

Evan Keyu Xiang

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Education

- 2022 - 2026 **Shady Side Academy Senior School, Pennsylvania, USA** (GPA: 4.05/4.33)
– SAT (1560, 760R, 800M); AP Calculus BC (5); AP Computer Science A (5); AP Biology (5); AP Psychology (5); AP Environmental Science (4). AP Scholar with Distinction & National Merit Semifinalist

Selected Awards & Honors

- **USA Biology Olympiad National Finals - Silver Medalist** 2025
Top 8 at the 2025 USABO National Finals after a six hour practical and four hour theoretical examination
- **Regeneron ISEF Grand Prize Winner - 3rd in Biomedical and Health Sciences** 2025
3rd Grand Award for my project studying Cas9-based gene therapies targeting chromatin re-organization around epithelial-to-mesenchymal-associated genetic loci during stress in the lens as a mechanism of treatment for posterior capsular opacification. Second grand award winner in school history
- **2-Time USA Biology Olympiad National Finalist** 2025
Invited as one of the Top 20 National Finalists for the USA Biology Team out of 11,000+ participants nationwide to the National Finals at Harvard University in both 2024 & 2025
- **Bausch and Lomb Honorary Science Award** 2025
Given by the faculty of the Science Department to a member of the student body in recognition of outstanding academic achievement and superior intellectual promise in the field of science.
- **Pittsburgh Regional Science and Engineering Fair - ISEF Finalist/3rd in Medicine** 2025
Received 3rd Prize in Medicine/Microbiology; Special Award from the Allegheny County Medical Society; Selected as 1 of 6 ISEF Finalists, one of three in school history.
- **USA Earth Science Olympiad National Finals Invitee** 2024
Invited as one of the Top 40 finalists for the USA Earth Science Team, used to select the 8-person team that represents the United States at the IESO. [Unable to attend due to conflict]
- **Pennsylvania Junior Academy of Science (PJAS) - 1st Prize in Biology** 2024
2025 - Regional/State 1st Place + Perfect Score; 2024 - Regional 1st Place
- **Science Olympiad National Tournament Medalist** 2024
National Runner Up in Storm the Castle and 4th place in Meteorology at the 2023 National Tournament, held at Wichita State University. Led team to first top 10 national finish in 15 years.
- **Pittsburgh Regional Science and Engineering Fair - 3rd in Math/Computer Science** 2024
Received 3rd Prize in Math/CS; Special Award from National Institute of Occupational Health/Safety and Center for Disease Control; Scholarship Award from Chatham University (\$10,000).

Experiences & Leadership

- **CrabSO Scrimmage League Director** 2025 - Present
– Appointed director of scrimmage league containing 15 teams, 12 of which qualified for the 2025 Science Olympiad National Tournament (SONT). Organize weekly testing programs and virtual build competitions to facilitate team growth. Organize the CurdSO Tournament, held in February with 50+ participating teams.
- **Research Intern @ Chang Lab (Stem Cell and Neuroregeneration Laboratory)** 2024 - Present
– Studying chromatin/DNA organization within the lens & retina. Led prospective study regarding large-scale rearrangement of chromatin compartments surrounding EMT-critical genes as targets for genetic therapies against post-surgical cataract recurrence. Currently working on modeling chromatin-state transitions and epigenetic memory within therapeutic retinal organoids.
- **Trained Scribe - Shady Side Academy Writing Center** 2024 - Present
– Selected as 1 of 12 students by the English Department to work in the Writing Center assisting with underclassman writing and to take the Theory & Process of Writing course. Organize programs to introduce freshman to the Literature & Writing I curriculum and assist teachers in teaching of basic academic writing principles.

- **Private Tutor - Meteorology Event for Science Olympiad** 2024 - Present
 - Volunteer teacher for meteorology, teaching a group of 25 middle schoolers about various weather and climate related processes. Drafted lesson materials and mock tests. Students placed 2nd and 3rd at the 2025 Northern California Science Olympiad State Tournament.
- **American Regional Biology Competition - Pennsylvania Regional Director** 2024 - Present
 - Led/directed the Pennsylvania Regional Competition, held in Pittsburgh, with 30+ participating students competing in various biology testing formats.
- **Member of the International Biology Bowl Content Team** 2024 - Present
 - Director of the Molecular Biology Section; Manage and review all questions for the IBB Novice/Expert exams, as well as Science Bowl style rounds that are under the category of Molecular and Cellular Biology. I also contribute to question writing frequently.
- **Pandorax - USABO Bootcamp Instructor/Content Writer** 2024 - Present
 - I teach about cool biology concepts & olympiad-focused problem solving each week to 20 interested students, including ideas like binary expression systems, quasi-integral control for synthetic biology, the Wright-Fisher model for allele sampling, and many other topics in molecular & cell biology, evolution, genetics, and ecology. I create slides and write questions to assist in my lessons.
- **Science Departmental Associate (Selected as 2/63 Applicants)** 2023 - Present
 - Selected as a Science Departmental Associate by the Science Department. I represent the department at academy-wide events, including admissions and create marketing materials for the various competitions we participate in.
- **Science Olympiad Captain/Exam Writer (Tests taken by 13,000+ students)** 2021 - Present
 - Led team for past six years in both Division B (6-9) and Division C (10-12). Led Division B team to best placement at nationals in the past 18 years, led Division C team to improve 8 places at the Pennsylvania State Tournament. Organize transportation, bookings, team arrangements etc. for 7 overnight competitions each season.
 - Invited/volunteered as a test writer for 34 invitationals, including the New Jersey and New Mexico state tournament. Specifically drafted 42 tests covering topics in Molecular Biology, Ecology, Genetics, and Meteorology taken by over 13,000+ students
- **Summer Science Program (SSP) Program in Genomics (University of Guelph)** 2025 - 2025
 - Conducted adaptive laboratory evolution experiments with *V. natriegens* under spectinomycin stress to determine causative mutations for antibiotic resistance. Attended lectures covering various topics in molecular biology and microbiology. Drafted manuscript and created poster for presentation to University of Guelph faculty.
- **Research Intern @ Treble-Barna Traumatic Brain Injury Lab** 2024 - 2025
 - Conducted research on the association of brain-derived neurotrophic factor (BDNF) and behavioral outcomes post-TBI using K-means based cluster analysis; Assisted in the collection of patient samples, processing of samples via ELISA and other assays, and statistical analysis of trends.

Projects

Xiang, E., Wang, T., & Poddar, V. (2024, December 2). *High-Throughput Detection of Risk Factors to Sudden Cardiac Arrest in Youth Athletes: a Smartwatch-Based Screening Platform*. arXiv.org.
<https://arxiv.org/abs/2412.12118>

Technical Skills

- **Statistics:** Python, MatLab, R, SPSS Statistics v28, L^AT_EX, Graphpad PRISM
- **Programming (in order of proficiency):** Python, C++, Java, Javascript, HTML/CSS, Rust,
- **Lab Skills:** Micropipetting, Western Blot, Gel Electrophoresis, Mammalian Cell Culture, RT-qPCR, ChIP-qPCR, Sequencing (Library Prep for Hi-C/NGS), Mini/Midi/Maxipreps, FRET, FRAP