Michael Huang

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Awards

ST-Yau CS Research Award 1st Place [2021] and 2nd Place [2022]
China's premier research competition for pre-college students.

Research Science Institute Top 5 Paper Award [2022]
Most selective pre-college research camp in the United States, with 2% admit rate. 93 students around the world are selected to participate each summer.

USA Computing Olympiad Training Camp Qualifier (Top 25) [2022]
Each year, top 25 competitive programmers in the United States are selected to attend the USACO training camp to prepare for International Olympiad of Informatics.

Davidson Fellows Scholarship [2023]
Davidson Institute selects 21 fellows from the United States to receive 25k scholarship.

Regeneron STS Scholar [2023]
Oldest and most prestigious research competition for pre-college students. Selects 300 scholars each year.

Atlas Fellowship [2023]
Scholarship worth 10k for "students who want to understand how the world works and change it." Less than 1% acceptance rate.

Skills

- Deep Learning
- Data Science
- Web Development
- Game Development
- Parallel Computing
- Writing
- Leadership

Education

Massachusetts Institute of Technology 2023-2027

Major: Electrical Engineering & Computer Science
Minor: Mathematics
Courses: Abstract Algebra, Machine Learning (grad-level), Solid State Chemistry, Problems of Philosophy

Phillips Academy 2019-2023

High School GPA: 5.95/6.0, SAT: 1590.
Courses: Information Theory, Formal Language Theory, Data Structure and Algorithms, Multivariable Calculus, Linear Algebra, Fluid Mechanics, Quantum Physics
Co-president @ CS Club, Physics Club, Chem Club, VEX Robotics Club, and Techmasters

Research Publications

Improving Multi-Modal Contrastive Learning on going
Michael Huang, Rumen Dangovski, Charlotte Loh, Marin Soljacic (MIT CSAIL)
Combining text, image, audio, and other information for improved contrastive learning.

Using Graph Neural Network and Spectral Clustering to Discover Dwarf Galaxies in the Milky Way on going
Michael Huang, Tri Nguyen, Xiaowei Ou, Lina Necib (MIT CSAIL)
Developed novel clustering algorithm to find dwarf galaxies that are absorbed by the Milky Way.

Faster Parallel Exact Density Peaks Clustering ACDA'23
Michael Huang, Shangdi Yu, Julian Shun (MIT CSAIL)
Developed the priority search kd-tree data structure, and applied it to perform fast clustering.

Efficient Algorithms for Parallel Bi-core Decomposition APoCS'23
Michael Huang, Claire Wang, Jessica Shi, Julian Shun (MIT CSAIL)
Developed fast algorithms for graph mining.

Experiences

Research Science Institute Last Week TA

- Provide mentorship for pre-collegiate student researchers
- Evaluate student research works

The Andover Computing Open

- Founded a competitive programming contest
- Served as tournament director for 2 years and workshop coordinator for 1 year
- Secured 7k sponsorship

Andover Window Cleaning Drone

- Led engineering team to build a drone that can power wash windows

The Revere, a student-run foreign affair newspaper

- Digital editor and writer for The Revere

Philosophy Blog

- Write Substack @www.daylightreveries.org