

ADELINA CHAU

✉ chauadelina06@gmail.com · 📞 +1(408)-775-5182 · 🌐 adelly13 · 📄 adelinac13

Curious, technical high school student and active researcher in quantum computing and deep learning interested in pursuing the applications of quantum computing to chemistry, finance, and cybersecurity.

🎓 EDUCATION

Archbishop Mitty High School, San Jose, CA August 2020 – Present

- Class of 2024
- GPA: 4.0 UW / 4.7 W
- Relevant Coursework: AP Calculus BC, AP Computer Science A, AP Physics C: Mechanics, AP Chemistry, Multivariable Calculus/Linear Algebra Honors

West Valley College, Saratoga, CA May 2023 – August 2023

- Coursework: Differential Equations

📖 EXTRACURRICULAR COURSEWORK

- AP Physics 1, Machine Learning by Andrew Ng, QubitxQubit: Introduction to Quantum Computing, University of Amsterdam's The Quantum Quest, Deep Learning Specialization (Course 1 and 2), Womanium Quantum (2022, 2023), IBM Qiskit Summer School (2022, 2023)

🌿 RESEARCH

Aspiring Scholars Directed Research Program August 2021 – Present

Lead Researcher of Dr. Larry McMahan's Quantum Computing Group

Researched Hybrid Quantum-Classical Generative Adversarial Networks for generating synthetic, chemically stable molecules ([link to code](#) 🔗)

- Developed pre- and post-processing algorithms for molecular representation conversion, molecular geometry optimization, and druglikeness calculation
- Implemented code for different Generative Adversarial Network architectures including the current quantum graph generator
- *Manuscript* 🔗 published in Journal of Emerging Investigators (Jan. 2023) and *conference proceeding* 🔗 published in IEEE International Conference on Quantum Computing and Engineering (QCE) (Nov. 2023)
- Presented poster at West Coast Biological Science Undergraduate Research Conference (Apr. 2023) and IEEE International Quantum Week 2023 (Sept. 2023)
- Follow-up manuscript accepted to Journal of Emerging Investigators (July 2023)

Boston University RISE Internship June 2022 – August 2022


Researcher in the Tian Lab 🔗

- A highly selective (< 5% acceptance rate) summer program to conduct research under the mentorship of world-class faculty from a research-intensive university
- Researched state-of-the-art deep learning model MultiWienerNet for Computational Miniature Mesoscope (CM²) measurement reconstruction under the guidance of Prof. Lei Tian and Qianwan Yang
- Presented original research findings at the MIT Undergraduate Research Technical Conference (Oct. 2023)
- Conference paper accepted to SPIE Photonics West 2024 (Jan. 2024)

University of Iowa Secondary Student Training Program June 2022 – August 2022

Researcher in the Geo-Social Lab 🔗, \$1000 Scholarship Recipient



- A highly selective (10% acceptance rate) summer program to conduct research under the mentorship of world-class faculty from a research-intensive university

- Researched the impact of COVID-19 on human mobility behaviors through the analysis of geo-social networks under the guidance of Dr. Caglar Koylu and Hoeyun Kwon
- Presented original research findings in a research brief and *academic poster*  at the research symposium

Python Research Program

July 2021 – August 2021

Researcher in the Bioinformatics Track

- Analyzed hemoglobin proteins using the National Center for Biotechnology Information database
- Prepared research paper on Hemoglobin and Sickle Cell Anemia
- Trained a Convolutional Neural Network for brain tumor classification and detailed the process and findings in a research *paper*  ([link to code](#) )

EXPERIENCE

Computer Science Club

August 2020 – Present

President (2023-2024), Vice President (2022-2023), Machine Learning Lead (2021-2022)

Oversaw the biggest club on campus (over 70 members) for coding, handled all monetary transactions, outreach, and school events

- Expanded operations, created promotional videos, and increased member retention from 10% to 85% by adapting project-based structure
- Focused on outreach to the female community, increasing female membership from 14% to 50%
- Developed 14 weeks of curriculum, taught 15 students the fundamentals of ML/AI through hands-on projects, and mentored students on their own ML/AI projects

FRC Team 1351 Mitty TKO Robotics

August 2020 – Present

Business Lead (2023-2024), Head of Engineering Design (2022-2023)




Directed award and grant applications on behalf of the team garnering sponsorship from Lockheed Martin, Intuitive Surgical, West Coast Products, and more, handled team's projected budget and spending

- Trained incoming rookies in all necessary mechanical knowledge
- Designed, modeled, and built subsystems with Solidworks for the robot during FRC season

Hackathon Organizer

August 2020 – Present

Organized hackathons with a specific goal of expanding coding opportunities to marginalized individuals and genders in both local and national community


- Spark : A 24-hour gender-focused hackathon in the Bay Area hosted through Hack Club in partnership with Sentry and Space Cookies (a local all girls robotics girl scouts troop)
- Horizon : Hack Club's first all-female/nonbinary one day hackathon hosted in partnership with the Girl Scouts of Greater New York
- Epoch Bay Area : A regional hackathon event based off the primary Hack Club Epoch Event in New Delhi, India

Reinvent Tomorrow

May 2021 – August 2021

Co-Founder, Chief Technology Officer

A social initiative to educate middle school students on the fundamentals of business while bridging the equity gap in the business world

- Designed and developed the organization's *website* 
- Taught 2 sessions of Introduction to Business, a 4-week course, covering business, finance, sales, and marketing to 20 students

Business Club

August 2020 – Present

Vice President (2022-2024), Officer (2021-2022)

Teach members about business plan and business pitch preparation; mentor members in starting social initiatives

- Competitor in Diamond Challenge and Blue Ocean Challenge

- Responsible for scientific research and 3D-modeling/designing of Solacase, a solar-powered wireless charging phone case

Chinese Culture Club

August 2020 – Present

President (2022-2024), Secretary (2021-2022)

Promoted Chinese culture appreciation by organizing fun, school-wide events including Lantern and Fan painting, Chinese New Year Celebration, and Chinese calligraphy

Apple Pi Learning

August 2022 – Present

- Taught Introduction to Python classes in Game Design and Machine Learning through interactive coding demonstrations and games

Project Code Foundation

- Taught Introduction to Python and Introduction to iOS App Development to over 100+ students worldwide during Code2K, an international hackathon for beginners to CS with workshops on introductory concepts



♡ HONORS AND AWARDS

Principal's Honor Roll	Aug. 2020 – Present
National Cyber Scholar 2023	May 2023
St. Francis of Assisi Award	May 2022, May 2023
Recognition of Outstanding Achievement in Mathematics	Apr. 2022, Apr. 2023
NCWIT Aspirations in Computing National Honorable Mention	Jan. 2023
NCWIT Aspirations in Computing San Francisco Bay Area Regional Affiliate Winner	Jan. 2023
MIT iQuHack 3rd Place	Jan. 2023
Presidential Volunteer Service Award (Gold)	2021
Recognition of Outstanding Achievement in World Languages	Apr. 2021
USACO Silver	Jan. 2021
Archbishop Mitty High School Acceptance With Academic Distinction	Aug. 2020
John Hopkins CTY Award of Grand Honors	June 2019

SKILLS

- Programming Languages: C++, Python, Java, HTML, CSS, Javascript
- Other: 3D-Modeling, Computer Aided Design (CAD), Additive Manufacturing

i MISCELLANEOUS

- Personal Website: <https://adelinachau.com> 
- Blog: <https://blog.adelinachau.com> 
- Languages: English, Cantonese, Mandarin