

# Alexander DeFranco

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## EDUCATION

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**Amherst College**, Amherst, MA | Bachelor of Arts in Physics and Astronomy **September 2020 - May 2024**

- Cumulative GPA: **3.97/4.00** | Major GPA: **4.00/4.00**
- Awards: Porter Astronomy Prize (most outstanding first year student for excellence in Physics & Astronomy)
- Coursework: *Astrophysics, Astrostatistics, Optics, Quantum Mechanics, Renaissance Art & Architecture*

**Oxford University**, Oxford, England | Final Year Placement, New College **October 2022 - June 2023**

- Focus: Physics; Computational and Theoretical Research
- Coursework: *Particle Physics, Condensed Matter Physics, Fluid Dynamics, Symmetry & Relativity*

**Loyola School**, New York, NY | High School Diploma **September 2016 - June 2020**

- Cumulative High School GPA: **3.98/4.00**; SAT: **1570 (M: 780 W: 790)**
- National AP Scholar: Score of 5 in Calculus AB and BC, Physics C, Biology, and English Language
- Leadership Activities: Editor-in-Chief of student newspaper, Founder and Chair of the Student Advocacy Coalition

**Stanford University**, Palo Alto, CA | Summer Student, Stanford credit received **June 2018 - August 2018**

- Coursework: *Machine Learning for Social Science, America as a World Power, The Origin of the Cosmos*

**St. Bernard's School**, New York, NY **Kindergarten - 8th Grade**

## RELEVANT EXPERIENCE

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**Pensos, Inc.**, New York, NY | *Founder, Executive Director* **June 2019 - Present**

- Founded education non-profit to promote equality through racially, economically, and socially diverse classrooms
- Led students from top universities to create and instruct 5-course summer program for 40+ high school students
- Secured **\$12,000+** in grant money; Finalist in prestigious \$300K Challenge run by Stern Business School

**Öberg Group, Center for Astrophysics | Harvard & Smithsonian**, Cambridge, MA | *Research Intern* **June 2022 - May 2023**

- Conducted novel astrochemistry experiments to examine how organic molecules that could seed future life form in space
- Presented preliminary results at a public talk; was personally invited to return to the group to continue my research
- Invited to present at the American Astronomical Society conference; results to be published in the *Astrophysical Journal*

**Follette Lab, Amherst College**, Amherst, MA | *Astrophysics Research Fellow* **June 2021 - June 2022**

- Analyzed ALMA telescope data; determined better methods of categorizing planet-forming disks around **20-100** young stars
- Developed and expanded pipeline using Python to process astronomical image data for use in machine learning models
- Presented at American Astronomical Society conference; will publish in prestigious *Protostars and Planets VII* compendium

**Physics Department, Amherst College**, Amherst, MA | *Teaching Assistant, Astrophysics* **January 2021 - January 2022**

- Designed and conducted advanced Astrophysics labs with two professors and four TAs for classes of 30+ students
- Taught biweekly discussion sessions with 10+ students to field questions and assist in the completion of coursework

**Rabble Rooms, LLC** | *Co-Founder, CEO of startup venture* **June 2020 - March 2021**

- Admitted to and competed in selective *Startup Sprint* at the NYU Entrepreneurial Institute
- Secured **\$6,000+** in grant money for product development and coordinated events for groups of **50-300** students

## Fellowships & AWARDS

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**Watson Fellowship**, *Thomas J. Watson Foundation* **August 2024 - August 2025**

- **\$40,000** national fellowship to visit 11 countries around the world to research local and cultural teaching practices with special attention to systemic educational structure and reform — highly competitive, awarded to ~50 students annually in the US

**Goldwater Scholarship**, *Goldwater Scholarship Foundation* **March 2023**

- Awarded a selective national **\$7,500** scholarship for novel astrophysics research involving the search for the building blocks of life in planets around other stars conducted as a member of the Öberg Group at Harvard

**Truman Scholarship Finalist**, *Harry S. Truman Foundation* **February 2023**

- Recognized for outstanding achievement and development in the field of education in my work at Pensos

**\$300K Entrepreneurs Challenge Finalist**, *NYU Stern Business School* **May 2022**

- Competed to win a \$300,000 investment at a \$5M valuation for an education technology startup focused on empowering students through radical constructivist learning methods and interactive pedagogies

**Grinspoon Entrepreneurship Initiative**, Amherst MA | *Entrepreneur Award Winner* **April 2021**

- Received highest undergraduate award offered by the Harold Grinspoon Foundation for most promising startup; competed against entrepreneurs from a consortium of 14 colleges and universities

## SKILLS & INTERESTS

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- Computer Skills: Adobe Suite (Photoshop, After Effects, Premiere Pro, Illustrator), Audacity, Github, Command Line
- Computer Languages: Python, Java, R, HTML, CSS, LaTeX, A86; some working experience in Fortran, Javascript, and C
- Interests: Carpentry, Metal Working, Banjo, Rock Climbing, Cheeseburgers (enthusiast), Cryptic Crosswords