – November 2022

- Founded Northlands' first National CANSAT (satellite design) Competition team.
- Managed a team of 5, overseeing work allocation, schedules, deadlines and interconnection between areas.
- Designed a Dead Reckoning algorithm for which utilized accelerometer and barometer data.
- Designed satellite's deployable parachute system on an octagonal flat model with given drag coefficients.
- Controlled financial (200 USD) and mass budgets (300g) and supervised the design process.

AWARDS, SKILLS & CERTIFICATIONS

Awards:

- Merit for Research and Preparation, National High School Model UN (NHSMUN). March 2022
- Honorific Mention in the Selective Test for the International Mathematical Olympiad (IMO). May 2022

Technical Skills: MATLAB, HTML & CSS

Certifications: MATLAB & Simulink Onramps (MathWorks), Introduction to Engineering Mechanics (Georgia Tech)

Languages: Spanish – native, English – bilingual