

❖ Kevin Xia ❖

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❖ Education

Walt Whitman High School, Bethesda, MD (Class of 2027) ❖ **GPA:** Weighted: 4.95 / Unweighted: 4.0
SAT: 1570 (770 Reading, 800 Math) ❖ **PSAT:** 1520

AP Exams: **5s:** Calc BC, Physics 1, Micro/Macroeconomics, Computer Science Principles, US Government, US History, Chinese, World History; **4s:** Language & Composition, Computer Science A

Mathematics: Completed Multivariable Calculus and Linear Algebra junior year, the highest mathematics available at Whitman. Attending Montgomery College senior year to take Differential Equations.

Technical: Python, Java, PyTorch, TensorFlow, Computer Vision (OpenCV, DepthAI), Raspberry Pi, ESP32, Arduino

❖ Extracurricular Activities

Summer Research Intern, Stanford AI in Medicine & Imaging Program, Summer 2026

- Participated in Stanford's AI in Medicine and Imaging summer research program (~5% acceptance rate), learning how machine learning is used in healthcare through lectures and a team challenge to build and improve a pneumonia classifier

Summer Research Intern, Smith-Kettlewell Eye Research Institute, Summer 2026

- Worked with Dr. Nasif Zaman to develop an app for blind and low-vision users that connects to Meta AI glasses, enabling discreet on-device assistance in understanding and monitoring visual scenes

AI-Powered Smart Cane Navigation System, September 2025–May 2026

- Started project after noticing that most navigation tools for blind users are reactive rather than proactive, alerting to an obstacle only after the user is close to it. NAVIS uses a drone for forward scouting combined with a motorized guide cane with depth cameras to give users more time and information to navigate.
- Designed and programmed custom software including creating a novel hierarchical navigation model. Used reinforcement learning, high-dimensional vectors, and deep learning.
- In preliminary testing, achieved 3x faster navigation, 2–3x greater path efficiency, and 85% fewer obstacle collisions compared to a standard white cane.
- Reached out for feedback to 15+ national organizations, professors, and state agencies including NFB, Perkins School for the Blind, Braille Institute of America, AER, AFB, HKNC, and Maryland Dept. of Rehabilitation Services. Patent pending.

Team Lead, SafeStride: Accessible Path Planning App, June–August 2025

- Led a four-person team in the UMD CPSE Summer Jumpstarter Program (under 25% acceptance rate). Built a mobile and hardware navigation system for blind users, focusing on accessible pedestrian routing.
- Presented at Demo Day to 500+ attendees; featured in local media. Congressional App Challenge Winner (Maryland's 8th Congressional District); met with Rep. Jamie Raskin. Patent pending.

ALS Assistive Communication System, September 2024–April 2025

- Built an eye-gaze communication tool for ALS patients who have lost the ability to speak or type. The goal was to make something genuinely affordable: Existing AAC devices can cost thousands of dollars. Visio runs on standard laptop hardware and costs under \$0.05 per month to operate.
- Achieved 55.9 words per minute, roughly 80% faster than traditional solutions, with 2–4x shorter response time.
- Dr. Daniel Rubin at Harvard Medical School and Massachusetts General Hospital reviewed the system and described its potential impact for ALS patients as “transformative.”
- Presented Visio at the International Conference on Computers Helping People with Special Needs (ICCHP) 2026 in Brno, Czech Republic

Research Assistant, Stroke Rehabilitation Lab, Prof. Lum, Catholic University of America, February 2026–April 2026

- Developed deep-learning models that detect hand-opening intent from multivariate time-series sensor data, to improve control for a robotic hand exoskeleton used in stroke rehabilitation. Expected co-authorship on the resulting publication.

Founder, Bugfix & Chill, 501(c)(3) Nonprofit, September 2023–Present

- Started as a way to give students around the world access to a collaborative, low-stakes programming environment.
- Grown to 8 global hackathons with 4,000+ participants across 87 countries; recruited 100+ industry professionals as judges and raised \$3,000 in sponsorships through cold calling.

Founder, Global Student Innovators Network, August 2024–Present

- Built a startup incubator for students in developing countries, distributing approximately \$1,200 in funding and prizes and assembling a 20+ member professional mentorship board. Mentored a student from Turkey whose app gained national media coverage.

Volunteer, Prevention of Blindness Society of Metropolitan Washington, December 2025–Present

- Created resource guides for blind and low-vision residents across five Maryland and DC-area counties; compiled local services and support resources that were previously scattered or hard to find.
- Developed tutorials on AI accessibility tools, Meta smart glasses, and accessible document creation.

❖ *Honors*

International

- **Regeneron ISEF Grand Award - Robotics:** One of five Third Award projects in the Robotics & Intelligent Machines category, 3rd place from an affiliated network of 175,000+ students worldwide.
- **Blue Ocean Competition, Top 10 Pitch:** Top 10 out of 23,000+ participants in the largest high school virtual pitch competition in the world.
- **AwardX International Entrepreneurship Competition:** 1st Place, 500+ entries for disability-tech work; \$5,000 prize.
- **NFTE World Series of Innovation Impact League:** 3rd Place in the Health category out of ~3,000 total participants
- **DECA ICDC Qualifier & Competitor:** 2nd in Maryland, competed in the international competition
- **International Young Researchers' Conference:** Research paper on using machine learning to model the D.C. overdose crisis accepted and presented at Summer 2026 Conference

National

- **3x AIME Qualifier:** American Invitational Mathematics Examination; 2x Distinction; top ~5% of AMC test takers nationally (1 of 2 students from our school)
- **Congressional App Challenge Winner:** Winner for Maryland's 8th Congressional District; met with Rep. Jamie Raskin; featured in local media
- **Congressional Debate TOC Qualifier:** Qualified for the national championship tournament; 2 TOC bids
- **GMU Patriot Invitational:** Congressional Debate Finalist
- **Pennsbury Invitational:** Congressional Debate Finalist
- **Vermont Pitch Challenge, 3rd Place:** 150+ submissions for assistive technology pitch

State & Regional

- **Scholastic Art & Writing Awards - D.C. Region:** 2x Silver Key, 4x Honorable Mention in Poetry
- **Montgomery County Science Fair, 1st Place - Computer Science:** First place for Visio ALS communication system
- **Modeling the Future Challenge:** Maryland State Semifinalist

- **NSDA Debate Ranking:** Ranked 2nd in Maryland for TOC bids
- **University of Maryland Math Competition Part II:** 2x qualifier to the invitation-only second round
- **University of Maryland Bitcamp Hackathon:** Won the App Development track as a highschool team, out of 52 college teams

❖ *School Leadership:* President & Co-Founder of AI & Research Club and Science Olympiad Club

❖ *Hobbies:* Volleyball, boxing, chess, corny RomComs, hackathons