# Saffron Liu

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## Education

**Liberal Arts and Science Academy (LASA), Austin, Texas** *May 2024*

**Rank**: 1/293 | **GPA**: 4.7/4.0 | **SAT**: 1570

**Advanced Coursework**: Linear Algebra, Multivariable Calculus, Logic (Discrete Math), Computational Problem Solving, Advanced Computer Science, Digital Electronics, Latin 5

**AP Courses (Scores)**: Computer Science A (5), English Language and Composition (4), Latin (5), Physics 1 (5), Physics 2 (5), United States History (5), Calculus BC (5), World History: Modern (5), English Literature and Composition (planned May 2024)

## Clubs & Activities

**Intern @ UT Austin Matz Lab** *Aug. 2023 - Present*

- Assisting PhD student with projects on population genomics of coral microbes: microbes as indicators of environmental change, microbes for prediction and prevention of coral bleaching
- DNA extraction, library preparation (dilution, PCR, gel electrophoresis, barcoding) for next-generation sequencing
- Exploratory data analysis using R

**CyberPatriot** *Aug. 2018 - Present*

- National cybersecurity competition sponsored by the American Airforce Association
- Prepare scripts and research to secure Windows and Windows Server machines
- Solve forensics challenges
- Coordinate team roles and instruct new members annually

**Quiz Bowl** *Aug. 2021 - Present*

- Hosted intramural tournament (attended by 250+) to recruit new members
- Revitalized Science Bowl team
- Moderated 2022-2023 and 2023-2024 regional finals for Science Bee, Geography Bee, and History Bee
- Facilitated communication between Longhorn and LASA Quiz Bowl to host 2023 Prometheus Science Bowl
- 5th place at local tournament, qualifying for the 2024 High School National Championship Tournament

**Latin Club**

Praetor (academic manager; elected position) *May 2023 - Present*

- Run twice weekly certamen (Latin Jeopardy!) practices and provide players with study resources
- Manage club tournament/convention registration
- Organized and hosted 2nd annual LASA Certamen tournament (20+ teams from Austin, San Antonio, and Houston)

Co-President (elected position) *Aug. 2022 - May 2023*

- Planned and ran weekly club and certamen (Latin Jeopardy) meetings with consistent membership
- Managed club tournament/convention registration and convention logistics (travel, lodgings, meals)
- Helped host 1st annual LASA Certamen tournament
- Promoted the Latin class/club at showcase and outreach events, increasing enrollment and membership ( 15/yr)
- Brought back annual Broomball fundraiser ($600) after it stopped due to COVID-19, allowing purchases for the Latin classroom and subsidizing club convention fees
- Worked with teacher sponsor to reorganize and more clearly define club roles

Scribe (elected position) *Aug. 2021 - May 2022*

- Compiled and distributed officer meeting notes
- Helped host 2-day long area convention, overcoming challenges posed by new/unfinished building, new teacher sponsor, and first in-person convention after COVID-19

Certamen Player / Latin Club Member *Jan. 2021 - Present*

- Study and mentor younger certamen players in Greek Mythology and Latin Literature year-round
- Compete in certamen and academic testing about classical subjects from city to national level

**Fundamentals of Computer Science: Teaching Assistant** *Aug. 2023 - Present*

- Work one-on-one with students to clarify topics and debug code
- Answer questions and assist in grading for a class of 30

**LASA Literary Club: Co-founder** *Aug. 2020 - May 2022*

- Created club to combat social isolation due to COVID
- Curated book list and created book groups based on member preferences
- Led small discussion groups

**Austin Public Library Summer Volunteer** *Jun. 2022 - Aug. 2022*

- Set up 3 different gaming consoles for the Girl's Gaming Club
- Oversaw group of 30 people for 4 hours at a time
- Commended by program supervisor for independently continuing the program while they were out sick

**Piano** *2011 - 2020 & Aug. 2023 - Present*

- Enrolled in private lessons from 2011 to 2020; currently enrolled in school independent study piano class
- Recent repetoire: *Preludio* and *Melodioso* from *8 Valses Poeticos*, Granados; *Sarabande* and *Gigue* from English Suite No. 2 in A minor, BWV 807, J.S. Bach; *Presto alla tedesca* from Sonata in G, Op. 79, Beethoven; *Nocturne* in G minor, Op. 37 No. 1, Chopin; *Alla turca* from Piano Sonata No. 11, Mozart

**Web Development**

- Developed script to automatically retrieve user's top songs with Spotify API and update website with Github Actions
- Created website to parse certamen questions using regular expressions and incrementally display text to users, helping increase access to study materials and combat high barrier to entry
- Created GeoGebra file to create visualization for multivariable calculus class using JavaScript
- Projects in progress: database of questions using MongoDB; multiplayer buzzer system using Node.js and Express.js

**Other Clubs/Organizations**: Programming in Practice, Women+ in Computer Science, National Honor Society
**Other Competitions**: USACO, picoCTF, CyberStart America, Science Bowl, UIL Computer Science, NACLO
**Additional Activities**: crochet, origami

# Education

**Academic Awards**
LASA Class of 2024 Valedictorian (2022, 2023)
National Merit Semifinalist (2023)
Rochester Institute of Technology Women in STEM High School Award (2023)
Trustee Award (top 10% of class) (2023, 2022)
AP Scholar with Distinction (2023)

**Computer Science**
CyberPatriot: Platinum National Semifinalist (top 7.5% nationally) (2023)
National Cybersecurity Scholarship Foundation (through CyberStart): Scholar (2023), Finalist (2022)
UIL Computer Science: 2nd place written test and 1st place team at Regionals (2023), 2nd place team at District (2023)
USA Computing Olympiad: Silver Division (2023)
picoCTF: top 10% (2023)

**Classics**
Nationals 2023: 1st place advanced open certamen, 2nd place Greek mythology, 8th place Latin literature, 6th place academic heptathlon (includes Greco-Roman mythology, Roman history, Greek, and Latin)
State 2023: 1st place advanced competitive certamen, 1st place Greek mythology, 1st place Latin literature
State 2022: 1st place advanced open certamen, 2nd place Greek mythology, 1st place Latin literature
State 2021: 3rd place intermediate competitive certamen, 10th place Greek mythology
Area 2023: 1st place advanced competitive certamen, 1st place Greek mythology, 1st place Latin literature
Area 2022: 2nd place advanced competitive certamen, 1st place Greek mythology, 1st place Latin literature
Area 2021: 1st place intermediate competitive certamen, 2nd place Greek mythology

**Other**
ABRSM Piano Performance Grade 8 (2020)
ABRSM Music Theory Grade 5, passed with merit (2017)