Hongxin Su (Steven Sue)

CIVIC TECHNOLOGY · ACCESSIBILITY · FULL-STACK DEVELOPMENT

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Grade 12 at NAIS Shanghai. I build civic technology for people usually left out of it, along one line: Access → Care → Dignity → Agency (ACDA). Accessible transit routing is access; fair volunteer allocation, care; my papers ask what those systems owe the people they sort, which is dignity; a STEM platform for left-behind children, agency. I start from the difficulties specific people face and use mathematics and computation to build real tools; I also study what genuinely helps, and how the people receiving support can take part in deciding what those tools are for. Three of the four projects are live today; six papers accepted at IEEE ICDM, MTSR, IEEE ITSC, NeurIPS, 4TU and APA.

EDUCATION

Shanghai North America International School (NAIS) — Shanghai, China
Grade 12 · Advanced Placement curriculum — Class of 2027
GPA 4.00/4.00 unweighted

RESEARCH · SIX PAPERS ACCEPTED

IEEE ICDM 2026 · UIM3-2026 Workshop, Urban Intelligence and Multimodal Mobility Mining — Full paper
"Evidence-Audited Mining of Urban Transit Accessibility Proxies: A Versioned Shanghai Metro Study"
First author and corresponding author; co-corresponding author: Yuan Sui · 16 Oct 2026

IEEE ITSC 2026 · 29th International Conference on Intelligent Transportation Systems — Poster
"Accessibility-Aware Public Transit Transfer Routing for Wheelchair Users"
First author; co-corresponding author · 15 Jun 2026

MTSR 2026 · 20th International Conference on Metadata and Semantics Research — Main-conference full paper
"When Is 'Accessible' Applicable? Preserving Context in Transit Accessibility Metadata"
Sole author and corresponding author · 15 Oct 2026

NeurIPS 2026 · AI and the Self Workshop — Short paper
"Whose Voice, Whose Control? Agency in AI-Assisted Communication"
Sole author and corresponding author · 30 Sep 2026

American Philosophical Association, Pacific Division — Colloquium paper
"When Inaccessibility Counts Against Access: Wheelchair Ridership and Allocative Bootstrapping"
Sole author and corresponding author · 6 Oct 2026

4TU ESDiT Philosophy Conference — Abstract
"The Presumption of Harm: Irreversibility, Cultural Lag, and Democratic Limits on Catastrophic Technology Research"
Sole author and corresponding author · 30 Jun 2026

PROJECTS

Accessible Transit Navigation System for Shanghai — 2025.09 – 2026.08
Lead developer and project lead · HTML5/CSS3/JS, AMap Web SDK, Web Speech API, Python, MySQL · accessgo.cn

- Surveyed **42 bus stops and metro stations** for platform, facility and transfer barriers, then folded what I found into six weighted accessibility factors in the route planner.
- Built the multi-sensory layer: high-contrast and colour-blind modes, adjustable-speed speech announcements, one-hand mode and enlarged tap targets.
- ~8,550 lines (1,111 Python / 7,439 frontend). Featured by *China Youth Daily* (2026-07-28, p.03) and school media; liaised with Minhang District public-interest prosecutors to push for open accessibility data.

Fair Volunteer Allocation System 2026.07 – 2026.09

Sole developer and project lead · Vue 3, Python 3 / Flask 2, MySQL 8 · fairallot.cn

- Wrote the fairness rule down as a priority order first: scarce teachers go to the hardest-to-staff sites, and the engine reports the class coverage that choice costs. Solved as a lexicographic mixed-integer program.
- ~12,256 lines, four user roles. In trial use at Shanghai Stepping Stones Youth Development Center, still running on its existing matching rules.

Qingban Youth STEM Education Platform 2025.12 – 2026.07

Founder and independent developer · PHP 8.2, PbootCMS V3.2.16, MySQL 5.7, Nginx 1.28.0 · www.qingban.org.cn

- **59 original video lessons** (47 in the teen Python series, 6 on math graphics, 6 physics lab walkthroughs), paired with offline events and used as a social space for left-behind and migrant children.
- 9,213 lines of my own PHP and frontend code on the open-source framework, bilingual CN/EN, designed, built and operated end to end.

"What Can Travel With You?" · Visual-Communication Installation 2026.07 – 2026.10

Independent creator · poster, illustration, photography, video, projection

- Asks what must be protected when a vulnerable child's life is rearranged, and whether the systems that arrange these lives can be questioned and changed by the children they affect.
- Installation complete; exhibition in the fall 2026 semester.

AWARDS

International Mathematical Modeling Challenge (IMMC), 12th · International Round **Meritorious**; Greater China Regional Round **Finalist** · team leader	INTERNATIONAL
USA Computing Olympiad (USACO) · **Gold** Division · 2025–2026	NATIONAL
CTB Global Youth Research Innovation Conference · **National 2nd Prize**, Best Community Impact Showcase, High Distinction · team leader, 2025–2026	NATIONAL
S.-T. Yau High School Science Award 2026 · **Semifinalist**, Economics & Financial Modeling	NATIONAL
Soong Ching Ling Award for Children's Invention, 21st (AI & Coding) · **National Bronze Award**, Regional 2nd Prize · top 1.2%, 2026	NATIONAL
Kaggle · ROGII Wellbore Geology Prediction, **Bronze Medal** · top 7.4%, 2026.08	INTERNATIONAL
AAPT Physics Bowl · **Silver ×2** · Division 1 2025, Division 2 2026	NATIONAL
Canadian Association of Physicists (CAP) High School Physics Prize Examination, **Silver** · 2026	NATIONAL
SJTU Rongchang Cup Innovation Competition, 7th (Mathematical Modeling) · **3rd Prize** · 2026.09	NATIONAL

LEADERSHIP & SERVICE

Physics & Critical Thinking Club · Founding President 2025.09 – present · 1 hr/week

- Founded the club and led five members through video coursework and experiments testing physics–philosophy questions, including chaos in the double pendulum.

Dandelion Club · Core Member and Project Planner 2025.09 – present · 1 hr/week

- Brought Qingban into the club, then co-planned charity events for migrant workers' children: 24 volunteers recruited, 100+ service hours.

Volunteer Tutor · Migrant Workers' Children, Guangzhou and Shanghai 2021.09 – present · 35 weeks/year

- Taught Chinese, math and English, and ran emotional-support activities alongside the lessons. About **137 hours** of service in total.

SKILLS

LANGUAGES	Python · JavaScript · PHP · SQL · HTML5 / CSS3
FRAMEWORKS	Vue 3 · Flask · PbootCMS
SYSTEMS	MySQL · Nginx · AMap Web SDK · Web Speech API
METHODS	Path planning and multi-criteria optimization · mixed-integer and lexicographic fairness modelling · mathematical modelling · metadata modelling · accessibility interaction design · philosophical argumentation
WRITING	Six papers accepted across six venues, all in English
SPOKEN	Chinese (native) · English (fluent)

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