

Katie Wang

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EDUCATION

Columbia University, Barnard College
Bachelor of Arts, Computer Science

New York City, NY

- Minor in Art History
- GPA: 3.9/4.0 | Dean's List
- Relevant Coursework: COMS3134W: Data Structures In Java, MATH2015UN: Linear Algebra and Probability, MATH1201UN: Calculus III, COMS1004W: Computer Science and Programming in Java, COMS1016BC: Computational Thinking and Data Science, [Planned: COMSW3203: Discrete Mathematics, COMSW3157: Advanced Programming]

WORK EXPERIENCE

Programming Languages Lab at Columbia University (<https://barnard-pl-labs.github.io>)

New York, NY

Research Assistant

Feb 2026 – Present

- Investigated Python-based intermediate representations for LLM-assisted creative coding with Professor Mark Santolucito.
- Extended MaxPyLang features and runtime bindings that power [MaxPyStudio](#)'s code, graph, and .amxd generation.
- Ran a two-week MaxPyStudio study with 52 users and 151 generations; co-authored an accepted IEEE VL/HCC 2026 paper.
- Published paper: (<https://katiewang.art/vlhcc>)

Columbia University Robotics (<https://www.columbiarobotics.club/>)

New York, NY

Software Developer, Project Build Lead

Aug 2025 – Present

- Help lead a team of 5 engineers to create an interactive robotics art exhibition in collaboration with artist Erika Harrsch.
- Implemented real-time motor control and sensor integration software for [Theobroma Flower](#) display using C and Python.
- Engineered sensors, dynamic petal movement, diffusers, and microcontrollers using Arduino, CAD, and Raspberry Pi.

MSI Analytics Lab at UC Santa Barbara

Santa Barbara, CA

Machine Learning Research Assistant

Jun 2024 – August 2024

- Performed solo analysis of manta ray behavior using 10k datasets managing data collection, cleaning, and modeling in R.
- Developed and optimized predictive models using decision tree based algorithms, improving classification accuracy to 85%.
- Presented climate change research and noted conservation insights to 200+ researchers and faculty in an in-person session.

EXTRACURRICULARS

Columbia Lion Dance (<https://culiondance.org/>)

Cupertino, CA

President

April 2025– Present

- Lead a 60+ member lion dance organization and 16-member executive board, driving recruitment, training, and growth.
- Oversee \$40,000+ in annual budget through performance bookings, sponsorships, fundraising campaigns, and planning.
- Represented Columbia at annual intercollegiate lion dance competitions and coordinated regional cultural performances.

SKILLS

- **Languages:** Python, Java, C++, TypeScript, JavaScript, R, SQL, Swift, HTML/CSS.
- **Tools/Frameworks:** React.js, Next.js, Git, Arduino, Claude Code, Figma, Illustrator, Photoshop, InDesign, Procreate.

PROJECTS

Angry Signing Llamas – Real-Time ASL Learning Game [Columbia DevFest 2026]

February 2026 – Present

- Developed a browser-based ASL game using MediaPipe and TensorFlow to recognize 35 signs from live webcam input.
- Constructed a hybrid recognition pipeline using single-frame classification and a 30-frame LSTM for dynamic gestures.
- Partnering with educational game publisher Jalan Journey to refine the prototype for publication and classroom distribution.
- (<https://devpost.com/software/angry-signing-llamas-asl>)

Therapi - Robotic AI Therapist [Columbia MakeCU Hacks | Best Use of ElevenLabs Award]

November 2025

- Engineered an adaptive therapy robot using Gemini and ElevenLabs for real-time, emotion-aware voice interactions.
- Integrated DeepFace and OpenCV to detect facial expressions and adapt chatbot tone, LED colors, and buzzer notes.
- Designed and 3D-printed a custom robot enclosure housing a Raspberry Pi, Logitech webcam, LEDs, and piezo buzzer.
- (<https://devpost.com/software/therapi-xiazu4>)

Personal Art Portfolio (<https://www.katiewang.art/>)

February 2024 - Present

- Engineered an adaptive therapy agent integrating Gemini API for dialog state modeling and ElevenLabs for vocal synthesis
- Built a personal art portfolio website with Next.js, CSS, and JavaScript, showcasing 30+ original works created over 8 years.
- Illustrated and animated dynamic graphics in Procreate and designed the site layout in Figma with fully responsive styling.

ADDITIONAL

- **Interests:** Oil Painting, Watercolor, Baking, Chilis, Matcha Making, Skiing, Acapella Singing, Piano, Fishkeeping, Wushi