Yuhan Wang

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EDUCATION

Smith College Northampton, MA
Bachelor of Arts: Art History & Computer Science; GPA: 3.96/4.0 Expected May 2025
Dean's List 2021-2022; 2023-2024

RESEARCH EXPERIENCE

Smith College Human Computation & Visualization Lab Northampton, MA
Honor Thesis advised by Prof. Jordan Crouser August 2024 – present

- Investigate AI's roles in higher education and target misalignments between institutional policy, faculty perception, and students' use to promote user-centered, ethical technology design and policy.
- Conduct literature reviews and public surveys for ground understanding of AI use and academic integrity.
- Facilitate interviews in Prof. Ravi Karkar's *Wee Work* project to prepare for leading thesis interviews.

Roy Rosenzweig Center for History and New Media Online; Edinburgh, UK
Research Assistant in Prof. Deepthi Murali's Indian Textile project May 2024 – August 2024

- Conducted text analysis on 8 scholarly articles of ~3000 pages, extracted detailed information on 18th - 19th centuries textile trade and production, and compiled 100+ entries into *Prof. Murali's* open-source database.
- Developed digital humanities skills like data visualization with D3.js and rapid prototyping for archive digitization in the *DH & RSE Summer School* at Edinburgh Futures Institute.

Smith College Phyllotaxis Lab Northampton, MA
Research Assistant in Prof. Christophe Golé's Phyllotaxis lab May 2023 – May 2024

- Applied 3 variations of Topological Data Analysis in Python to measure the regularity of phyllotaxis in simulative disk-stacking models and 7 plant species. Presented at Smith College's *Celebrating Collaboration*.
- Redesigned model generation algorithms to produce hexagonal heatmaps, improving data interpretability.
- Researched and created visually engaging plots like violin plots and animated persistence diagrams, supporting visual comparison of statistical differences across species.

ExploreCSR at Brown University Online; Providence, RI
Research Program Participant mentored by Prof. Jeff Huang & Catherine Chen January 2023 – May 2023

- Investigated the feasibility of Scalable Vector Graphics (SVG) as website backgrounds.
- Prototyped 17 vector images as web page backgrounds using <svg> in XML, identified scalability, precision, and interactivity as key advantages, and presented an SVG-based poster at Brown's research symposium.
- Conducted a 10-person user study on a vector image creation tool *filtered.ink* and discovered that built-in examples ease the steep learning curve of specialized CS tools.

INTERDISCIPLINARY PROJECTS

Guerilla AI Online
A Computer Vision-Assisted Investigation inspired by Guerilla Girls May 2023 – present

- Leverage open-source museum data and large language models to statistically support *Guerilla Girls*' claim on the under-representation of female artists and the over-dominance of female nudes in modern art.
- Train an Ollama model on modern artworks from the Metropolitan Museum of Art database, discovering that 98.4% of the female nudes were created by male artists.
- Contribute codes for easy access to Nation*al Gallery of Art* image data to a GitHub open-source project.

Smith College Design Thinking Initiative Northampton, MA
Studio Design Partner; Website Operation Partner May 2022 – present

- Tutor students in design practices, focusing on ideation, prototype, and implementation. Provide hands-on guidance for machines and tools usage. Host workshops on 3D modeling and crochet for 30+ students.
- Led user-centered research initiatives to improve space accessibility and inclusiveness, developing tools such as staff proficiency charts and affirmation signs that foster student engagement.
- Improved *Smith Makers Map* (smithmakersmaps.com) with interactive data features like real-time making space information in TypeScript and Angular, enhancing accessibility of making resources on campus.

Break Through Tech AI at MIT Cambridge, MA
Program Participant May 2023 - May 2024

- Developed a predictive model for bat population decline across North America, analyzed time series data on White-Nose Syndrome, and provided insights on indicative fungi for WNS prevention to *Biointerphase*.
- Led a team of 4 in the New York Botanic Garden Kaggle competition and won the *Most Submissions* award.
- Leveraged scikit-learn and TensorFlow to build Random Forest, NLP, and CNN models, achieving 81% accuracy in bat population prediction, and 97.7% accuracy in plant classification.

LEADERSHIP / COMMUNITY ENGAGEMENT

Smith College International Students Organization Northampton, MA
Chair(23'-25'); Publicity(21'-23') September 2021 – present

- Represent international students by planning and hosting campus-wide initiatives and meetings. Oversee daily operations, event logistics, and budget for the largest student-run organization on campus.
- Foster collaboration with campus offices to increase international representation in the college community.

Smith College Computer Science Department Northampton, MA
Student Liaison December 2023 - present

- Liaise between students and faculty. Advocate for students' needs in department meetings.
- Initiated *Bytes & Bites* networking events, *Prof Research Talk Series,* and *REU info session* to facilitate students navigate CS opportunities and advance equitable access to education resources.

Education Without Barriers Online; Shenzhen, China
Website team member September 2023 – present

- Design and maintain a WordPress-based website to raise visibility and support fundraising initiatives for left-behind children in China.
- Address local schools' limited-budget equipment needs with interactive web-based teaching facilitator programs.

SKILLS

Programming: C, C++, HTML, Java, JavaScript, Python, React, Ruby

Frameworks/Libraries: Angular, D3.js, Matplotlib, NumPy, Pandas, Plotly, Rails, Scikit-learn, TensorFlow

Creative Software: Balsamiq, Blender, Figma, Fusion 360, PhotoShop, Premiere, P5.js, Shapr3D, Three.js, Tinkercad

UX Methods: Affinity Diagram, Cognitive Walkthrough, Prototyping, Persona & Scenario, Survey, Usability Testing

Making: Calligraphy, Crochet, Hand Sewing, Laser Cutter, Sewing Machine, Vinyl Cutter, 3D printer

Languages: Chinese (native speaker); Spanish(intermediate)