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
Cornell University, online certificate in Machine Learning Foundation   August 2023

AWARDS

Dean's List 2021-2022
Best Pitch Award, Hack(h)er 413, February 2022

RESEARCH EXPERIENCE

Smith College Phyllotaxis Lab   Northampton, MA
Research Assistant in Prof. Christophe Golé's Phyllotaxis lab   May 2023 – present
- Applied 3 variations of Topological Data Analysis(TDA) in Python to measure the regularity of phyllotaxis from a disk-stacking model and 10+ plant species.
- Redesigned model generation algorithm to generate hexagonal heatmaps. Researched effective plots to visualize the analysis results. Generated animated persistence diagrams to differentiate geometric features across species.

ExploreCSR at Brown University   Online; Providence, RI
Research Assistant   January 2023 – May 2023
- Researched and prototyped 10+ vector images as web page backgrounds in XML language with <svg> tags. Coded an svg poster that showcases vector images' flexibility and presented at Brown's research symposium.
- Conducted user study on a vector image creation tool *filtered.ink* that provides insight about learning cost and accessibility for Prof. Jeff Huang's research lab.

RELEVANT PROJECTS

Break Through Tech AI @MIT   Online; Cambridge, MA
AI Studio Projects (Biointerphase; New York Botanic Garden Kaggle Competition)   August 2023 – May 2024
- Collaborated in a team of 5 to develop a time series analysis model to predict bat population decline from White-Nose Syndrome across North America. Extracted insights about indicative fungus for *Biointerphase*.
- Led a team of 4 and awarded Most Submissions in the spring Kaggle Competition to classify plant species.
- Leveraged scikit-learn and Tensorflow to build Random Forest, NLP, and CNN models. Reached 81% accuracy for bat population prediction, and 97.7% for plant classification competition.

Mystery Art Object Recognizer   Northampton, MA
MTH353 Seminar: Topics in Deep Learning; ARH 212 Ancient Cities and Sanctuaries   December 2023
- Designed an art recognition machine learning project with knowledge of ancient artworks from Near East, Egypt, Greek, and Roman. Collected and preprocessed over 1000 images of artworks for model training
- Built 2 AI models for artwork classification. Experimented with different labeling and reached 80% accuracy for the Greek category. Extracted insights about ancient artworks' connections between cultures.

Smith College Design Thinking Initiative   Northampton, MA
Studio Design Partner; Website Operation Partner   May 2022 – present
- Updated data and interface for an interactive map on the self-hosted website smithmakersmaps.com for students to access live information about creation resources on campus with Typescript and Angular.
- Designed and installed tour guide, affirmation signs, and staff proficiency chart with the whole team to increase the accessibility of the space, encourage students' agency, and improve design justice.

Valet Bike   Northampton, MA

CSC223 Intro to Software Engineering   February 2022 – May 2022

- Teamed with 4 students to build a semester-long project on the Bike Rental Website with Ruby on Rails. Applied MVC design pattern, iStar model, and Agile practices to maintain sustainable project development.
- Incorporated human-centered design by adding features like adjustable windows for mobile-friendly views. Leveraged Google Map API and Stripe enabling real-world rental experience.

LEADERSHIP/SERVICE

Education Without Barriers   Online; Shenzhen, China

Website team member   September 2023 – present

- Design website pages with WordPress to display the mission of the non-profit, showcase our worldwide impact, and raise visibility and empathy to fundraise for children in need. Build certificate generation program.

Smith College International Students Organization   Northampton, MA

Co-Chair(23'); Publicity Chair(21'-22')   September 2021 – present

- Plan and host campus-wide events showcasing international cultures. Collaborate with the international students office, the dining services, and other offices to improve international representation on campus.

Smith College Museum of Art   Northampton, MA

Museum Advisory Collective; Volunteer   September 2021 - May 2023

- Participate in museum activities' planning and volunteer in community events. Propose potential artworks for future installation and provide feedback on digital installations.

SKILLS

Programming: C, C++, Java, JavaScript, Matlab, Python, Ruby; **Framework:** Angular, Rails; **ML**: NumPy, Pandas, matplotlib, scikit-learn, tensorflow

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

Language: Chinese (native speaker); English (fluent); Spanish(intermediate)