Amy Wu
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About

I am grateful to share that I am an incoming **DOE SULI AI intern at the Berkeley Lab for Spring 2026**!

I am particularly passionate about **designing AI applications, tools, and interfaces for human learning and communication**. Therefore, I can personalize my skills in **thematic analysis for CS Ed and algorithmic design for AI and Computer Vision** and be prepared for my emerging interests in **Human-Computing Interaction (HCI) and AI**.

I am **open** to collaborate in **any project proposals** on interdisciplinary areas involving **AI**!

Education

University of Florida (UF) Gainesville, FL
Bachelor of Sciences with Honors in CS, Minor in Digital Arts and Sciences *June 2020 – May 2025*

Publications & Manuscripts in Review and Preparation

- **A. Wu**, Cobb, M., Graddy, N., Perez, V., Grant, C., & Waisome, J. A. M., *Guided Undergraduate Training for Shark Segmentation (GUTSS)*, in SIGCSE 2024. **https://dl.acm.org/doi/10.1145/3626253.3635573**.
- A. DeHoog, J. Blanchard, **A. Wu**, & J. Hott. (2025, June), *Escaping the CS Dungeon: Modern College Curricula within and Beyond Computing*, Paper presented at 2025 ASEE Annual Conference & Exposition, Montreal, CN. **https://peer.asee.org/56440**.
- A. Webber, Z. Sayers, **A. Wu**, E. Thorner, J. Witter, G. Ayoubi, & C. Grant. 2024. *Analyzing Finetuned Vision Models for Mixtec Codex Interpretation,* in AmericasNLP 2024. **https://aclanthology.org/2024.americasnlp-1.6.pdf**.
- C. Resch, P. Stapleton, B. Rheault, **A. Wu**, & C. Gardner-McCune. (2022, August), *Analysis of Effect of Answering Reflection Prompts in a Computer Organization Class*, Paper presented at 2022 ASEE Annual Conference & Exposition, Minneapolis, MN. **https://peer.asee.org/40428**.
- P. J. Sullivan, E. R. Duarte*, D. Fabregat*, J. McCray*, J. K. Nelson*, Q. Nguyen*, S. B. Robles*, & **A. Wu.*** *Student Perspectives Mindfulness Chapter*, **Manuscript in Preparation**.

*All authors contributed equally.

Research Experience (CS Education (CE), AI Design (AI), Computer Vision (CV))

AI Department of Energy: Science Undergraduate Laboratory Intern January 2025 - May 2025
Dr. Thorsten Hellert (ALS), Lawrence Berkeley National Laboratory *Berkeley, CA*

- Pending.

AI Department of Energy: Science Undergraduate Laboratory Intern May 2025 - August 2025
Dr. Yue Li (MSD) and Dr. Aikaterini Vriza (CNM), Argonne National Laboratory *Lemont, IL*

- Selected specific chalcogenides from Materials Project database.
- Visualized the data through featurization techniques for UMAPs.
- Analyzed machine learning models with featurization techniques to conduct property prediction.

AI|CE|CV University Scholars Program (USP) AI Scholars Researcher May 2023 – May 2025
*Dr. Christan Grant and Dr. Jeremy Waisome, UF (**pub: 10.1145/3626253.3635573**)* *Gainesville, FL*

- Led a team of six in Guided Universal Training for Shark Segmentation (GUTSS), an Artificial Intelligence (AI) application to teach K-12 biology classrooms more on shark anatomy.
- Experimented with parameters in semantic segmentation algorithms (Meta's SAM and GroundingDINO).
- Established an application workflow incorporating semantic segmentation algorithms.
- Prepared instructor survey questions on AI and course curriculum for application design and usage.

AI|CE Amazon SURE Intern May 2024 – July 2024
*Dr. Vishal Misra, Columbia University (**demo: https://tokenprobe.cs.columbia.edu/**)* *New York City, NY*

- Developed TokenProbe- an open-source tool for the community to learn how LLMs work on the fly.
- Established workflow diagram on application functionality and design.
- Tested OpenAI's GPT-2 and Meta's LLaMA's 3 4-bit quantized model and tokenizer in Google Cloud VM to investigate in-context learning.
- Demo is hosted by Martin Casado, Marco Mascorro, and Andreessen Horowitz.

CE Ronald E. McNair Scholars Researcher May 2023 – May 2024
Dr. Jeremy Waisome, UF *Gainesville, FL*
- Contributed to LithoReality, an Affordable and Realistic Augmented Reality (AR) application.
- Drafted a 3D model to mimic LithoReality's photolithography process.
- Coded a circuitry for the 3D model section for LithoReality's Augmented Reality component.

CE USP Researcher August 2022 – May 2023
*Dr. Jeremiah Blanchard and Audrey DeHoog, UF (**pub: https://peer.asee.org/56440**)* *Gainesville, FL*
- Developed a questionnaire to survey programming fundamental instructors of top 50 largest universities.
- Created a codebook for qualitative coding on survey responses.
- Evaluate instructor responses on programming, collaboration, and classroom style through inter-rater reliability.

CE Engaging Learning Lab Researcher January 2021 – May 2022
*Dr. Cheryl Resch, UF (**pub: https://peer.asee.org/40428**)* *Gainesville, FL*
- Built a codebook based on student responses on reflections before and after assessments.
- Associated themes to each student response based on qualitative coding.
- Conducted thematic analysis and inter-rater reliability with a team of four.

CV UF Data Studio Researcher May 2023 – May 2024
*Dr. Christan Grant & Prof. Alex Webber, UF (**pub: americasnlp-1.6.pdf**)* *Gainesville, FL*
- Manually segmented human and creature figures from each Mixtec codex page.
- Documented each cutout based on quality, figure type, and what page it is from.
- Peer reviewed paper for publication submission to AmericasNLP.

CV UROP International Intern May 2022 – July 2022
Dr. Stefan Schiffer, RWTH Aachen University *Aachen, Germany*
- Tested various facial, mood, eye, upper body and gesture detection algorithms.
- Created a visual processing algorithm from those previous works to track humans.

CV Leadership Alliance SR-EIP and vASURE Intern May 2021 – July 2021
Dr. Alberto Quattrini Li, Dartmouth College *Virtual*
- Researched UAV obstacle and landscape detection algorithms to experiment on a ROS simulation.
- Assembled a fundamental obstacle algorithm based on UAV recorded footage.

CE Emerging Scholars Researcher January 2021 – May 2022
Dr. Jeremiah Blanchard, UF *Gainesville, FL*
- Conducted qualitative coding and thematic analysis on students' perspectives of camera-based proctoring systems.
- Worked with inter-rater reliability on the impact of camera=based proctoring systems.

Professional Experience

Information and Database Systems 1 Teaching Assistant August 2024 – December 2024
Prof. Alex Webber, HWCOE, UF *Gainesville, FL*
- Assessed students' level of understanding on their fundamentals in database systems through group projects.
- Developed and implemented a rubric for an assignment's evaluation to maintain consistency within grading.

UF International Center (UFIC): Student Assistant May 2023 – August 2023
Dr. Pingchien Neo, UFIC, UF *Gainesville, FL*
- Oversaw and maintained UFIC site.
- Updated spreadsheet on international programs and class curriculums offered.

WiCSE Shadowing Mentorship Program: Front End Developer Jan. 2023 – April 2023
Traject, WiCSE Shadowing Mentorship Program, UF *Gainesville, FL*

- Designed Figma workflow and React front-end interface for user interaction on a draft for a personal project based on mentorship apps.
- Implemented Firebase back-end for user registration and login.

STEPUP Lead Mentor and Teaching Assistant May 2021 – May 2022
Mr. Stephen Roberts, STEPUP STAR Office, UF *Gainesville, FL*

- Provided academic support to research groups for Dr. Regina Rodriguez for Research Fundamentals.
- Assisted in course management for Dr. Philip Jackson's Engineering Design and Society classes.
- Supervised academic, professional, and personal workshops for first-year engineering students.

STEPUP Participant June 2020 – May 2021
Mr. Stephen Roberts, STEPUP STAR Office, UF *Gainesville, FL*

- Led a mock research project on discrete event simulations for the optimization of patient care during a pandemic.
- Presented a mock oral presentation at the end of the summer program.
- Represented my group in the mock research Q&A session during the research fundamental class.

Community Service and Outreach

Ronald E. McNair Scholar May 2023 – May 2025
Student Volunteer, UF *Gainesville, FL*

- Shared research expertise and journey at UF BRIDGES Program, an outreach program to prepare Gainesville high school students to be competitive undergraduate applicants.
- Discussed about summer research opportunities on a First Gen Research panel.
- Spoke as a panelist for a class with first-year students on research opportunities at UF.
- Talked with aspiring McNair Scholars at McNair Open House.

International Engineering Ambassadors August 2022 – May 2024
President, HWCOE Student Organization, UF *Gainesville, FL*

- Supervised general body meetings, information sessions, and tabling events for organization.
- Organized trips around Florida (e.g. Kennedy Space Center) for international engineering students.

Benjamin A. Gilman Scholar Self-Service Project May 2022 – December 2022
Organizer, HWCOE, UF *Gainesville, FL*

- Led a study abroad panel for UF STEPUP students to learn more about international programs.
- Blogged on study abroad experience.
- Spoke as a study abroad panelist for Germany for UF first-year students.

Miami International Airport (MIA) Airport Ambassador August 2019 – March 2020
Student Volunteer, MIA *Miami, FL*

- Managed the information desk where travelers from over 80 airlines stop by to ask questions.
- Presided over the changes of more than 1000 flights for said travels.
- Oversaw efforts to assist commuters during Hurricane Irma and 3000 passengers for SuperBowl LIV.

Poster & Oral Presentations

- **Wu, A.**, Bissell, A., Li, Y., & Vriza, A. (2025, August). *Magnetic Property Prediction Using Machine Learning in Transition Metal Chalcogenides.* Poster presented at NSF Institute for Data Driven Dynamical Design (ID4) Materials Science Research Symposium, Northwestern University.
- **Wu, A.**, Bissell, A., Li, Y., & Vriza, A. (2025, August). *Magnetic Property Prediction Using Machine Learning in Transition Metal Chalcogenides.* Poster presented at "Learning On the Lawn," Argonne National Laboratory.
- **Wu, A.**, Bissell, A., Li, Y., & Vriza, A. (2025, July). *Magnetic Property Prediction Using Machine Learning in Transition Metal Chalcogenides.* Oral presentation presented at Department of Energy: Argonne IgniteOff Talks, Argonne National Laboratory.
- **Wu, A.**, Cobb, M., Graddy, N., Perez, V., Grant, C., & Waisome, J. A. M. (2025, February). *Guided Universal Training for Semantic Segmentation (GUTSS).* Poster presented at Florida Undergraduate Research Conference (FURC), University of South Florida.

- **Wu, A.**, Cobb, M., Graddy, N., Perez, V., Grant, C., & Waisome, J. A. M. (2024, November). *Guided Universal Training for Semantic Segmentation (GUTSS)*. Poster presented at the Ronald E. McNair Open House, University of Florida.
- Kerfoot, C.*, Rahman, R.*, **Wu, A.***, Tang, A., & Misra, V. (2024, July). *Deeper Dive: How LLMs Learn on the Fly.* Poster presented at the Amazon Summer Undergraduate Research Experience Symposium, Columbia University.
- **Wu, A.**, Cobb, M., Graddy, N., Perez, V., Grant, C., & Waisome, J. A. M. (2024, April). *Guided Universal Training for Shark Segmentation (GUTSS)*. Poster presented at the Undergraduate Symposium for USP AI Scholars, University of Florida.
- **Wu, A.**, Cobb, M., Perez, V., Grant, C., & Waisome, J. A. M., *Guided Undergraduate Training for Shark Segmentation (GUTSS)*, Poster presented at ACM SIGCSE 2024. Portland, OR.
- **Wu, A.**, Parnell Jr., D., & Waisome, J.A.M. (2023, November). *LithoReality: 3D Prototyping and Visualization.* Poster presented at the Ronald E. McNair Open House, University of Florida.
- **Wu, A.**, Cobb, M., Graddy, N., Perez, V., Grant, C., & Waisome, J. A. M. (2023, October). *Guided Universal Training for Shark Segmentation (GUTSS)*. Poster presented at the AI Days Symposium, University of Florida.
- **Wu, A.**, Parnell Jr., D., Reed, T., & Waisome, J.A.M. (2023, June). *LithoReality: Accessible and Affordable AR Photolithography Application.* Oral presentation presented at Ronald E. McNair SAEOPP Conference, Atlanta, GA.
- **Wu, A.**, DeHoog, A., & Blanchard, J. (2023, April). *Instructor Perspectives on Non-STEM Programming Fundamental Classes.* Poster presented at the Undergraduate Symposium for USP, University of Florida.
- **Wu, A.** & Schiffer, S. (2022, July). *Visual Processing for MoBi, the Monster Bin.* Poster presented at the UROP International Symposium, RWTH Aachen University.
- **Wu, A.**, Stapleton, P., & Blanchard, J. (2022, April). *Student Perspectives on Online Camera-Based Proctoring.* Poster presented at the Undergraduate Symposium for ESP, University of Florida.
- **Wu, A.**, Li, A.Q., & Jeong, M. (2021, July). *UAV Image-Based Obstacle Detection in Aquatic Environments.* Oral presentation presented at the Leadership Alliance National Symposium, Virtual Event.

*All authors contributed equally.

Research Mentorship

08/2023–05/2025-Natahja Graddy(UF CS BS)(Gathered footage on small animal anatomy dissections for GUTSS)
08/2023–05/2024-Morgan Cobb(UF CS BS)(Drafted application design through Figma & Swift for GUTSS)
08/2023–05/2023-Jinghan (Kevin) Wu(UF DAS BS) (Added features to 3D-model for LithoReality)
06/2021–08/2021-Nathaniel Collins(UF CS BS)(Oversaw peer-reviewed STEPUP work on nanotechnology)
06/2021–08/2021-Keelyn Mooney(UF IE BS) (Oversaw same peer-reviewed STEPUP work)
06/2021–08/2021-Sihala Senevirathne(UF CS BS)(Oversaw same peer-reviewed STEPUP work)
06/2021–08/2021-Katelynn Turney-Rudisill(UF Music Edu BS) (Oversaw same peer-reviewed STEPUP work)

Awards, Scholarships, Honors, Fellowships

10/2024 - UF: Fernandez Family Scholarship: Top 10 UF Applicants Interested in Engineering Ph.D.
03/2023 - McNair SAEOPP Conference 3rd Place Winner: Chose top 3 oral presenters in education category.
10/2023 - UF: AI Diversity Fellowship: 1 of 20 UF high-achieving underrepresented and first-generation low-income UF students and is funded through an NSF grant dedicated to broaden student participation in AI courses and research.
05/2022 - RWTH Aachen University International UROP Scholarship: Awarded stipend of 1,850 euros.
05/2022 - U.S. Department of State: Benjamin A. Gilman Scholarship: Top 30 % of UF Applicants to study abroad with Pell-grant recipient. Awarded stipend of 5,000 dollars.
04/2022 - UF: Dr. Ralph Alexander Morgen StepUp Program Endowment: Awarded 2,000 dollars to high-achieving UF STEPUP participants interested in studying abroad.
08/2021 - Leadership Alliance: SR-EIP Scholar and Virtual Professional Development Series Certificate: Awarded to students interested in pursuing a Ph.D. and conducting a research internship at another institution.
09/2020 - Code for America: Code for Gainesville: National Day of Civic Hacking 1st Place Winner: Top 3 Project Showcases. Awarded for UI food bank system prototype draft via Figma.
06/2020 - UF: Machen First-Generation Opportunity Scholarship: Awarded to high-achieving first-generation, low-income incoming UF students.
06/2020 - Florida Bright Future Scholarship: Awarded to high-achieving students in Florida.

Other Competitive Activities

10/2025 - JHU EHOP: Awarded full funding for recruitment program visit with one-on-one faculty meetups at JHU.
09/2025 - UIUC MERGE: Virtual campus visitation program at UIUC. Also, eligible for $700 of professional development funds upon UIUC enrollment.
01/2025 - GT FOCUS: Awarded full funding for recruitment program visit at GT.
11/2024 - USC Preview Day Travel Grant: Awarded partial funding for graduate recruitment program at USC.
03/2024 - DAAD RISE: Accepted out of 2,358 applicants; later committed to Amazon SURE.
06/2023 - ConsiderCornell: Explore: Explore graduate school application process.
09/2022 - NSF IOT4AG PPP @ UPenn: Explore graduate school application process and have one-on-one mentorship with UPenn faculty and graduate students.
02/2021 - RWTH Aachen University International UROP: Accepted; later committed to Leadership Alliance SR-EIP at Dartmouth vASURE.

Technical Skills

Programming: Java, Python, C/C++, JavaScript
Languages: Cantonese, English, Spanish, German
Advanced Coursework: Information and Database Systems, AI Ethics, AI Fundamentals, Engineering Design and Society