Kevin Zhou

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EDUCATION AND ADVANCED COURSEWORK

Hopewell Valley Central High School Pennington, NJ | Class of 2027
GPA: 3.97 UW / 4.63 weighted | **SAT superscore:** 1550 (790 Math, 760 EBRW); highest one-sitting score 1540 (790 Math, 750 EBRW)
College coursework: Calculus III (Syracuse SUPA Project Advance); Linear Algebra (NOVA Online); Discrete Mathematics (in progress, NOVA Online); Data Structures & Algorithms (planned, MCCC).

RESEARCH PAPERS AND INDEPENDENT INVESTIGATION

IEEE BigData 2026 High School Symposium *First Author Accepted*
CalibMI: Auditing EEG foundation models for motor imagery
- Compared LaBraM and CBraMod with three supervised EEG baselines using training-session-only model selection; enforced safeguards preventing evaluation-label leakage in reported results.

NeurIPS 2026 LP4FM Workshop *Second Author Accepted*
A Minimal-Pair Test Shows a Spectral Fork Diagnostic Tracks Prompt Surface Form
- Co-authored a controlled study on Gemma-4-12B-it; tested a method for analyzing AI reasoning and whether it could distinguish meaningful changes from changes in wording; found it missed all 100 answer-changing edits.

RESEARCH EXPERIENCE

Clinical AI Research Contributor @ MIT Critical Data *Jun 2026–Present*
Remote, Cardiac multimodal learning and AI reliability
- Evaluated ECG–echocardiography model robustness under missing modalities; echo-removal ablation reduced AUROC from 0.813 to 0.668. Assisted with JEPA-based evaluation and related research prototypes.

Researcher and Project Lead @ University of Illinois Urbana-Champaign iSchool *Apr 2026–Present*
Remote, Social Computing Systems (SALT) Lab
- Designed a method to label 800+ citations; tested 10+ AI systems (GPT, Jev); found that which AI model ranks best depends on whose labels are used.
- Contributed to development and evaluation of LLM-supported tools for human–AI scientific research workflows.

Research Assistant @ University of Michigan–Flint *Nov 2025–Sep 2026*
Remote, Google-Sponsored Kotlin Project
- Built 2 Kotlin static analyses for div-by-zero/index errors; annotated 1k+ benchmarking cases; scraped and ran experiments on 100+ repositories.
- Investigated typed-result handling for invalid arithmetic operations and compiler-based approaches to preventing runtime failures.

HONORS, COMPETITIONS AND ACTIVITIES

Competitions: USACO Silver; 2nd Place, IU Indianapolis DataViz Games (NCAA partnership); Kaggle 5× top-15% finishes (best top 4% and 8%); Grand Concours Gold and Silver medals.
Music and athletics: ABRSM Grade 8 Piano; AAFAA piano medals and Weill Recital Hall soloist; four years of school soccer (two varsity), two years of EDP club soccer.
Programming practice: USACO solutions, LeetCode 400+ problems; Codeforces 1500+.

SELECTED TECHNICAL PROJECTS

Ariel, a reinforcement learning humanoid (HackPHS 2026 Submission) *2026*

Python, PPO, MuJoCo, dm_control, MoCapAct

- Built a simulated humanoid with adjustable limb lengths; trained a proximal policy optimization control layer over a pretrained and frozen motion prior, testing on procedurally generated obstacle courses that were modeled after the lunar surface.

MultiForecast: Probabilistic Sports Modeling *2025–2026*

Python, statistical modeling, Streamlit, Next.js

- Implemented Elo, Poisson, Skellam and Dixon–Coles models with Monte Carlo simulation, walk-forward validation, log-loss/Brier evaluation, and probability calibration; reached 1,500+ unique users.

InvariantGuard, a local-first program verification (alpha) *2026*

Python, typed IR, interval/path reasoning, Z3, Docker, MCP

- Developed a research-preview verifier for Python patches that analyzes modeled runtime-failure paths, validates counterexamples, checks repository-specific contracts, and produces machine-readable evidence for coding-agent repair workflows.

LEADERSHIP, EMPLOYMENT AND SERVICE

Co-Founder, Chief Executive Officer @ Velvt April 2026–Present

Engineered a core vector-embedding productivity platform to manage user focus, establishing a 50+ user technical waitlist. Hand-selected to attend the invite-only, in-person Y Combinator Startup School 2026 Summit in San Francisco. Secured active entry into Microsoft for Startups Founders Hub and NVIDIA Inception acceleration programs.

Executive and Technical Director @ Minorities in STEM Dec 2025–Present

Developed Northstar (northstar.study) research-opportunity mapping; helped connect 400+ students with laboratory research opportunities; organized workshops and local robotics partnerships. Organization-wide: 50+ chapters in 5+ countries, 300K+ students reached.

Student Council President, Former Vice President @ Hopewell Valley Central High School 2026–Present

Represented 1,000+ students; supported $14K homecoming fundraising, a 300+ item food drive, and school-wide events such as pep rallies and spirit weeks.

Scholars United Initiative / Learn To Be (President, 2026–) 2023–Present

Helped coordinate 400+ tutoring hours across 50+ members; ranked #1/293 chapters in the US in tutoring hours, past 30 days; completed 120+ personal tutoring hours. Raised over $1k for school supplies, donating over 200+ packs containing notebooks, pencils, erasers, and folders to Cadwalader Elementary School.

Paid STEM Instructor and Camp Counselor @ WULA Summer Camp Summer 2024

Only student staffer selected to lead technical curriculum; taught mathematics, Scratch and stop-motion to 30+ students (120 paid hours).

President @ HVCHS Mu Alpha Theta Chapter 2026–Present

Led a 90+ member chapter; organized SAT Math and AMC practice sessions.

TECHNICAL SKILLS

Languages: Python, Kotlin, C++, Java, R, SQL, TypeScript | **Libraries/Tools:** PyTorch, TensorFlow, scikit-learn, NumPy, Pandas, Git, Z3, FastAPI, Next.js