

Krutharth Vaddiyar

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Plainsboro, NJ

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EDUCATION

Princeton University

- Major: Mathematics; Minors: Statistics & ML, Computational Biology
- Relevant Coursework: Algebra I, Programming Systems, Probability and Stochastic Systems, Integration Theory and Hilbert Spaces

Princeton, NJ

Class of 2029

West Windsor-Plainsboro High School North

- Princeton University Dual Enrollment: Real Analysis, Honors Linear Algebra

Plainsboro, NJ

Class of 2025

EXPERIENCE

Vertaix Lab @ Princeton

2025-present

Machine Learning Researcher

- Mentored by Prof. Adji Bousso Dieng
- Developed and trained alternators, a novel family of non-Markovian models, to predict amino acid sequences from structural protein embeddings
- Applied the Vendi score to use statistical diversity to parse noisy data and identify events from LIGO, VIRGO, KAGRA gravitational wave data
- Applied graph-theoretical entropy to reveal patterns in neuronal activation data

Alimtas Bio-Ventures

2025-present

Investor Relations Team Member

- Collaborated with the Myhrvold Lab at Princeton to pitch cutting edge viral RNA antigen-detection technology powered by CRISPR-Cas13 to investors
- Pitched technology investors from companies such as Arch Ventures, Gladstone, Trinity Life Sciences

Science Olympiad

2018-2025

Captain

- Managed examination content at invitational competitions for 1000+ participants
- Organized school team tryouts, managed a 30-member team to qualify for the National Tournament in 2024

STEM Olympiad Summer Camp

2021-2023

Lead Instructor

- Implemented a comprehensive olympiad-level curriculum in biology, managing a team of co-instructors
- Organized and engaged students in camp-wide co-curricular activities

HONORS AND AWARDS

USA Biology Olympiad

2023, 2024

2-time Finals Qualifier

- Top 10 participants out of 10,000 participants nationwide

Science Olympiad

2023, 2024

National Medalist

- National Tournament: 2nd in Anatomy (2023), 3rd in Anatomy (2024), 4th Cell Biology (2024)

American Invitational Mathematics Examination

2023-2025

3-time AIME Qualifier

- Top 2.5% of participants on the American Mathematics Competition out of 300,000 participants

SKILLS

Programming: Proficient in Python (including PyTorch, TensorFlow), C++, Java, ARM64 Assembly

Language: Fluent in English, Telugu, Conversational in German