

Ella Jeon

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Motivated high-school student with a passion for learning, STEM, and Earth

EDUCATION

Amador Valley High School

Pleasanton, CA (2021-Current)

GPA : 3.98 (overall unweighted), 4.36 (overall weighted)

SAT : 1560 (English 760/Math 800), **PSAT** : 1470 (English 710/Math 760)

AP/Honor : AP Calculus BC (5), AP US History (5), AP Biology (5), AP Chemistry (4), AP World History (5),

AP Computer Science A (5), AP Environmental Science (4), AP English Language and Composition (4)

AP Psychology (3), Honor Algebra 2, Honor Precalculus, Honor Freshman English, Honor Sophomore English

CONCURRENT EDUCATION

Las Positas Community College

Physical Geology : A

(June 2024 - July 2024)

General Psychology : A

(June 2023 - August 2023)

Introduction to Computer Science : A

(June 2022 - August 2022)

Self-study / Certifications

- Climate Olympiad : "Industrial Innovation Course" in June 2024
- Climate Olympiad : "Causes Course" in June 2024
- Coursera : Stanford Online "Supervised Machine Learning: Regression and Classification" in Feb 2023
- Coursera : Stanford Online "Introduction to Healthcare" in November 2023
- Coursera : Stanford Online "Introduction to Food and Health" in January 2023

ACADEMIC ENRICHMENT

NASA Ames Research Center

Research Intern / Stipend

20 hours per week for 8 weeks (June 2024 - August 2024)

- Analyzed data on UAS incidents and accidents via NASA's Aviation Safety Reporting System (ASRS) and the Federal Aviation Administration (FAA) to improve aviation safety regulations
- Mentored by Carlos Paradis (KBR Data Scientist @NASA) & Misty Davies (NASA System-Wide Safety Project Manager)
- Presented work to stakeholders: Charles Werner (Director of DRONERESPONDERS) & Becky Hooey (Director of ASRS)
- Nominated for NASA Internship Programs' *Shining Star Recognition*
- Published *Grounded Theory Analysis of UAS Incidents and Accidents* research poster at NASA official website (<https://ntrs.nasa.gov/citations/20240009438>)
- Intended *Grounded Theory Analysis of UAS Incidents and Accidents* research paper publication as co-author

Lawrence Berkeley National Lab : Experience In Research (EinR)

Research Intern / Stipend

20 hours per week for 6 weeks (June 2023 - July 2023)

- Created novel data visualizations of global network flow from ESnet (U.S. Department of Energy's science network)
- Mentored by Chris Tracy (ESnet Computer Systems Engineer) & Sartaj Baveja (ESnet Software Engineer)
- Used Python modules including pandas, Plotly, Seaborn, Matplotlib, Grafana plugins, and D3Blocks
- Collaborated with intern partner to analyze, explore, and communicate data visualizations
- Presented to Lawrence Berkeley National Lab community

STANFORD 2024 Mini-Fellowship on Molecular Imaging

Fellow

4 hours per week for 8 weeks (June 2024 - August 2024)

- Participated in lectures on fundamental molecular imaging principles and technologies, including computational tools like AI and deep learning, taught by multiple professors
- Completed reading and presentation on *AI for Molecular Imaging Applications*

Vanderbilt Programs for Talented Youth (PTY) Mentor Immersion Program

Researcher (Biomedical Informatics)

4 hours per week for 20 weeks (January 2024 - May 2024)

- Analyzed health record data to identify correlation between human health and environmental lead contamination
- Mentored by Biomedical Informatics PhD Alex Becker and Leigh Anne Tang.
- Studied data science metrics and techniques, R (programming language), and research process

Aspired Scholars Directed Research Program (ASDRP)

Researcher

6 hours per week for 40 weeks (May 2022 - May 2023)

- Performed wet-lab antibody drug conjugate (ADC) research; finding drug to antibody ratio for the development of a novel cancer treatment drug; weekly presentations in collaboration with several other involved research groups
- Principal investigator: Akira Yamamoto

Stanford Pre-Collegiate Summer Institute

6 hours per week for 2 weeks (July 2023)

Introduction to Machine Learning

- Studied supervised/unsupervised machine learning concepts and Python algorithms
- Applied understanding to individual research project and poster on prediction of sleep disorder based on lifestyle variables (i.e. BMI, sleep duration, physical activity)

Go Green Initiative Fellowship

Fellow

12 hours per week for 3 weeks (July 2024)

- Studied local legislature: Senate Bill (SB) 1383, focused on reducing compost contamination methane, and Pleasanton's Climate Action Plan (CAP), steps to reduce greenhouse-gas emissions
- Developed educational outreach for local populous on SB 1383 and CAP
- Awarded \$600 scholarship; 30% of the scholarship donated to Local Leaders of the 21st Century's fundraising

Girls Who Code Summer Immersion Program (GWS SIP 2022)

Participant (selective program), GWS SIP Alumni '22

30 hours per week for 2 weeks (July 2022)

- Learned HTML & javascript (programming languages) to develop personal website and "Activist Toolkit" (an informative page on global issue) with topic of Gun Violence, featuring topic research, history/present, statistics, action steps

UC Berkeley Academic Talent Development Program (ATDP)

Advanced Biotechnology (Grade in Course: A)

12 hours per week for 8 weeks (July 2022 - August 2022)

Artificial Intelligence in the Economy (Grade in Course: A+)

4 hours per week for 6 weeks (July 2022 - August 2022)

Introduction to Innovation and Entrepreneurship (Grade in Course: A)

4 hours per week for 6 weeks (July 2022 - August 2022)

Iowa Young Writers' Studio at University of Iowa

30 hours per week for 2 weeks July - August 2023

Mantee

- Completed *A Perusable Feast* (creative writing) with Delilah Silberman

Juniper Young Writers Program at University of Massachusetts Amherst

July 2022

Mantee

EXTRACURRICULAR ACTIVITIES

Local Leaders of the 21st Century

4 hours per week, 42 weeks per year (2021 - Present)

President (12th), Vice President (11th), Technology Officer (10th), Leader of Journalism & Media group (9th)

- Encouraging members to take local action with the greater goal of branching out with experiences and lasting actions
- Regularly collaborating with city council for public awareness of sustainability
- Visited elementary schools and educated youth via bean-bag sorting; developed media on sustainability policies for local gov't to distribute to city as educational material
- As President, managing meetings/activities in both the main club and its subjects (each with their own environmental foci): Policy Advocacy, Fundraising, Media Outreach, Youth Outreach
- Co-head of Media Outreach (2 yrs) and Policy Advocacy (1 yr)
- **Fundraised \$4,866.87**—using for sustainability projects like school **rainwater gardening system**

National Honor Society (NHS)

2 hours per week, 42 weeks per year (2021 - Present)

Vice-President (12th), Secretary (11th), Volunteer Coordinator (10th)

- Offering opportunities for students to form community and grow individually through participation in bi-weekly service projects for local hospitals, senior centers, and leadership experiences; organizing NHS induction ceremonies

Girls Who Code

4 hours per week, 42 weeks per year (2021 - Present)

Treasurer & Mentor (12th), Secretary & Mentor, (11th), Junior Officer (10th)

- Wrote and taught curriculums for Python, Java, machine learning/data science, and HTML
- Hosted annual Summit event for 200+ girls to learn code; responsible for sponsorship outreach and connecting with the 2023 woman-in-stem guest speaker, Dana Ding (Meta Software Engineer); Summit Lead Mentor in 2022, 2023, 2024

Key Club

2 hours per week, 42 weeks per week (2021 - Present)

Vice President (12th, 11th), Secretary (10th)

- Fundraising and making gifts for holidays or special occasions for local animal shelters, hospitals, children, seniors
- Exercising leadership skills and empathy through volunteer services; annual events including Officer Training Conference (OTC) to learn responsibilities and develop bay area Key Club community

Music4Heart

4 hours per month, 12 months per year (2020 - Present)

Co-Founder & President (12th, 11th), Vice-president (10th, 9th)

- Musical volunteer organization, performing for seniors & children with special-needs; fostering community through music; connecting and interacting with seniors post-concert over refreshments
- Organized 24 volunteer concerts since 2020
- Conducted annual community/Earth projects (Teddy Bear Project, Covid PPE Project, Maui WildFire project, Recycle Sneaker Project)
- Raised \$6,219, donated 647 handmade cotton masks, 4,940 disposable masks, 437 3D-printed mask extensions, 248 face shields, 2,380 oz. of hand sanitizer to our community during the COVID-19 pandemic

San Francisco Symphony Youth Orchestra (SFSYO)

4 hours per week, 10 months per year

Member, Violin 1 (2024-present), Violin 2 (2021-2023)

(September 2021- Present)

- Deepening musicianship while gaining pre-professional experience from an internationally recognized youth orchestra
- Performed benefit concerts including Bay Area Youth Orchestra Festival for Bay Area organizations serving underserved youth; seasonal subscription concerts for community

Gaia Lit Magazine

Managing Editor, Writer/Poet (11th & 12th)

2 hours per week (2023 - present)

- A student-run online literary magazine dedicated to amplifying voices on climate crisis
- Reviewed and compiled selected literary submissions on environmental issues for quarterly magazine; 5 released issues
- Gaia Lit - awarded fellowship from the Bow Seat Ocean Awareness Programs to support climate activism mission

Joy Math Academy

Teacher Assistant

1 Hour per week, 12 months per year (January 2024 - Present)

- Grading and helping teach high-school students in Calculus, Pre-Calculus, and Geometry

LEADERSHIP

California Boys & Girls State (CBGS)

Delegate of 2024 American Legion Post 237 (12th)

(Summer 2024)

- Nominated by Vice-Principal of the School, Melanie Harris, followed by U.S. veteran led interview selection
- Studied civic responsibilities via political simulation, building identity through CBGS citizenship; served in the Federalist Party; citizen of Cenoz County and Shick City

- Ran for county Assembly; Media writer/photographer—helped produce daily articles on CBGS elections/events; served as jury in court cases; served as police officer and lifeguard of Shick City; awarded 1st place county
- Raised awareness of project led by CBGS elected governor to prevent child trafficking through partnership with OUR Rescue (an organization fighting worldwide child sexual exploitation and human trafficking)

Student Inter-Schools Action Council (SIAC) of Pleasanton Unified School district

District Secretary & Nutrition/Cleanscape Committee (12th), **Nutrition Committee** (11th) 3 hours per month (2023 - present)

- Monthly meetings with formed committees to take city-level student action in school's safety, health, and environment
- Nutrition Committee: collaborate with district nutrition services to better cafeteria menus of all schools in city; representing student perspective through feedback, meal designing, taste-testing
- Cleanscape Committee: collaborate student-groups/administration to advocate for sustainable school infrastructure

Student Site Council (SSC) of Amador Valley High School

School Secretary, Sophomore Representative (10th) 2 hours per month (2022 - 2023)

- Elected Sophomore Representative: discussions with student/teacher representatives and administrative staff/principal to achieve school goals and make budget decisions
- Elected Secretary: recording meeting notes, managing agendas, facilitating public access

Hoby Northern California Leadership Seminar

Ambassador (Summer 2023), **Hoby Alumni** (2023 - present) 3 days (2023)

- Nominated as 10th grade ambassador by principal of Amador Valley High School to attend this leadership seminar
- Joined service project (restoring city garden); learning conduct of efficient leadership and successful community project

California Association of Student Councils (CASC)

Participant (Summer 2022)

Region 4 Spring Leadership Conference 6 hours per day for 1 day (March 2023)
Summer Leadership Conference 1 week (Summer 2022)

COMMUNITY SERVICE

Chabot Space and Science Center

12 hours per month, 12 months per year (2021 - present)

Oakland Space Academy Intern - Floor Leadership & Environmental Team Teacher Assistant (12th)

Zenith Galaxy Explorer (10th, 11th), **Galaxy Explorer** (9th)

- Planning, creating, and running science activities (rocket building, aerodynamic simulations, etc.) for children and museum visitors; intern leadership of volunteers' floor shifts and designing special floor events
- **Environmental Team** (11th): Researched impact of Agent Orange (herbicide used in Vietnam War) on Vietnam's modern deforestation; used ArcGIS software to map pesticide spray-lines and overlay deforestation data
- **Engineering Team** (11th): Designed and constructed C engine model rocket with OpenRocket simulations; evaluated by and launched rocket with American Launch Vehicle Company, Astra in November 2023

Book Club

Leader (9th, 10th, 11th, 12th) 4 hours per month (2021 - Present)

- Sharing love for literature by leading a book club for elementary and middle schoolers; prepared monthly book club agendas; discussions with young students using an age-appropriate balance of engaging education and fun
- **Outstanding Leadership Award** from the Education Center Director of the Consulate General, Republic of Korea in SF

Stanford Health Care - Tri Valley

Lab Assistant (11th, 12th) 2 hours per week (May 2024 - Present)

- Assisting and communicating with professionals in the lab where patient samples are processed and tested
- Making patient sample deliveries and drop-offs; maintaining organization of lab and its supplies

YouDescribe

Audio Describer (9th)

- Organized by the Smith-Kettlewell Video Description Research and Development Center by scientist Joshua Miele.
- Allows **visually impaired** people to add descriptive descriptions to YouTube video content to help them understand, improving the quality of life and education of visually impaired people

ATHLETIC PARTICIPATION

Cross Country (Sports)

18 hours per week (Fall 2021, 2022, 2023, 2024)

Varsity (12th), **Junior Varsity** (11th), **Frosh/Sop** (9th, 10th)

- Running ~30 miles a week for practice; scored for Varsity as 5th runner; improved 5K pace from 13:38 to 8:15 mins/mile

ACADEMIC HONORS & AWARDS

National Center for Women & Information Technology (NCWIT) 2024 NCWIT Aspirations in Computing (AIC) Award

- Chartered by the **National Science Foundation**
- **National Honorable Mention Awardee** (made the top 400 of the over 3,300 applications)
- **Winner of NorCal Affiliate** (Bay Area Aspirations in Computing Award)

Climate Science Olympiad 2024 (CSO24), Quarter Finalist

- A global competition focused on raising awareness of climate change and its impact on the planet
- 12,400 participants in over 149 countries, finalists will go to UN Climate Summit to present Climate Global problems

USA Biology Olympiad (USABO) 2023, National Open Exam Honorable Mention

- Among the acknowledged top 20% of 9,700 students
- USABO is a national competition sponsored by Center for Excellence in Education (CEE)
- USABO's 2023 cutoff for Semi-finalist was 24 out of 50 (my score: 23)

International British Biology Olympiad, Bronze Medalist (March 2023, February 2024)

- Among top 15% of over 13,000 participants

USA Computing Olympiad (USACO), *Silver Division Competitor*

Alameda County Science and Engineering Fair (ACSEF) 2024, *4th place*

- Research project: *Supervised Machine Learning: Sleep Health And Lifestyle Prediction*

27th Annual National High School Poetry Contest 2024, *National Winner*

- Published work in the Fall edition of *JUST POETRY!!!, The National Poetry Quarterly*

California Writers (Tri-Valley) 13th Annual High School Writing Contest, *1st place in poetry category*

Scholastic Writing Awards (Poetry): Alliance for Young Artists & Writers 2024, *Honorable Mention*

National Merit Commended Scholar 2024

- *Letter of Commendation* received from National Merit Scholarship Corporation in recognition of outstanding ability and potential for academic success in college

The University of California's (UC) Eligibility in Local Context (ELC) program

- Issued by University of California in Nov 2024; among top 9% of Amador Valley High School Class 2025

AP Scholar Award with Distinction (2024), AP Scholar Award (2023)

Genius Olympiad by Rochester Institute of Technology 2022, *Finalist/Bronze Medalist*

- Environmental Creative Writing category; 233 among 1,609 projects in the creative writing category were recognized

Amador's PTSA Reflections 2022-2023, *Certificate of Merit (2nd place) in literature category*

Wolfpack Invitational Debate Competition 2021, *1st place Speaker Award*

The Congressional Award: Gold Medalist (2024), Silver Medalist (2023), Bronze Medalist (2022)

- Congress' highest youth honor; setting and achieving goals in voluntary service, personal development, physical fitness, expedition/exploration
- Individually recognized by Eric Swalwell (U.S. Representative)

President Volunteer Service Award (PVSA): Gold Medalist (2022, 2023), Bronze Medalist (2021, 2024)

MUSIC AWARDS

American Protégé International Music Talent Competition (Violin): *1st place* in Spring 2024

Charleston International Spring Music Competition (Violin): *1st place* in 2024 (published on ABC and AP News)

Great Composers Competition Rising Talents of Americas 8th edition (Violin): *1st place* in 2024

World Grand Prix International Music Contest (Violin): *1st place* in young artist category in 2024

ENKOR International Competition 10th Edition & 11th Edition (Violin): *3rd place* in 2023 and 2024

American Protege International Piano and Strings Competition (Violin): *2nd place* in Spring 2022

Performed at the winners' recital at Carnegie Hall in April, 2023

California Orchestra Directors Association (CODA) All-State Symphony Orchestra: Violin 1 in 2020, 2021, 2023

Great Composer Competition 6th Edition (Violin): *2nd prize* in Best Bach Performance in 2022

Music Legacy Open Competition (Violin): *1st Place* in Junior Category in 2022

US International Open Music Competition (Violin): *1st Place* in 2021 and 2023

Junior Bach Festival (Violin): recognized and awarded in **2021 & 2022**

Pelican International Competition (Violin): *1st place, Exceptional Young Talent Award* in 2021

Youth Excellence in Arts (YEA!) Award (Violin): *2nd place* in 2022 with a **\$300 grant**

SKILLS

- Excellent programming skills in **Java, Python, HTML and Javascript**
- Extensive knowledge of **Biology**; willingness to learn and **passion for STEM**
- Excellent **research skills** and **problem-solving skills** and experienced presentational skills
- Project **teamwork and communication** in a professional setting
- Intermediate speaking and writing level in Spanish and Korean
- Creative writing skills and strong expression of thought

CERTIFICATES

- Lifeguard Certificate in August 2023
- Basic Life Support (BLS) in August 2022, renewed in August 2024

HOBBIES

Writing novellas, traveling, running, reading, app-development, learning languages (German, Spanish, French)

- *Two Eyes To See*, Self-Publication (ISBN : 979-8324601751) on Amazon