

YIJIA (CLAIRE) XU

Email: 27yijiax@wab.edu | xyjclaire1018@gmail.com

Phone: +86 185 1681 9521 | +1 626 781 2117

EDUCATION

Western Academy of Beijing (WAB), Beijing, China IB Diploma Candidate	Expected 06/2027
● IB Higher Level: Biology, Psychology, Mathematics: Analysis and Approaches, English Literature ● IB Standard Level: History, Spanish ab initio	

SELECTED ACADEMIC PROGRAMS

Yale Young Global Scholars - Innovation, Science, and Technology (IST)	Summer 2026
● Engaged & debated in lectures, seminars, and breakout discussions including medical AI ethics, digital identity and ownership, Al-Ghazali's epistemology in the age of misinformation, health inequity, and socially assistive robotics. ● Researched Phantom Limb Pain's prosthesis materials and feedback-loop design for capstone; presented to 50+ YYGS students & 5 graduate instructors ● Built a CubeSat prototype with Arduino sensors to collect and interpret environmental data on Yale's campus.	
University of Chicago - Fundamentals of Psychology: Theory & Research	Summer 2025
● Completed a for-credit course covering perception, emotion, memory, development, disorders, and experimental design.	
University of Southern California - The Brain: Introduction to Neuroscience	Summer 2024
● Completed a for-credit neuroscience seminar with laboratory work and collaborative research.	

SELECTED HONORS AND AWARDS

USA Biology Olympiad - National Gold; British Biology Olympiad - Global Silver	2026
International Neuroscience Olympiad Global , Honorable Mention & Semi-finalist	2026
China Brain Bee National Championship - First Prize, 13th of 2,678 (Top 1%)	2025
National History Day China - Senior Exhibit 3rd Place & Museum Curator's Award; National Contest qualifier	2026
Diamond Challenge , Social Innovation - Beijing 1st Place / Top 3 China; Limitless Summit qualifier (Top 2%)	2026
Conrad Challenge China - Silver Medal (Top 6%)	2026
iGEM Grand Jamboree , High School Section - Gold Medal	2024
2x Quintuple & 1x Quadruple WAB Academic Award Winner (only recipient in grade) – G9: Science, Extended Mathematics, PHE, Chinese A L&L; G10: Nature of Science, English A L&L, Global Crises & Sustainability, Chinese A L&L, Design; G11: Biology HL, English A Literature HL, Psychology HL, History SL, Spanish Ab Initio SL	2024-2026
Make a Difference Award	2026
Hilary Munro China Engaged Service Award; Best MYP Personal Project Award	2025
Volleyball & Basketball: 4x All-APAC Teams, 5x MVP/MIP, Female Athlete of the Year Finalist	2024-2026

RESEARCHES IN SCIENCE, TECHNOLOGY, AND SOCIETY

<u>Seeing Yao Medicine</u>, Culture-Centered Bilingual & Multimedia Digital Museum <i>Founder & Project Lead</i> 2024-Present	
● Fieldwork with 20+ Yao practitioners, cultural researchers, and gov. officials; used semi-structured interviews, multimedia documentation, and thematic coding to examine and preserve the Yao medical practice and its local identity; ● Connected 150+ practices, medicinal plants, and traditions to practitioners' voices and cultural context; 10,000+ clicks; county government adoption planned for next year. ● Presented at the 4th Peking University Medical Museum Forum as panelist host (650+ audience); advocated digital equity for indigenous communities at the UN High-Level Political Forum to 100+ UNDP, EU, and US delegates.	
The Battle for Men's Minds: Politics, Science, and Secrecy in MKULTRA <i>Author & Archival Researcher</i> 2025-2026	
● Analyzed 80+ declassified CIA records and testimony from CIA Reading Room & College Park National Archives with historiography and scientific literature. ● Argued that while political urgency & contemporary scientific paradigms made behavioral-control research appear plausible, MKULTRA's meticulous architecture of secrecy insulated its nil operational value and experimental failures from scientific and ethical scrutiny in a 15,000-word paper for The Concord Review; received a "very good" National Writing Board evaluation.	
To Err Is Human: Inferring Authorship in the Age of AI <i>Author & Researcher</i>	2025-2026
● Reframed the Turing Test around how humans and AI attempt to prove humanness and which authenticity heuristics observers rely on to distinguish human- vs. AI-authored texts under Harvard Prof. Jason P. Mitchell.	

- Designed a three-stage experiment with 250+ global participants; analyzed detection accuracy and inferential statistics; found 4 effective strategies & evaluated their significance; manuscript under ICSPHS 2026 & CPCI review.

National Institute of Biological Sciences (NIBS), Dr. Peng Cao**Gut-Brain Axis Lab** | *Research Intern* 2025-2026

- Prepared mouse brainstem tissue for circuit-level analysis of toxin- and chemotherapy-induced defensive responses through transcardial perfusion, extraction, fixation, cryoprotection, coronal sectioning and histological staining.
- Targeted the nucleus of the solitary tract, area postrema and dorsal motor nucleus of the vagus; developed gut-brain signaling schematics for neurological diseases; contributed to [APS manuscript publication](#).

Mind Over Muscle: Expectancy vs. Ergogenics in Adolescents' Anaerobic Athletic Performance | *Researcher* 2025-2026

- Designed a 2x2 study of expectancy & ergogenics' (caffeine and taurine) effects on adolescent sprinting & grip strength.
- Analyzed results with ANOVA and Tukey tests; found placebo effects outweighed ergonomics; received an academic award (top student) with the 52-page investigation.

Born to Be Kind: The Evolutionary Significance of Prosocial Behaviors in Humans | *Researcher* 2024-2025

- Conducted literature review and survey study examining the role of kindness in partner preferences among Chinese participants under Harvard Prof. Jason P. Mitchell; evaluated inclusive fitness, reciprocal altruism, group-survival theories; argued sexual selection as an explanation for human's unusual prosociality; published in *Modern Psychological Studies* (950+ downloads).

TECHNOLOGY, MEDICINE, AND INNOVATION

MOTION³: AI-Driven Biomechanical Analysis Platform | *CEO & Algorithm Co-Lead* 2025-Present

- Founded a single-camera movement analysis platform that identifies subtle biomechanical deviations and offers semantic, personalized feedback for sports performance and rehabilitation through the integrated AI agent.
- [Co-designed the STCF-DTW algorithm](#); validated on 51 stroke patients and 20 healthy controls with 58% and 45 % reduction in alignment error and temporal distortion respectively, achieved over 80% anomaly-localization accuracy (above clinical).
- Led five iterations based on 1,600+ respondent market-validation survey; reached 1,000+ users across schools, gyms, and rehabilitation centers.

LUNA Pad: Menstrual-Blood Biosensor for Gynecological Screening | *Team Leader* 2024-Present

- Originated an affordable sanitary-pad biosensor using scFv-based lateral-flow detection of CA125 and IL-6; led conceptualization, biomarker research, human practices; coordinated between wet- and dry-lab teams.
- Conducted plasmid construction, transformation, protein electrophoresis, and purification; interviewed experts, led public health surveys and fundraising; won the iGEM gold medal.

BCI-Assisted Spatial Cognition Training for Alzheimer's Patients | *Independent Designer-Researcher* 2024-Present

- Designed a non-invasive, customizable spatial-navigation training program for Alzheimer's patients, targeting the often-overlooked deterioration of cognitive mapping and everyday navigation;
- Developed a difficulty-adjustable training framework in realistic physical environments; established a proposed patient-testing protocol to evaluate usability, navigation performance, and functional independence; final paper pending.

LEADERSHIP AND COMMUNITY ENGAGEMENT

United 2 Beat Malaria | *Founder & President* 2022-Present

- Founded student organization with 30+ members across China that supports malaria prevention in Zambia through awareness campaigns, fundraising, and community-based health education;
- Directed research, communications, social media, event planning, and partnership development; coordinated collaborations with the American International School of Lusaka, Dream Building Association, African Traveling Teacher, and China Africa Business Council.
- Raised approximately \$30,000 for malaria-related education and specialist training; represented the initiative as a youth advocate at events such as the UN's High-level plenary meeting, UNICEF, UNDP, China Daily, and meetings with other international development leaders; received over a million views on social media; won first place in Public Benefit International Challenge for Youth..

The Neuro Network | *Co-Founder & Co-Leader*

2024-Present

- Directed academic, design, social-media and communications teams to co-produce “March into the Mind,” a 500+ attendee lecture, Q&A and interactive exhibition with clinicians and researchers on the Mechanisms of common mental disorders from Beijing Tiantan Hospital; promoted awareness and care of teenage mental health.

Poetical China | *Founder & President*

2023-2025

- Co-developed a curriculum tracing relationships among Chinese characters, Phoenician symbols and the English alphabet; taught 200+ elementary and middle school students and presented the method at the Conference on Innovative Practices in International Understanding Education in the New Era in Chengdu (May 28-29, 2024)

ATHLETICS, MUSIC, AND SERVICE

WAB Varsity Basketball & Volleyball | *Team Captain & Athlete (Power Forward & Middle/Outside)*

2023-Present

- Competed in U19 APAC, Super APAC, ISAC, Tri-Cities and China Cup tournaments; earned All-APAC selections in both sports, a varsity basketball MVP award and multiple team championships.

Certified Disasters | *Founder & Main Drummer*

2021-Present

- Performed at school assemblies, 1,000+ attendee music festivals and benefit concerts addressing cancer and school bullying; also plays guitar and bass.

Additional Service

- Supports children with autism and other disabilities through art, music and fundraising with Zhixing Bowu; helped Golden Ribbon distribute medical supplies, improve donation access through a WeChat mini-program and support children with cancer or leukemia.