

# Alice Y. Hu

## EDUCATION

C. Leon King High School IB Program, Tampa, FL

Aug 2022 – May 2026

**GPA** (1/15/2026): 4.0/4.0 (unweighted); 7.88 (weighted); **Rank**: Top 1%; **ACT**: 34

## EXTRACURRICULAR ACTIVITIES

***Vice President, Recruitment & Retention (2026-2029) National Senior Recruitment Director (2026-2028) & Tutor, Do Re Mi Project*** Nov 2022 – Present

- Do Re Mi Project is a global platform that provides free online music lessons to young musicians in communities worldwide (20,000+ free lessons, 10,000+ scholarships, 2,000+ young musicians).
- Lead global outreach and engagement strategy; recruit and manage 21 recruitment directors; oversee retention initiatives supporting 539 tutors and 1,088 students across 18 countries and 43 U.S. states.
- One of 3 national recruitment directors in a global nonprofit providing 20k+ free music lessons to underserved youth.
- Recruit and mentor 5-10 recruit members annually through orientation, weekly zoom meeting and ongoing guidance.
- Delivered 400+ free weekly flute lessons to five students across NYC, Florida, Maryland, and Washington, DC, mentoring one student who later earned the prestigious Accelerando Scholarship (student).
- Recognized as Accelerando Scholarship (tutor) for outstanding leadership and volunteer service.
- Recognized as Tutor of the Month for teaching excellence.

***President (2024-present), member, Tri-M Music Honor Society, C. Leon King High School*** Jun 2022 – Present

- Revived an inactive chapter, reestablished it as a cornerstone of the school's music community.
- Organized ensemble visits to senior centers, performing for 20+ non-English-speaking elders and to foster intergenerational connections.
- Expanded membership by recruiting 20 musicians and leading 2 service projects that used music for community outreach.
- Refresh several of the murals of high school music building and help them look refreshed.
- Worked to bridge divisions between a predominantly Asian IB cohort and a largely African American traditional students by uniting diverse peers (5 African American, 3 Asian, 1 Muslim, and 3 White students) through music service and expanding access to activities. Redefining leadership as creating opportunity across systemic barriers.

***Principle Flutist, Tampa Metropolitan Youth Orchestra (TMYO)*** Aug 2021 – Present

- Participate in weekly rehearsals with 60 young musicians.
- Chosen for TMYO's Mentorship Program from 140 musicians to instruct and support junior flutists in rehearsals and sectionals.
- Lead the flute section as Principal Flutist, setting artistic and technical standards for peers.
- Participated annually in Side-by-Side Performance – The Florida Orchestra & TMYO; Performed in a collaborative Side-by-Side rehearsal and concert experience with professional musicians of The Florida Orchestra; Strengthened ensemble performance, musicianship, and professional-level rehearsal skills.

***Co-Vice President & Statistics Coach (2025-present), Officer (2024-2025), member, Mu Alpha Theta Math Club, C. Leon King High School*** Aug 2022 – Present

- Designed and led free weekly statistics lessons for 6-10 peers, covering probability and competition problem-solving.
- Helped organize state-wide Mu Alpha Theta competitions annually (2023–2026); co-led planning and execution of events and awards ceremonies serving 400-900 students from 30+ schools, raising >\$5,000 each year to support math education.
- Helped organize and run Tampa Region 4's first "Fest-4-all" (Fest-IV-al) competition and fundraiser to support students, who lack access to advanced math courses and coaching. Beyond writing statistics competition problems, I donated four Bumblebees I hand-crocheted as awards for the "Differentiation-Bee". This event brought together 100 students from 8 schools and raised >\$1,000 for the fund.
- Responsible for managing the club's social media and scrapbook to promote events, lessons and competitions.

***Regional Director, American Regional Biology Competition (ARBC)*** Jun 2024 – Present

- Appointed as the sole Regional Director in Florida, responsible for expanding ARBC to Florida.
- Organized the 1<sup>st</sup> Tampa regional competition in 2025, hosting 20 students across 5 teams from 4 high schools.
- Established a 4-student team from King High School to represent the region in Gainesville, FL in 2024.
- Conducted outreach to 10+ local schools to introduce ARBC as a new academic opportunity.
- Contribute to weekly leadership meetings to shape competition design, outreach strategy, and ARBC's national growth.

***President (2025-present), President-in-elect (2024-2025), member, Science National Honor Society Club, C. Leon King High School*** Jun 2022 – Present

- Revitalized club participation by recruiting 20 members, including 6 incoming IB students.

- Recruited 8 members into science competitions and Olympiads; led team to earn 2<sup>nd</sup> place in the county, boosting academic involvement.

- Fostered collaboration among students pursuing biology, chemistry, and physics through group study and projects.

**Co-Captain (2024-present), member, Girls Varsity Swim Team, C. Leon King High School**

Jun 2022 – Present

- Selected as team captain and recognized as the team's top backstroke swimmer.
- Lead warm-ups and strategy discussions, fostering team spirit during training and competitions.
- Train 4-5 times per week (1.5 hours per session) at school and local swimming clubs, and compete in ~20 swim meets annually, including district, region and state championships.
- learned and applied Tian Ji's horse-racing strategy (An ancient Chinese strategy that optimizes matchups by strategically sacrificing one position to maximize the team's overall victory) in swim meet competitions to optimize lineup choices and achieve the best possible results.
- At the 2023 state championship, I filled in for an injured teammate, swimming an unfamiliar stroke that helped our relay team place 18th.
- Help coaches to organize year-end celebrations and recognition events to build morale and cohesion.

**Flutist, Florida Music Education Association (FMEA) All-State Band/Orchestra**

2021 – 2026

- Selected as Principal Flutist for the 2026 FMEA All-State Symphonic Band, I performed under the direction of Colonel Schofield, Commander and Conductor of The US Air Force Band, whose leadership included performances at the 59th Presidential Inauguration of President Joe Biden.
- Selected for the FMEA All-State Band/Orchestra every year from 2021 to 2026
- The only flutist in Florida accepted into FMEA All-State Band/Orchestra consecutively for 6 years
- The only flutist in Florida served as Principal Flutist in the FMEA All-State Band 3 times (2022, 2024 and 2026) from 2021 to 2026

**VOLUNTEER**

**Volunteer, VolunTeen Program, Moffitt Cancer Center, Tampa, FL**

Summer 2024

- Selected for the highly competitive VolunTeen Program at one of the nation's leading cancer research and treatment centers.
- Completed professional training in patient care, hospital protocol, and HIPAA confidentiality.
- Provided guidance, free nutritious food and emotional support to oncology patients with treatments.
- Collaborated with nurses and staff to ensure efficient patient flow and enhance patient care.
- Gained firsthand exposure to cancer treatment challenges and the importance of compassionate healthcare.
- Witnessed how compassion and communication complement systemic healthcare innovation, highlighted by First Lady Dr. Jill Biden's 2022 visit to launch the Cancer Moonshot initiative.

**Flutist & Volunteer, National Flute Association**

Aug 2022, Aug 2024, Aug 2025

- Supported event logistics by monitoring session doors, greeting attendees, and ensuring smooth transitions between performances and presentations.
- Flutist, Golden Anniversary Opening Flute Choir; National Flute Association 50<sup>th</sup> Annual Convention, Chicago, IL
- Flutist, National Flute Association High School Flute Choir, National Flute Association 52<sup>nd</sup> Annual Convention, San Antonio, TX
- Invited Speaker, the Life Member and Donor Appreciation Reception, National Flute Association 53<sup>rd</sup> Annual Convention, Atlanta, GA

As co-captain of the swim team, I learned the usefulness of Tian-Ji's Horse Racing Strategy in competitions-An ancient Chinese strategy where you use your strengths wisely to help the whole team win, even if you don't win every individual event. Also, I mentor swimmers and step into challenging roles when needed. At the state championship, I filled in for an injured teammate, swimming an unfamiliar stroke that helped our relay team place 18th.

**SUMMER PROGRAMS**

**Garcia Summer Research Scholars, Stony Brook University, NY**

Jul 2025 – Aug 2025

Project: *Ordered DNA Fragmentation on UV-patterned SU-8 using Tn5 transposase*

- Selected for the highly competitive Summer Scholars Program at the Garcia Center for Polymers at Engineered Interfaces.
- Engaged in daily lectures explored scientific research across engineering, medicine, and energy, along with its growing connection to AI, machine learning, and computational modeling.
- Independently created and designed the logo for the Garcia Summer Research Program.
- Did experiments to demonstrate ordered DNA fragmentation by patterning UV-exposed SU-8 films and applying Tn5 transposase to bridge and cleave DNA across microgaps, improving sequencing accuracy while reducing amplification needs.

- Co-first author on 3 oral poster presentations at the 2025 Garcia Summer Research Symposium in NY, 2025 Symposium E. Organic and Biological Coatings in Taipei, Taiwan, and 2026 Biological Physics II Section, American Physical Society Global Physics Summit in Denver, CO.

**Boston University Tanglewood Institute, Woodwind Quintet Workshop, Lenox, MA**

Jun 2025 – Jul 2025

- Selected for one of the nation’s top pre-college music programs, the only musician from Florida attended this workshop in 2025.
- Coached by Prof. Valerie Coleman, a Grammy Award–winning flutist, composer, and founder of this workshop, and encountered a diverse repertoire shaped by African American traditions, blues techniques, and culturally rooted expressions that opened my eyes to new musical perspectives.
- Performed contemporary and classical repertoire, including Red Clay and the Mississippi Delta, Umoja and Tzigane, in final recital with quintet.
- Expanded my understanding of music beyond the Classical canon and deepened my appreciation for how sound can carry history, culture, and collective identity. This experience inspired my passion for storytelling through music.

**Garcia Summer Research Scholars, Stony Brook University, NY**

Jun 2024 – Aug 2024

Project: *Novel Method for Ordered Fragmentation of DNA using Tn5 transposase on UV-patterned PMMA*

- Engaged in daily lectures explored scientific research across biology, genetics and engineering.
- Demonstrated ordered mouse DNA fragmentation by stretching Tn5-bound strands across UV-patterned PMMA surfaces, enabling spatially controlled cleavage and improved genome assembly with optimized proteinase K digestion.
- Co-first author on 3 oral poster presentations at the 2024 Garcia Summer Research Symposium in NY and 2025 Biological Physics II Section, American Physical Society Global Physics Summit in Anaheim, CA

**Flute Intensive Summer Camp, Interlochen Center for the Arts, Interlochen, MI**

Jun 2023

- Admitted to Interlochen’s highly selective program; studied with renowned flutists Prof. Christina Jennings and Nancy Stagnitta.
- Trained daily in practice techniques, breath control, improvisation sessions, strengthening my tone production and breath control.
- Attended masterclasses focused on tone development, artistry, and stage presence.
- Performed in chamber and solo settings, confidently collaborated in a flute choir and performed live before an audience of 100.

## HONORS AND AWARDS

2026

### ACADEMIC ACHIEVEMENTS

- Poster presentation (Co-first Author) “Ordered DNA Fragmentation over UV-patterned SU-8 Using Tn5 Transposase”, Biological Physics Section, American Physical Society Global Physics Summit, Denver, CO (March 15-20, 2026)
- Florida Association of Mu Alpha Theta (FAMAT) January Regional Competition: Sweepstakes, 5th Place; Coached two students to 8th Place and 15th Place in Statistics Individual; Coached team to 4th Place in Statistics Team Competition
- FAMAT February Regional Competition: Coached one student to 11th Place in Statistics Individual; Coached team to 7th Place in Statistics Team Competition
- FAMAT Statewide competition: Sweepstakes, 7th Place (out of 37 schools); Coached team to 11th place in the Statistics Team Competition with only 3 members, while all other teams had 4 members.
- Eligible and registered for the National Mu Alpha Theta Convention in Frisco, TX (June 28–July 3, 2026)
- Principle’s Honor Roll, C. Leon King High School – Recognized for maintaining a GPA of 4.0 (2022 – 2026)
- Student of the Month, C. Leon King High School

**2025**

## **ACADEMIC ACHIEVEMENTS**

- National Mu Alpha Theta Convention, Statistics Division, Team (captain), 9th Place; Hustle: 7th Place; Sweepstakes, 8th Place; Statistics Ciphering, 20th Place
- FAMAT State Competition: Statistics Division, Team (captain), 7th Place; Hustle: 8th Place; Sweepstakes, 10th Place
- FAMAT Statewide: Statistic Team (captain), 7th Place; Sweepstakes, 5th Place
- FAMAT March Regional: Statistics Division, Team (captain), 2nd Place
- FAMAT February Regional: Statistic Individual, 5th Place; Statistics Division, Team (captain), 2nd Place
- FAMAT January Regional: Statistic Individual, 9th Place; Statistics Division, Team (captain), 3rd Place
- AP Scholar with Distinction
- Garcia Summer Research Scholars, Garcia Center for Polymers at Engineered Interfaces, Stony Brook University, NY (I am attending this summer program for the second year in a row; according to MIT website, this program is one of the competitive-admission summer programs <https://mitadmissions.org/apply/prepare/summer/>)
- Oral presentation, “Ordered DNA Fragmentation over UV-patterned SU-8 Using Tn5 Transposase”, 2025 Garcia Summer Research Symposium, Stony Brook University, NY (August 2025)
- Poster Presentation (Co-first author), “Ordered DNA Fragmentation over UV-patterned SU-8 Using Tn5 Transposase”, Symposium E. Organic and Biological Coatings, International Thin Films Conference, Taipei, Taiwan (October 2025)
- Poster presentation (Co-first Author) “A Novel Method for UV Thin-Film Backside Development for Ordered DNA Fragmentation” Biological Physics II Section, American Physical Society Global Physics Summit, Anaheim, CA, (March 2025)
- Poster presentation (Co-first Author) “A Novel Approach for Ordered Fragmentation of Mouse DNA Using Tn5 Transposase” Physics of Disease, Diagnosis and Treatment Section, American Physical Society Global Physics Summit, Anaheim, CA, (March 2025)

## **SWIMMING**

- Florida High School Athletic Association (FHSAA) 2A State Championships: 400 Yd Free Relay, 21st Place; 200 Yd Free Relay, 24th Place
- Western Conference – National Division: 100 Yd Back, 1st Place; 50 Yd Free, 5th Place; High Points, 5th Place; 400 Free Relay, 1st Place; 200 Medley Relay, 3rd Place; Girl’s Team (Captain), 4th Place
- Florida High School Athletic Association (FHSAA) 2A District 7 Championships: 100 Yd IM, 2nd Place; 100 Yd Backstroke, 4th Place; 200 Yd Free Relay, 2nd Place; 400 Yd Free Relay, 2nd Place; Girl’s Team (Captain), 3rd Place (with the fewest female swimmers in the district’s top 3 teams)
- FHSAA 2A Region 3 Championships: 100 Yd IM, 21st Place; 100 Yd Backstroke, 22nd Place; 200 Yd Free Relay, 8th Place; 400 Yd Free Relay, 8th Place; Girl’s Team (Captain), 9th Place out of 20 (with

the fewest female swimmers in the district's top 10 teams)

- Hillsborough County Swimming Championships: 100 Yd Back, 6th Place; 400 Yd Free Relay, 7th Place; 200 Yd Medley Relay, 8th Place
- City Relay (Tampa): Girls 500 Yd Free Replay Crescendo, 2nd Place; Mixed 400 Yd Medley Relay, 6th Place

## 2024

### ACADEMIC ACHIEVEMENTS

- Garcia Summer Research Scholars, Garcia Center for Polymers at Engineered Interfaces, Stony Brook University, NY
- Oral presentations, "A Novel Method for UV Thin-Film Backside Development for Ordered DNA Fragmentation" and "A Novel Approach for Ordered Fragmentation of Mouse DNA Using Tn5 Transposase", 2024 Garcia Summer Research Symposium, Stony Brook University, NY
- AP Scholar with Distinction
- FAMAT State Convention, Precalculus Team, 7th Place; Hustle, 3rd place; Sweepstakes, 7th Place
- FAMAT March Regional, Sweepstakes, 1st Place
- FAMAT February Regional, Sweepstakes, 5th Place
- FAMAT January Regional, Precalculus Team, 5th Place; Sweepstakes, 2nd Place
- FAMAT Statewide, Sweepstakes, 7th Place
- Health Occupations Students of America (HOSA) Future Health Professionals: Epidemiology competition (Regional): 5th Place
- Brain Bee competition (Regional): 5th Place

### SWIMMING

- Western Conference – National Division: 100 Yd Back, 1st Place; 50 Yd Free, 3rd Place; 200 Free Relay 2nd Place; 400 Free Relay 2nd Place; Girl's Team (Captain) 4th Place
- City Relay (Tampa): Girls 500 Yard Free Replay Crescendo: 6th place; Mixed 400 Yard Relay, 5th Place; Girls 400 Yd Medley Relay, 5th Place
- Florida High School Athletic Association (FHSAA) 2A District 7 Championships: 100 Yd Backstroke: 3rd Place; 50 Yd Free, 5th Place; 200 Yd Free Relay, 3rd Place; 400 Free Relay, 3rd Place; Girl's Team (Captain) 3rd Place
- FHSAA 2A Region 3 Championships: 200 Yd Medley Relay, 3rd Place; 200 Yd Free Relay, 3rd Place 11th Place; 400 Free Relay, 11th Places 50 Free & 100 Back Qualifier
- Hillsborough County Swimming Championships: Women 100 Yd Back, 6th Place; 200 Medley Relay, 8th Place; 400 Free Relay, 6th Place

## 2023

## **ACADEMIC ACHIEVEMENTS**

- USA Biology Olympiad, Certificate of Merit Scores
- American Regional Biology Competition, King High School Team Leader, 3rd Place
- Hillsborough County Science Olympics, Problem Resolve, 1st Place; Science Bowl, 2nd Place
- Health Occupations Students of America (HOSA) Future Health Professionals: Epidemiology competition (Regional), 5th Place

## **SWIMMING**

- Florida High School Athletic Association (FHSAA) Class 2A State Championships: 400 Yd Free Relay, 12th Place; 200 Yd Medley Relay, 18th Place
- FHSAA 2A Region 3 Championships: 200 Yd Medley Relay, 3rd Place; 400 Yd Free Relay, 2nd Place; 50 Free Individual, and 100 Yd Backstroke, 8th Place
- Western Conference- National Division, 400 Yd Free Relay, 1st Place; 200 Yd Medley Relay, 1st Place
- Florida Swimming Harry Meisel Championships – West, Girls 15-16, 200 Yd Backstroke, 4th Place; 50 Yd Freestyle, 8th Place; 100 Yd Breaststroke, 6th Place

## **2022**

## **ACADEMIC ACHIEVEMENTS**

- National History Day: Regional Qualifier
- Accepted, Center for Talented Youth (CTY) Summer Program at Johns Hopkins University (program canceled due to COVID-19)

## **SWIMMING**

- FHSAA 2A Region 9 Championships: 100 Yd Back, 7th Place; 50 Yd Free, 2nd Place; 200 Melody 3rd Place; 400 Free Relay, 2nd Place
- Western Conference– National Division: 400 Yd Free Relay, 1st Place; 200 Yd Medley Relay, 1st Place; 200 Yd IM 3rd Place; 100 Yd Free 2nd Place
- City Relay (Tampa): Girls 500 Yd Free Replay Crescendo, 4th Place; Girls 400 Yd Medley Relay, 4th Place; Mixed 400 Yd Relay, 7th Place
- Florida Summer Area 3 Championships: Age 14, 200 Yard Backstroke, 3rd Place

## **2021**

## **SWIMMING**

- Western Conference – National Division: 400 Free Relay, 1st Place; 100 Yd Back, 4th Place; 200 Yd Free, 6th Place; 100 Yd Free, 4th Place
- Hillsborough County Swimming Championship: 400 Free Relay, 6th Place; 200 Medley Relay, 8th Place

- FHSAA 2A Region 3 Championship: 50 Yd Free, 11th Place; 400 Free Relay, 4th Place

## LEADERSHIP

- Vice President, Recruitment & Retention (2026–2029), National Senior Recruitment Director (2024–2026) and Tutor for the Do Re Mi Project (<https://www.doremiproject.org/>), a platform dedicated to offering online music lessons for young musicians in communities all over the world.
- Sole Florida Regional Director, American Regional Biology Competition
- President, Science National Honor Society, King High School
- Co-vice President and Statistics Coach, Mu Alpha Theta Math Team, King High School
- President, Tri-M Music Honor Society, King High School
- Captain, American Regional Biology Competition Team, King High School
- Captain, Statistics Team, King High School
- Vice President, The Lion's Yarn Den Club, King High School
- Co-captain, Girls Varsity Swim Team, King High School

## PUBLICATIONS

1. Hu, A. (Co-First author) et al., and Jonathan Sokolov (Correspondence author), A Novel Method for UV Thin-Film Backside Development for Ordered DNA Fragmentation. Poster presented in the Biological Physics II Section, American Physical Society Global Physics Summit, Anaheim, CA (March 2025)
2. Hu, A. (Co-First author) et al., and Jonathan Sokolov (Correspondence author), A Novel Approach for Ordered Fragmentation of Mouse DNA Using Tn5 Transposase. Poster presented in the Physics of Disease, Diagnosis and Treatment Section, American Physical Society Global Physics Summit, Anaheim, CA (March 2025)
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