

Audrey Cui

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<https://github.com/audreycui>

EDUCATION

Massachusetts Institute of Technology

Cambridge, MA

2020 - 2024

- **ASE'd Coursework:** Intro CS & Programming (6.0001), Multivariable Calculus (18.02), Intro Biology (7.01x)

Monta Vista High School

Cupertino, CA

2016 - 2020: **GPA 4.0 (unweighted)**

- **SAT:** 1590/1600, Math Level 2: 800, Physics: 800, Biology 800. **National AP Scholar:** 5/5 on 9 AP exams
- **Activities:** Biology Club President, Science Olympiad Vice President, Cross Country

RESEARCH

MIT THINK Scholars & Independent Research

Jun 2018 - Jun 2019, Feb 2020

From Pixel to Paragraph: A deep neural artwork analysis paragraph generator

- Developed a generative adversarial neural network for the generating paragraphs analyzing input artwork by using the low level Tensorflow API to build complex machine learning models. Built augmented reality proof of concept using Unity.

SUNY Stony Brook

Jun 2019 - Aug 2019

Development of a hydrogel-based intumescent flame retardant for limiting wildfire propagation

- Synthesized and characterized a novel eco-friendly, sprayable, and effective fire retardant gel
- Presentation accepted by the American Chemical Society Spring 2020 National Meeting & Expo

Independent Research

Sep 2017 - Mar 2018

Ovarian cancer biomarker identification from SELDI-TOF mass spectrometry datasets using machine learning methods

- Trained classification models to identify ovarian cancer in SELDI-TOF MS samples and feature extraction models to identify potential ovarian cancer biomarkers

WORK & COMMUNITY SERVICE

Hongyun Art School

Cupertino, CA

Art Teacher

Jun 2017 - Mar 2020

- Taught weekly intermediate art classes in a variety of media (color pencil, acrylic, watercolor, clay, pen and ink)
- Created & taught a curriculum for 6 day camp that teaches the science of light phenomena through watercolor

Face Shield Project

Mar 2020 - Jun 2020

- Built a network of 100 robotics teams, 3d printing hobbyists, and volunteer drivers to 3d print and deliver parts for 10,000 face shields in response to a nationwide PPE shortage
- Established partnership with Maker Nexus, a local nonprofit that delivered face shields to healthcare centers

Retirement Center Art Workshops

Sep 2017 - Feb 2020

- Created & led biweekly art workshops for senior residents at 3 local retirement centers
- Recruited and trained 35 team members to lead art workshops

SKILLS

Python, Java, R, Tensorflow, Unity/C#, Microsoft Azure

HONORS

2020 Society of Women Engineers Scholarship Recipient, **2020** Equitable Excellence Scholarship Recipient, **2020** Hearts in San Francisco Artist, **2019** MIT THINK Scholars Finalist & overall 2nd place winner, **2018 & 2019** USA Biology Olympiad Top 50, **2019** City of Cupertino Volunteer of the Year, **2018** AIME Qualifier, **2018** Cupertino Emerging Artist Award Winner