

AVIRAL MEHROTRA

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EDUCATIONAL QUALIFICATIONS

Walter Payton College Preparatory High School, Chicago 2019 – 2023

- AP Computer Science A, AP Calculus BC, AP Statistics, AP Physics C: Mechanics, AP Physics C: Electricity and Magnetism, AP Chemistry, AP English Language and Composition

University of Chicago Quantum Quickstart, Chicago Jul 2021

- Accelerated learning course for the quantum sciences and foundations of quantum mechanics

WORK EXPERIENCE

Software Engineering Intern, Taelor Jan 2022 – Oct 2022

- Google analytics, SEO meta tag implementation, AI data collection, Google progressive web app

TARGET Program Internship, Fermilab Jun 2022 – Aug 2022

- Worked in Fermilab's Scientific Computing Division and used the Pynq-Z2 Board, Python, CNNs, and FPGAs to create a computer vision demonstrator capable of acquiring a video stream from a webcam, manipulating images, and showing the output to a monitor
- Portions of the project were incorporated into Fermilab's hls4ml Demo Lab at DEFCON 30

Software Engineering Intern, WordLeap Mar 2021 – Dec 2021

- Module development in React to guide first-time users to navigate and use the app
- Python to edit the process of tokenizing words between different languages
- Code deployment to Google Cloud and collaboration using Git

Teacher's Assistant, Pyramid Academy for Gifted Youth, Chicago Dec 2021 – Sep 2022

- Coach middle school students on solving problems for American Computer Science League

Sneaker Reseller / Business Owner Aug 2020 – Present

- Research sought after sneakers to assess profitability and track inventory and financials
- Achieved gross revenue \$5.5K+ with ~60% profit margin in sneaker reseller business

EXTRACURRICULAR ACTIVITIES

- President & Co-founder, Risera Inc., Chicago, IL (2021-)
 - 501(c)(3) to help underprivileged with education opportunities; got \$1K competitive grant
- High School Science Olympiad team (2019-); multiple medals at state and regional level
- Founder, Table Tennis Club at High School (2019); Chess team (2021-); Math Team (2019-)
- Captain, Leukemia & Lymphoma Society Fundraiser (Spring 2021); raised \$11K in six weeks
- Co-Captain, Fundraiser for Chicago small businesses impacted by COVID; raised \$3K in 2020
- Member, National Honor Society (2022-)
- Payton Advisory Leader (PAL) (2022-)
- President & Founder, Walter Payton Computer Science Honor Society (2022-)

AWARDS & RECOGNITION

- Congressional App Challenge: IL-07 Winner (2021)
- National Merit Scholarship Qualifier & Semi-finalist (2021-)
- CodeDay Hackathon: Best in Class App (2020)
- CodeDay Hackathon: Most Useful App (2021)
- Modeling the Future Challenge: Semi-finalist (2021)
 - Analyzed data on COVID-19 vaccinations in Chicago to determine the ideal vaccine distribution model
 - Developed a mathematical model to determine optimal locations for vaccination sites
 - Co-authored semi-finalist paper which outlined the process and technical skills required
- Modeling the Future Challenge: Semi-finalist (2022)
- NASA Space Apps: Global Qualifier (2020)

SKILLS

- Experience in Python, C++, Swift, JavaScript, and algorithms
- Backend-frontend integration, mobile development, web automation
- Audio / video editing, voice over, creating presentations

ADDITIONAL INFORMATION

- 3rd-degree brown belt in Shotokan karate
- Completed four half-marathons and three Spartan obstacle races (pre-pandemic)
- Other interests include Formula 1, basketball, and soccer