

Yuhan Wang

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EDUCATION

Smith College

Bachelor of Arts: Art History & Computer Science; GPA: 3.93/4.0

Relevant Coursework: AP Calculus BC, AP Psychology, Programming with Data Structures (Java), Introduction to Software Engineering, Computer Graphics, Mathematics of Deep Learning

Northampton, MA

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 Howe Lab

Northampton, MA

Research Assistant in Prof. Nicholas Howe's lab

September 2023 – present

- Preprocess 4 cast pictures of Greek letter plaque Javascript and Matlab into smaller parallel split parts. Annotate each small part as labeled input data for future image processing models.
- Researched foundational knowledge of Neural Network and proposed 3 potential models for the processed data.

Smith College Phyllotaxis Lab

Northampton, MA

Research Assistant in Prof. Chris Golé's Phyllotaxis lab

May 2023 – present

- Collected and unrolled 10 Magnolia samples with Mathematica. Prepared phyllotaxis data by using Matlab app to analyze unrolled pictures and generate point clouds with Delaunay triangulation.
- Transcribed and innovated 3 Topological Data Analysis algorithms in Python to measure irregularity of phyllotaxis in different species. Generated 5+ heatmaps & plots to explain and visualize the analysis results.

ExploreCSR at Brown University

Online; Providence, RI

Research Fellow

January 2023 – May 2023

- Researched and prototyped 10+ vector images as innovative web page backgrounds in XML language with <svg> tags. Coded an animated [poster](#) in XML that showcases vector images' flexibility and presented at Brown's annual CS 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

Biointerphase

Online; Cambridge, MA

Bat-Detection Model; AI Studio Project

August 2023 – present

- 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.
- Leveraged Python's scikit-learn and Keras libraries to process and analyze data in 2 tracks, enabling more comprehensive feature extraction. Built a Random Forest and a Natural Language Processing model.
- Produced visualization like confusion matrix to extract insights for effective protection actions for bats and provide foundation for future research on this disease.

Valet Bike

CSC223 Intro to Software Engineering

Northampton, MA
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.

Smith College Design Thinking Initiative

Studio Design Partner; Website Operation Partner

Northampton, MA
May 2021 – 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.
- Tutor students on design software and machines like 3D printers to encourage computational designs. Hosted 2 workshops teaching basic skills on sewing machines that increased 20+ new students using the space.

LEADERSHIP/SERVICE

Education Without Barriers

Website team member

Online; Shenzhen, China
September 2023 – present

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

Smith College International Students Organization

Co-Chair(23'); Publicity Chair(21'-22')

Northampton, MA
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

Museum Volunteer; Advisory Collective Member

Northampton, MA
September 2021 – present

- Participate in monthly museum activities' planning and volunteer in community engagement events.
- Propose artworks for installation and provide feedback on curation, accessibility, and space use of the museum.

SKILLS

Programming: C, C++, Java, JavaScript, Matlab, Python, Ruby; **Framework:** Angular, Rails

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

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