

WILLIAM HUANG

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EDUCATION

BS in Computer Science & Physics, Stanford University 2022-present

High School Graduate, Lynbrook High School 2018-2022

Valedictorian, GPA: 4.0/4.0, SAT: 1590/1600, National Merit Finalist (Top 1% in US).

SKILLS

Coding Languages Python, C++, Java, HTML, L^AT_EX
Algorithms Graph theory (e.g. DFS/BFS, Dijkstra/Bellman-Ford, MSTs), Dynamic Programming (e.g. Knapsack, Bitmask), Data Structures (e.g. trees, sets, maps, DSUs)

AWARDS AND ACCOLADES

Regeneron Science Talent Search (STS) Scholar [🔗](#) 2022

National Science Bowl Champion, Captain [🔗](#) 2022

International Physics Olympiad, Team USA (**Top 5 in US**), Gold Medal [🔗](#) 2021

International Olympiad in Astronomy and Astrophysics, Team USA (**1st in US**), 2x Gold Medal [🔗](#) 2020, 2021

COURSEWORK

CS 106B: Programming Abstractions fall 2022

CS 103: Mathematical Foundations of Computing fall 2022

Math 51: Linear Algebra, Multivariable Calculus, and Modern Applications fall 2022

CS 161: Design and Analysis of Algorithms (planned) winter 2023

CS 107: Computer Organization and Systems (planned) winter 2023

CS 111: Operating Systems Principles (planned) spring 2023

CS 109: Introduction to Probability for Computer Scientists (planned) spring 2023

RESEARCH PUBLICATIONS

An Investigation of the Formation of Fast Radio Bursts 2020-2022

- Developed Python package to perform Efron-Petrosian statistical analysis on truncated data, generate simulated data to match existing distributions, and provide error margins on extracted parameters.
- Advisor: Professor Petrosian, Stanford University
- Named Regeneron Science Talent Search Scholar [🔗](#)

Galaxy Formation Simulations to Study Accretion History of the Milky Way 2020-2021

- Performed 3D modeling of galactic morphologies of substructural features and stellar halo simulations in Python to find key trends between velocity and spatial distributions and accretion history.
- Advisors: Miranda Apfel and Professor Raja Guhathakurta, UC Santa Cruz
- Publications in the American Astronomical Society, [🔗](#), American Physical Society Far West Section [🔗](#)

Looking for Tidal Disruption Events in Virgo's Globular Clusters 2019

- Visualized luminosity-time relationships and simulated gravitational and tidal interactions in tidal disruption events in Python; performed probability modeling of feasibility of an optical survey for disruption events.
- Advisors: Vivian Tang, Professor Piero Madau, Professor Raja Guhathakurta, UC Santa Cruz
- Publications in the American Astronomical Society [🔗](#), American Physical Society Far West Section (Best High School Poster for 2019) [🔗](#)