

Tang, Zijia (Thomas)

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EDUCATION

Guangdong Experimental Middle School
Guangdong Experimental High School

Sept 2020 – July 2021
Sept 2021 – Present

LEADERSHIP EXPERIENCE

Postpartum Depression Care Application | Founder, CEO, CTO

April 2022 – Present

- Designed a mobile app to offer online support groups, content sharing, moderated family workshops & professional guidance. Overcame difficulties promoting the app due to mental health stigma & lack of trust in online platforms. Approached around 20 obstetricians & moms myself, and tried to dissipate stereotypes and distrust.
- Connected and supported more than 100 moms and still growing; received 21 feedback and an average review of 4.5 out of 5 in our beta test.

HIMCM Club | Founder, President

Sept 2021 – Present

- Started the club to bridge gaps in access to contest resources and held lectures on computational and mathematical modeling. Realizing the lack of interest in HiMCM, expanded the club mission from HiMCM teaming to facilitate communication on more diverse topics.
- Aimed to utilize the precious gatherings to cover more topics of students' interests (from antimatter to international aid), initiated 25-minute bi-weekly school-wide TED talks.
- Motivated more speakers (7 student speakers), and attracted a constant audience of 20+.

Science & Technology Engineering Club | President

Sept 2022 – Present

- Organized various engineering projects such as designing and building robotic vehicles.
- Tripled the size of the club to 91 members; Coached 34 teams for S.-T. Yau High School Science Award; arranged mock presentation sessions 3 times where I acted as the judge, offered feedback, and explored collaboratively how to explain research topics in 3 minutes effectively.
- 4 teams gained national awards, and 2 teams got international Honorable Awards (Ranked 6 and 9 respectively in the Computer Science Division and Physics Division).

Peer tutoring program | Founder

Sept 2023 – Present

- Recruited top students of higher grades to provide lectures on their favorite subjects during the night studying period and answer students' questions when teachers' support is not available.
- Established a learning resource database to which each tutor could contribute, including curriculums, practices, readings, interesting materials... Mitigated the effects of inconsistencies in teaching resulting from high teacher turnover rates.

PUBLICATION

PINet: Privileged Information Improve the Interpretability and Generalization of Structural MRI in Alzheimer's Disease | Independent researcher | First Author

Dec 2021 – Present

- Designed a novel deep-learning model for early Alzheimer's detection using CNN and transformer, resulting in an accuracy of nearly 96%.
- Accepted as a rapid-fire paper by the ACM-BCB conference, an honor awarded to the top 25% of accepted papers (DOI: 10.1145/3584371.3613000).

scPerb: single-cell perturbation via style transfer-based variational autoencoder | Independent researcher | First Author

May 2023 – Present

- Created a new framework to predict cellular responses to perturbations, utilizing computational tools to be more economically friendly and less labor-intensive than traditional methods.
- Combined style-transfer and variational autoencoder, resulted in an accuracy of over 99.5%, outperforming all of the state-of-the-art methods.

PROJECTS

Youth Observation Contest (YOC)

May 2022 – Sept 2022

- Intrigued by what's beneath the stereotypical understanding of Chaoshan's culture strongly preferring boys, why women rate their happiness high and have an extremely low divorce rate.
- Initiated a research study, conducted 240 surveys by mobilizing networks of students for distribution, and analyzed how entrenched gender roles, family-centric values, and social stigma collectively contributed to the unique regional gender dynamic. Wrote a report: Recasting the Mirror in The Hand of Venus - Awakening Chaoshan Women's Self-awareness.

China Thinks Big (CTB)

Dec 2021 – May 2022

- Started a research project examining irrational consumption behaviors and susceptibility to financial fraud among the elderly.
- Conducted street survey for the 1st time, learned to overcome rejections & gaining strangers' trust. Proposed modifying our study after realizing how we were not reaching the targeted demographics and the difficulties of surveys in tracking gaps between knowledge & actions.

Auto Calendar Application

March 2023 – Present

- Our school's complex dynamic class schedule is only offered as an Excel sheet containing all classes provided, making it extremely difficult to search for classes among hundreds of blocks.
- Created a Python-based calendar program that addressed students' challenges with frequently changing class details and being late or attending the wrong class.
- The app automatically generates a personalized calendar with class location and time, can set alarms 5 minutes before classes start. Received 30 stars on GitHub, and over 60 unique users.

EXTRACURRICULAR

American Literature and AP Calculus AB | Teaching Assistant

Sept 2021 – Present

- The first-ever teaching assistant in my high school, aiming to be the bridge between teachers and students and encourage more students to assume this responsibility.
- Stepped up to solve academic challenges caused by the high turnover rate in our school (in the first month of my studies at my high school, we changed three Calculus AB teachers)

Cihui Hospital | Volunteer

July 2022 – Present

- Volunteered at ICU the elder's ward of Cihui Hospital bi-weekly.
- Committed to patient care; witnessed diseases, trauma, and death, witnessed volunteers who encouraged relatives of the deceased to donate their organs endure discrimination and rage.
- Became more aware of social classes and norms and more appreciative of life.

Band | Singer and Drummer

Continuous since Grade 5

- Learned and practiced opera singing for 4 years, pop songs for 2 years, and rap for 2 years.
- Enjoy powerful forms of self-expression and forming a connection with the audience in those moments of rapture. Forming a band currently to play resonating pop songs. Performed drum solo *She Will Be Loved* at the local Hesheng Mall.

AWARDS AND HONORS

Global Honorable Mention (Rank 6), National First Award, S.-T. Yau High School Science Award (Computer Science Division)	Nov 2023
Honor Roll of Distinction (Top1%), American Mathematics Contest 12(AMC12) score 139.5	Nov 2022
American Invitational Mathematics Examination (AIME), 13 points	Feb 2023
Qualifier, USA Mathematical Olympiad (USAMO)	Feb 2023
Qualifier, Platinum, USA Computing Olympiad (USACO)	Apr 2022
First Prize, National Olympiad in Informatics (NOIP)	Nov 2018
Global Top 100 and National Gold, Physics Bowl	Mar 2022
Global Gold, British Physics Olympiad (BPhO) Intermediate Physics Challenge	Mar 2022
Prize Award (Top 0.3%), Australian Mathematics Competition	Sept 2021
Third Award, China Thinks Big Challenge (CTB)	Dec 2021
National Top Gold, Math Kangaroo (Level 5)	Jun 2022
Youth Silver Medal, Invention & New Product Exposition, Pittsburgh, PA, USA	Aug 2022
Honorable Mention, Youth Observation Contest	Aug 2022
Computer Software Copyright Certificate: "Worry-Free Pregnancy" App	Nov 2022
Honorable Mention, High School Mathematical Contest in Modeling (HIMCM)	Feb 2023

SCHOLARSHIPS

Full-ride Scholarship

Sep 2021 – Present

Awarded a scholarship of 660,000 yuan in recognition of academic excellence, covering all my tuition.

Academic Excellence Scholarships

Jan 2022 – Jan 2023

Received a total of 20,000 yuan in five separate scholarships for consistently achieving outstanding scores in standardized exams and other competitions, and achieving the highest academic rank in the graduating class.