Jacob H. Nie

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Education

UC Santa Barbara, B.S. Physics

(expected) 2020 - 2024

Monta Vista High School, Cupertino, CA

2016 - 2020

Selected Academic Honors

Rudolf Ortvay Int'l. Competition in Physics, Second Prize November 2019

- Two week long online competition hosted by the Etvs University in Budapest.
- Received second prize internationally among college students while competing as a high school senior; top score among first year undergraduates and below

USA Physics Olympiad Team Training Camp, Invitee

June 2019

• The top 20 scorers on the USAPhO are invited to this rigorous ten-day camp at the University of Maryland College Park, which selects the team for the International Physics Olympiad through written examination and laboratory work.

USA Physics Olympiad, Gold medal

April 2019

• Top 20 nationally (unranked)

Princeton University Physics Competition, Gold Medal

November 2018

• 7th place nationally

Skills

Proficient in Python and LATEX

Familiar with MATLAB and Mathematica

Coursework

Personal Self Study

2017 – present

Physics:

- *Physics* by Resnick, Halliday, and Krane (Mechanics, Waves, Relativity, Thermodynamics, Electromagnetism, Optics)
- Introduction to Classical Mechanics by Morin (Mechanics, Relativity, some Lagrangian)
- Electricity and Magnetism by Purcell and Morin
- (in progress) Vibrations and Waves by French

Mathematics:

- MIT OCW 18.02 (Multivariable Calculus)
- Div, Grad, Curl by Schey (Vector Calculus)
- (in progress) Introduction to Linear Algebra by Strang
- (in progress) Elementary Differential Equations by Edwards and Penney

Programming:

- MIT OCW 6.0001/2
- Introduction to Computation and Programming with Python by Guttag

Experience

Private Physics and Mathematics Tutoring, Cupertino, CA

2017 - 2019

Prepared middle and high school students for both school math/physics and competitive math/physics.