

Cathy Hou

cathyhou2002@gmail.com

(650) 695-9704

EDUCATION

Henry M. Gunn High School Class of 2020 (GPA unweighted: 4.0, weighted: 4.46)

Advanced Coursework: AP Computer Science, AP Physics C, AP Calculus BC, AP Biology, AP Music Theory, AP Chinese, AP Chemistry, AP Economics, AP Psychology, AP English Literature and Composition, Multivariable Calculus, Linear Algebra

TECHNICAL SKILLS

Languages: Java, Python, Scheme (LISP), C++, R, HTML, CSS, JavaScript, SQL

Platforms: Web+Android Development, Autodesk Maya, AutoCAD

Development Tools: Git, Amazon Web Services, Google Cloud Platform

ACTIVITIES

Research Assistant, Department of Biomedical Data Science, Stanford University, PI: Dr. Dennis Wall

June 2019 - Present

Attended the Stanford Institutes of Medicine Summer Research Program (SIMR).

Helped develop 'Guess What?' Android app, a data acquisition game and therapeutic solution for young children with autism. Independently trained an emotion classifier for children that works significantly better than existing ones and will be incorporated into 'Guess What?' to improve its efficacy. My research received the Jessica Saal Fellowship Award. Currently preparing a paper for publication. Continued internship in lab and assisting with using machine learning to analyze genomic landscape of autism.

Founder and Executive Director of 4ai (www.4ainonprofit.org)

Aug 2018 - Present

Designed and developed a web-application for users with disabilities to use to label images for machine learning development. Partnered with Abilities United (local disability organization) Labelbox (software company) and SRI International (national scientific research institute). Developed curriculum and led training workshops for a dozen prospective employees.

Outreach Director at Space Cookies FIRST Robotics Team

Aug 2016 - Present

Organized over 2000 hours of outreach for 74 team members. Mentored and developed curriculum for a FIRST Lego League team in East Palo Alto. Wrote Chairman's essay, Executive Summary of a Business Plan and selected from team to present 2019 Chairman's Award and Entrepreneurship Award submissions. (Won Chairman's Award Winner@2019 LA North Regional, Entrepreneurship Award Winner@2019 Silicon Valley Regional)

Board Member (Treasurer) and Instructor at Robotics For All (www.roboticsforalleducation.com)

Jan 2018 - Present

Taught robotics+programming to children from underserved communities. Managed organization's financials, organized fundraisers and wrote grants to raise money to expand organization to 10 schools across 3 states.

Project Leader of KindMinds (Winner of Stanford Mental Health Innovation Challenge for High School Students)

June 2017 - June 2018

Received funding from Stanford University to design a video game to teach young children about mental illnesses. Spoke at several conferences including Adolescent Mental Health Wellness Conference in Santa Clara County.

Selected for COSMOS (California State Summer School for Mathematics and Science)

July 2018 - August 2018

Programmed AI to play Blackjack. Researched statistical tools, Big Data, and machine learning algorithms to determine most efficient game strategies. Learned how to apply ML to biophysics+laser technologies.

Performer in Dance Connection Ballet Company

Aug 2015 - Present

Danced ballet since 2007 (12 years). Performed in national festivals and annual Nutcracker+spring shows. Helped raise funds for company through organizing fundraisers. Assisted ballet classes.

Elected Officer Positions

- Vice President of Gunn Business Club (largest club @ Gunn High School)
- President of Gunn Key Club (local branch of international service organization)

AWARDS

- Jessica Saal Fellowship Award through SIMR 2019 for research accomplishments and leadership. \$1500 prize (3 out of 55 SIMR attendees)
- Henry M. Gunn High School Physics Department Award 2019
- National Merit Semifinalist 2019
- National Center for Women & Information Technology Aspirations in Computing Award, San Francisco Bay Area Honorable Mention 2017, 2018, 2019
- AP Scholar with Distinction 2019
- Runner Up, Stanford Mental Health Innovation Challenge, \$1000 prize (out of 25 teams)
- Diamond Challenge Social Innovation Pitch Competition 2019, Semifinalist (top 30 out of 600 teams internationally)
- FIRST Robotics Competition Regional Chairman's Award Winner 2019 (writer/presenter), qualified for Houston World Championship
- FIRST Robotics Competition Regional Entrepreneurship Award Winner 2019 (writer/presenter)
- FIRST Robotics Competition Regional Winner 2019 (member)
- 1st Place Overall, California DECA States Conference 2019, Buying and Merchandising Team Decision Making (out of 40 teams), qualified for International DECA Conference
- Top 10 Overall, Silicon Valley DECA Conference 2019, Independent Business Plan (out of 30 teams)
- 1st Place, FBLA Bay Section Conference 2019, Word Processing, qualified for California FBLA States Conference
- Top 10 Overall, California FBLA States Conference 2017, Introduction to Business Presentation
- Certificate from Associated Board of the Royal Schools of Music Piano+Theory Exam Level 8 (out of 8)