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Updated Jan 14, 2024; check the newest version *here*, the shorter resume *here*, the photography resume *here*.

Honors

Gold Division, *USA Computing Olympiad*

10th grade · National

- **Award requirements:** USACO is the US' top HS competitive programming competition. Entry to Gold requires exceptional performance in Bronze and Silver (scores 650–850/1000). Only about 10% of participants advance to Gold or above, highlighting its exclusivity and rigor.
- **What you did to earn award:** Scored in the top 13% in the Silver contest. Dedicated 15–30 hr/wk over 2–3 years learning algorithms by solving problems, reading textbooks, and writing 20+ technical articles (6k+ views) on personal sites and forums like *Luogu*. Participated in contests on Codeforces and Luogu; led discussions and built an online judge system for the CS club.

***Scholastic Art* — 1 National Silver + 3 Gold Keys, 2 Silver Keys, 5 Honorable Mentions**

11th grade · Regional & National

- **Award requirements:** All works are photography. Jurors select based on originality, skill, and personal vision. Less than 1% of works are awarded national Silver Medal, 5–7% for regional Gold Key, and 7–10% for regional Silver Key.
- **What you did to earn award:** Started photography in primary school. Took at least 3000 photos each year, 10% fine-tuned and processed. The national silver medal photo, **Industrial Tranquility**, used aerial photography at Pinghu Port, illustrating the interaction of human development and nature in my mother's hometown.

Meritorious, *High School Mathematical Contest in Modeling*

11th grade · International

- **Award requirements:** HS teams of four apply mathematics to write a paper (ours was 25 pages) in 14 days. In 2023, 967 teams from 18 countries participated; 202 were awarded Meritorious or above. It's the best result of my school in the past 4 years.
- **What you did to earn award:** Evaluated teammates' strengths to form a comprehensive team; lectured essential math modeling concepts (3 hr/wk) before the competition; attended online classes; analyzed past winning papers; spent 5 hr/day during competition writing the paper and physics simulation code.

***International Photography Awards* — 1 HM, 10 Official Selection**

11th grade · International

- **Award requirements:** A professional award for photographers 18+, with 14k+ submissions from 120+ countries annually. Experts judge on creativity, originality, and impact. About 600 earn honorable mentions; category winners get $10k and the Lucie Trophy.
- **What you did to earn award:** The HM series was shot during the *School of New York Times' Photojournalism* course assignment at Coney Island. Researched a week on the neighborhood's history/culture, spent a day photographing, and weeks editing/writing descriptions. Official Selection photos came from various projects, like alternative processes in analog photography.

Second Place in CS, ACM award in *North Jersey STEM Fair*

11th grade · Regional

- **Award requirements:** Judged by scientists & engineers; sponsored by Nokia Bell Labs. 142 total projects, 17 in CS competed. One project earned second place in CS ($75 prize). ACM awarded 1-year memberships to 4 projects advancing computing fields.
- **What you did to earn award:** Spent a year (>10 hr/wk) on a research project gamifying CS education; self-taught Kotlin & software engineering principles. Developed a backend with 6k+ lines of code; collaborated with school officials on data compliance; designed an award-winning poster (best in school symposium); dedicated 20+ hours prepping the presentation at the STEM fair.

Scholastic Writing — 2 Silver Keys + 1 Honorable Mention

11th grade · Regional

- **Award requirements:** All works are critical essays. Jurors select based on originality, skill, personal vision. 7–10% earn regional Silver Key, 15–20% earn regional Honorable Mention.
- **What you did to earn award:** All three award-winning essays came from my English class assignments. Revised each multiple times, incorporating feedback from my teacher and classmates. Re-read *The Veldt* and other works for deeper nuances. Continued editing for over a month, refining each piece at least five times.

4th in opt., 6th in New Language, 14th overall, CMIMC prog.

11th grade · International

- **Award requirements:** The *Carnegie Mellon Informatics and Mathematics Competition Programming* is open to teams of three HS students worldwide. In my year, 115 teams competed in algorithmic challenges judged on solution correctness and efficiency.
- **What you did to earn award:** Recruited three teams for the school as CS club leader; handled logistics, registration, resources; trained teams in Python and past problems; spent 12+ hr/day during contest weekend. Designed algorithms for the optimization round, achieving 4th/115 (two problems ranked 1st and 3rd, total 3 problems solved). Advised a teammate in charge of other rounds.

Activities

Leader of Computer Science Club

9th–12th grade · 4 hr/wk · 36 wk/yr

- Leader (G11–12), Co-leader (G10), member (G9); 15 members.
- Led 5 projects, like an inter-house event website & building full adders with logic gates.

- Gathered info on competitions & internships, built competition teams, organized training sessions and logistics, led teams that won awards (e.g., PClassic).
- Organized trips to professional conferences like *PyCon*.

Personal Website (*ttzytt.com*)

9th–12th grade · 3 hr/wk · 48 wk/yr

- 50 technical articles on personal sites and well-known CP sites (Luogu, oi-wiki).
- 40k+ total views. Multiple articles appear as top search results (e.g., "implementation of function calls").
- A lab note on university open courses was recommended by *csdiy.org*, a popular CS self-learning site.

Photography

9th–12th grade · 15 hr/wk · 15 wk/yr

- Photographed for 7 years; took courses like the *School of NYT's Photojournalism* and darkroom/film digitalization at *ICP*.
- Worked on independent projects recording Hong Kong protests, discarded farms from the planned economy era in China, natural sceneries, life in New York, etc.

Volunteer: School Principle of Computer Science course

11th–12th grade · 3 hr/wk · 30 wk/yr

- Principle of CS is our school's intro CS course, challenged by large class sizes.
- Developed grading software to automate correctness evaluations (with security features), letting teachers focus on nuanced feedback.
- Open-sourced on *GitHub* tutored students in its use; held review sessions & weekly office hours; suggested curriculum improvements.

Volunteer: Refugee Resettlement Program

11th–12th grade · 2.5 hr/wk · 15 wk/yr

- Interfaith-RISE supports refugees in NJ; SARI is a student-led nonprofit. Our program partners with both.
- Taught refugee students from Afghanistan English and Math at the library, engaged via play.
- Developed software to automate venue reservations.
- Collaborated with Model UN club to organize an in-school Model UN conference on refugee awareness, using the UN Refugee Agency's materials.

Intern at *StonySystems Lab*, CS dept., Stony Brook Univ.

11th grade · 65 hr/wk · 7 wk/yr

- StonySystems is a distributed systems lab led by Prof. Shuai Mu (10 members), focusing on fault-tolerant databases, concurrency tools, correctness proofs.
- I was the only high schooler in the lab.
- Wrote/presented multiple investigation reports on Rust/C++ interoperability and C++ memory safety for a research survey.
- Refactored an existing codebase to implement more features, constructed a Rust compiler-frontend as an infrastructure, presented weekly progress.

Volunteer: Cat Rescue and Resettlement

11th grade · 8 hr/wk · 4 wk/yr

- Formed after Dec 15, 2023 "Hangzhou Cat Truck" incident (illegally obtained cats, incl. pets).
- Collaborated with a local pet hospital to resettle 100+ rescued cats, supporting recovery.
- Replaced litter, food, water daily; monitored health, reported to vets; trained new volunteers on safety & sanitation; supervised volunteer entry for cleanliness; organized resources for cat care.

Initiator of Photography Club

12th grade · 3 hr/wk · 36 wk/yr

- 24/120 members, one of the largest clubs in school.
- Organized student exhibits with art teacher on summer experiences. Organized activities like museum trips, photographing auroras/meteors.
- Delivered lectures on photography techniques; invited professional speakers; documented key school events (commencements, orientation).

Mentor in FIRST Tech Challenge (FTC) Robotics Team

12th grade · 6 hr/wk · 15 wk/yr

- Overall mentor & software group leader.
- Led algorithm development using PID and computer vision; organized team recruitment, reviewed applications.
- Conducted lectures on software engineering, Kotlin, and Android Studio; coordinated hardware-software integration; ensured smooth systems operation.

Volunteer: *Trenton Area Soup Kitchen*

10th–12th grade · 3 hr/wk · 10 wk/yr

- TASK feeds the hungry in Greater Trenton, offering education & job assistance.
- Prepared, cooked, packaged, served meals; sorted/disposed of waste post-session; cleaned kitchen areas; distributed food packages.
- Engaged with individuals, listened to their stories, provided info on local resources.

Model UN Club

11th–12th grade · 2 hr/wk · 36 wk/yr

- Collaborated with Refugee Resettlement Program to organize an in-school MUNC on refugee awareness (UNHCR resources).
- Competed at multiple conferences; organized transportation & lodging.
- Participated in club discussions on global events, gave speeches.

Other coursework: 6.s081, Massachusetts Institute of Technology (*MIT*)

9th grade · 50 hr/wk · 6 wk/yr

- A prestigious operating systems course covering advanced topics like virtual memory, file systems, threads, system calls.
- Built projects with the xv6 OS, gaining hands-on systems programming experience.
- Completed all labs; shared notes on my personal site (11k+ views).
- Listed as a recommended resource on *csdiy.wiki*, a popular self-learning site.

Leader of School Cycling Athletics Group

10th–12th grade · 3 hr/wk · 25 wk/yr

- Leader (G12), participant (G10–11).

- Researched/designed cycling routes for different skill levels; led group sessions with 10–15 participants, ensuring safety/cohesion.
- Maintained school-owned bicycles; taught new members hand signals, road safety, regulations; fostered a supportive environment.