

EDUCATION

Georgia Institute of Technology, Atlanta GA
Bachelor of Science in Computer Science, May 2027

Chongqing Yucai Secondary School, Chongqing, China
AP Curriculum--College Board's AP Scholar with Distinction, June 2022 GPA: 4.0/4.0

Technical skills

Programming languages (subject to change):

1. Java
2. Python
3. MATLAB
4. C/C++

Website-building languages (subject to change):

1. HTML
2. CSS
3. SCSS
4. JavaScript

WORK EXPERIENCE

HIMCM Pre-Flight Tutor

Prepped beginners in High School Mathematical Contest in Modeling for basic MATLAB coding skills, problem-solving skills, and writing in formal paper.

USAD Speech Tutor

Lectured on how to write a public speech, revised on students' essays, reviewed their public speech in the contest of United States Academic Decathlon.

PROJECTS/Leadership

[Leadership] Smart Kitchen Waste Pickup Program, Python

Website link: <https://ecoist-ste.github.io/promotion-website/>

Designed a three-parties and three-factors system used to increase the efficiency of municipal waste collection process by reducing fuel consumption and unpleasant odor resulted from excessively accumulated garbage in a waste bin—Three parties: 1) data collection, 2) algorithm operation, and 3) user interface. Three factors: total distance traveled by garbage truck, height of waste in bin, and length of time waste was disposed (last 2 are from sensors installed in the bins). On average of 20 trials conducted on the system, in theory it can reduce CO₂ emission by 425 kg per year.

[Leadership] Solution to Priority of Funding Projects Based on Genetic Algorithm (GA), MATLAB & Lingo

Attended lectures on advanced mathematics (linear algebra, prioritization, mathematical modeling, etc.), led 3 teammates in designing computational model to make optimal schedule for funding plant conservation projects that takes info about all projects as input and priority associated with each as output. Our algorithm resulted in a maximum of 11 million dollars profits per year out of a period of 25 years.

[Leadership] Chongqing Eagle Project (Chongqing Education Bureau), C++

A lectures in communication physics and C++ programming from Prof. Di Ke from Chongqing University of Posts and Telecommunications. led 2 teammates in utilizing infrared sensor technology to create intelligent shopping carts to enhance shopping experience. Crafted a prototype cart that follows a person's gestures. Published a report on a Chinese academic journal, ISSN 1003-9716.

S.T. Yau High School Science Award, Python

Investigated the phenomenon of corrugated cavity making sounds under certain conditions through laboratory experiments and Python statistical analysis to explain why when kids are playing with swinging tube it will

sometimes make "melody" . Paper name: "Singing" Tube: Excitation and Resonance of Airflow in Corrugated Cavity. Presented our work to Tsinghua University professors.

[Leadership] Eco-experience Facility Model, Designer & Team Leader, Sketchup

Spearheaded 5-member team in designing an eco-experience facility model using Sketchup that involves exhibition of water flow system, plants, and renewable energy to promote environmental awareness by bringing people closer to nature and experiencing its benefits. Conducted surveys to find out people's attitude toward it and completed a report. The statistics showed that our project intrigued 82.9% of surveyed subjects.

Environmental Group Research and Field Study, Python

Traveled to Yunnan Province to test the efficacy of our self-designed Sphagnum palustre water purifier to provide local farmers economical and sustainable access to clean water. Contacted local radio stations to broadcast our project and invited experts to our presentation. Our product outperformed current products in filtering water based on tests' results at 7 rural sites across China.

HONORS and AWARDS

COMAP's 2020 High School Mathematical Contest in Modeling, Finalist (Top 7%)

S.T. Yau High School Science Award, Bronze Award (6th place)

Envirothon, 19th Place (300+ finalists) and Grade A (Case Study)

Youth Impact Communication Initiative, Excellent Award

USAD China In-Country Competition, 6th Highest Overall Score

Future Business Leaders of America-Broadcast Journalism Category, 2nd place

High School Entrepreneurship Competition, Third Prize

EXTRACURRICULAR ACTIVITIES

Environment Club, President (G10, G11) & Advisor (G12)

Facilitated lectures on environmental science and current issues like impact of burgeoning human population for 41 members. Hosted activities like promoting environmental awareness and reusing water; presented my projects. Published articles online like benefits of plants and renewable energy sources. Advise the club on relevant activities to hold.

Independent Learning, Programming

Learning various programming languages [C, C++, Python, JAVA, and MATLAB] and website-building languages [HTML, CSS, SCSS, Java script]. Practicing on LeetCode, HackerRank, etc. about data structures and algorithms.

COMMUNITY SERVICE

Chongqing Jiulongpo Special Education School, Sep 2019 to Oct 2021 (except 2020)

Our group of 7 is tasked to teach basic concepts like colors, fruits, vegetables, common Chinese pleasantries.

Create PPT for our visual aid. Supervise the kids in different activities. It is our goal to ease the kids' transition and integration into society.

TiaoDeng River Trash Pickup, Jun 2021 to Present

Every weekend, go to the banks of the river to pick up trash, and then sort them accordingly before disposal.

From time to time, give "informal lectures" to kids playing in the area to be mindful of how they dispose trash.

Successfully invited 5 of my classmates to join me in this activity.

HOBBIES

Basketball, Boxing, Reading, Music, Movies, Learning the world