

Vedanth Iyer

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EDUCATION:

Sunset High School: (09/2017 - 06/2021)

Portland, OR

4.327/4.0 Cumulative GPA

IB/Higher Level Coursework:

IB Language & Literature HL, IB History HL, IB Physics HL, IB Biology HL, IB Chemistry SL, IB Economics SL, IB Anthropology SL, Calculus 3 DC, Statistics DC, Java Programming DC

Non-accredited Courses Taken:

18.06 - Linear Algebra (MIT OCW)

18.02 - Multivariable Calculus (MIT OCW)

Ch 121 ab - Atomic-Level Simulations of Materials and Molecules (Caltech course catalog)

Yale University: (09/2021 -)

New Haven, CT

Relevant Coursework :

Multivariable Calculus (MATH 120) , Linear Algebra (MATH 225), Data Structures and Programming Techniques (CPSC 223), Fundamentals of Physics (PHYS 200)

WORK EXPERIENCE AND ORGANIZATIONS:

Student Researcher at Caltech: (07/2019 - 06/2021)

Pasadena, CA

Worked at Caltech's Materials and Process Simulation Center (MSC) on self-inspired research to develop novel next generation energy storage materials for Li-ion batteries. Utilized First-Principles Density Functional Theory (DFT) and Advanced Molecular Dynamic techniques for electronic structure calculations, simulations, and modeling.

Undergraduate Researcher, Batista Lab: (01/2022 -)

New Haven, CT

Conducting computational chemistry research on a variety of energy systems and processes. Currently using Ab-initio Molecular Dynamics (AIMD) to characterize and explore borophene growth and the intermediate structures of decaborane for application in anode materials for lithium-ion batteries.

STEM Vice President & Volunteer at the Shooting Stars Foundation (SSF): (04/2019 - 03/2021)

Portland, OR

Worked with other members of the SSF Portland Team to organize and conduct various STEM based camps and competitions for elementary and middle school students in the local Portland area. The funds raised from these events go directly towards the college tuition of underprivileged kids around the world. **Link:** <https://shooting-stars-foundation.org/>

Co-Founder of Quantum Outreach PDX: (06/2020 -)

Portland, OR

Co-Founded an annual 4-week summer camp for middle school students to teach a variety of quantum physics and computing topics in a conceptual manner.

AWARDS AND HONORS:

- ❖ 2021 Regeneron Science Talent Search (STS) Top 40 Finalist. **Link:** <https://www.societyforscience.org/regeneron-sts/2021-finalists/>
- ❖ 2021 Davidson Fellow (\$25,000 recipient). **Link:** <https://www.davidsongifted.org/gifted-programs/fellows-scholarship/fellows/current-and-past-fellows/2021-fellows/vedanth-iyer/>
- ❖ Published First-Author in the Journal of Physical Chemistry C (ACS Publications) for work titled: *Electrochemical Performance and Structures of Chromium and Molybdenum-Doped ϵ -Li_xVOPO₄ Predicted as Promising Cathodes for Next Generation Lithium-Ion Batteries*. **Link:** <https://pubs.acs.org/doi/10.1021/acs.jpcc.0c10156>
- ❖ 2nd Place Grand Award Winner in Materials Science at the 2021 Regeneron ISEF. **Link:** <https://www.societyforscience.org/press-release/2021-regeneron-isef-grand-awards/>
- ❖ 2021 Regeneron ISEF Special Awards:
 - The Chief of Naval Research Scholarship Award of \$15,000
 - Air Force Research Laboratory Award (1st Award and \$750)**Link:** <https://www.societyforscience.org/press-release/2021-regeneron-isef-sao-awards/>
- ❖ 2017 Broadcom MASTERS Top 300 Semifinalist. **Link:** <https://www.societyforscience.org/broadcom-masters/2017-top-300-masters/>
- ❖ Top 20% internationally in the 2019 Breakthrough Junior Challenge and Top 10% in 2020. **Links:** (2019) <https://www.youtube.com/watch?v=GH37uUgyaIs> || (2020) <https://www.youtube.com/watch?v=JngU0nnD59k>
- ❖ TEDx Speaker
- ❖ President's Volunteer Service Award (Silver Award)
- ❖ 1st place in Chemistry and a \$25,500 renewable scholarship to Lewis and Clark College at the 2020 and 2021 Intel North-West Science Expo (NWSE) state fair. **Link:** <https://nwse.org/nwse-awards/>
- ❖ 1st place in Chemistry and Best in Fair at the 2021 Beaverton-Hillsboro Science Expo (BHSE) regional fair.
- ❖ 2021 Presidential Scholar Candidate. **Link:** <https://www2.ed.gov/programs/psp/index.html>
- ❖ Associate Membership Nominee at the Sigma Xi Scientific Research Honor Society