Tony Wang Li

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Research Interests

Human-Computer Interaction and **Artificial Intelligence**: I am interested in empowering diverse users to understand and voice their experiences with novel AI technologies and use those experiences to enable engineers to build human-first AI technologies.

Education

2023–Present **Ph.D. in Computer Science and Engineering (Anticipated)**, *University of California, San Diego*, La Jolla, California
Courses: Software Engineering, Machine Learning Algorithms, Interpretability and Explainability in Machine Learning, Human Robot Interaction, Privacy and Society, Sociotechnical Security

2021–2023 **M.S. in Human Centered Design and Engineering**, *University of Washington*, Seattle, Washington
Courses: User-Centered Design, Theoretical Foundations of HCDE, Experimental Research Methods, Usability Studies, User-Centered Web Design, Interaction Design Prototyping, Designing for Behavior Change, Future of Scholarly Communication, Designing a Human Centered Venture, Physical Computing and Prototyping

2013–2017 **A.B. in Computer Science**, *Harvard University*, Cambridge, Massachusetts
CS Courses: Data Structures and Algorithms, Machine Learning, Artificial Intelligence, Data Science, Visualization, Systems Programming and Machine Organization, Computer Graphics

Publications

- **Tony W. Li**, Arshia Arya, and Haojian Jin. *Redesigning Privacy with User Feedback: The Case of Zoom Attendee Attention Tracking*. ACM CHI Conference on Human Factors in Computing Systems. 2024.
- Yaqing Yang, **Tony W. Li**, and Haojian Jin. *On the Feasibility of Predicting Users' Privacy Concerns using Contextual Labels and Personal Preferences*. ACM CHI Conference on Human Factors in Computing Systems. 2024.
- Emelia May Hughes, Renee Wang, Prerna Juneja, **Tony W. Li**, Tanushree Mitra, and Amy X. Zhang. *Viblio: Introducing Credibility Signals and Citations to Video-Sharing Platforms*. ACM CHI Conference on Human Factors in Computing Systems. 2024.
- **Tony W. Li***, Yelin Jo*, Zander Brumbaugh, Hanna Lee, Michael Murray, and Elin A. Björling. *Low-Effort, Unqualified, and Malicious User Behaviors in Online Human-Robot Interaction Studies*. ACM Special Interest Group on Design of Communication (SIGDOC). 2023. **[Best Paper Award Winner]**
- **Tony W. Li**, Michael Murray, Zander Brumbaugh, Hanna Lee, Raida Karim, Maya Cakmak, and Elin A. Björling. *Tell Me About It: Adolescent Self-Disclosure with an Online Robot for Mental Health*. ACM/IEEE International Conference on Human-Robot Interaction (HRI). 2023.
- K. J. Kevin Feng, **Tony W. Li**, and Amy X. Zhang. *Understanding Collaborative Practices and Tools of Professional UX Practitioners in Software Organizations*. ACM CHI Conference on Human Factors in Computing Systems. 2023.
- Raida Karim, Edgar Lopez, Katelynn Oleson, **Tony W. Li**, Elin A. Björling, and Maya Cakmak. *Share with Me: A Study on a Social Robot Collecting Mental Health Data*. International Conference on Social Robotics (ICSR). 2022.

- **Tony W. Li**, Ofra Amir, and Barbara Grosz. *Approaches to Policy Advice From Multiple Teachers in Reinforcement Learning*. Digital Access to Scholarship at Harvard. 2017.

* Denotes equal first-author contribution.

Honors and Awards

2024 **Department Service Award (Teaching)**, *Halicioğlu Data Science Institute*, UCSD

2023 **Best Paper Award**, *ACM Special Interest Group on Design of Communication (SIGDOC)*

2016 **Best Overall Final Project**, *Data Science (CS 109)*, Harvard University

Research Experience

07/2023–Present **Graduate Student Researcher**, *University of California, San Diego*, La Jolla, California
- Currently conducting research on collecting individual and collective opinions and intelligence with Prof. Steven Dow (ProtoLab)
- Conducted research on data privacy through human-computer interaction, resulting in two published CHI papers, with Prof. Haojian Jin (Data Smith Lab)

05/2022–06/2023 **Graduate Research Assistant**, *University of Washington*, Seattle, Washington
Advised by Prof. Amy Zhang (Social Futures Lab)
- Surveyed user experience (UX) collaboration in practice and recommended tooling design from qualitative coding
- Built crowdsourced video annotation tooling and evaluated with usability studies

09/2021–06/2023 **Graduate Research Assistant**, *University of Washington*, Seattle, Washington
Advised by Dr. Elin Björling, Prof. Maya Cakmak (Project EMAR)
- Developed software-hardware integration for a social robot and an end-user programming platform for intervention and measurement of adolescent stress based on user research
- Evaluated online social robot interactions for adolescent mental health interventions through mixed-methods analyses

09/2022–06/2023 **Graduate Research Assistant**, *University of Washington*, Seattle, Washington
Advised by Prof. Cecilia Aragon, Dr. Bernease Herman, Prof. Sarah Evans (Directed Research Group: Research Design for Games to Teach Data Ethics)
- Evaluated and developed game designs for ethics and diversity education in data science

Work Experience

08/2017–09/2021 **Data Engineer**, *Facebook*, Menlo Park, California

Artificial Intelligence Data Engineering
- Partnered with Facebook AI Research to source and manage data for computer vision projects, platformize visual model-free data sampling methods for Instagram images, and visualize annotation progress in an interactive dashboard
- Partnered with AI Data team to analyze and improve Facebook AI platforms with previously no data architecture
- Implemented ETL data foundations, alerting capabilities, and data visualization dashboards to track reliability, performance, efficiency, and label quality across AI Data platforms
- Designed and implemented frontend UI for internal customers to track and analyze machine learning dataset quality

Ads Interfaces Data Engineering
- Partnered with Product Experience Analytics to promote advertising product quality and advertiser experience
- Created and maintained data ETL, central data pipelines, and data visualization dashboards for Ads org-wide goal metrics and internal Dogfooding Programs formerly with no goaling metrics or data visibility
- Implemented an automated bot to post weekly metric movements internally to relevant stakeholders
- Crafted and delivered presentations on query optimization and data visualization

04/2014–08/2015 **Software Developer**, *Quorum Analytics*, Cambridge, Massachusetts
- Built an online legislative strategy platform performing big data analysis of the United States Congress
- As a full stack developer, created interactive data visualizations and quantitative profiles of political data

Teaching Experience

2024 **Teaching Assistant**, *UC San Diego - Computer Science and Engineering*
Software Engineering (CSE 110): Created and ran interactive lab sections for technical skills, created and hosted discussion sections for soft engineering skills, held office hours, and graded assignments and projects

2024 **Teaching Assistant**, *UC San Diego - Halıcıoğlu Data Science*
[HDSI Department Service Award Recipient] Systems for Scalable Analytics (DSC 102): Held office hours and graded homework assignments

2018–2019 **Data Engineer**, *Facebook*
Lectured on data visualization and SQL query optimization within the data engineering organization

2017 **Teaching Fellow**, *Harvard University - Computer Science*
Advanced Topics in Data Science (CS109b): Held teaching office hours and graded homework assignments

Leadership and Service

2024-2025 **Peer Reviewer**, *ACM CHI (5 reviews); ACM Computer-Supported Cooperative Work & Social Computing (CSCW); ACM Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)*

2021–2023 **President**, *University of Washington HCDE Graduate Student Association*
Organized and coordinated social and professional events for nearly 300 graduate students

2016–2017 **Design Director of Staff Development, Software Engineer**, *The Harvard Crimson*
Recruited designers for the school newspaper, lectured on design and web development skills, developed the newspaper's online website

2016–2017 **President**, *Harvard Chinese Music Ensemble*
Coordinated rehearsals and community performances with 8 members, performed on the *erhu* (traditional Chinese violin)

Technical Skills

Programming	Python, C/C++, Java, OCaml
Web	HTML, CSS, JavaScript/React, Django, PHP
Data Analytics	Python, SQL (MySQL, Hive/Spark, Presto), R
User Research	Interview, Survey, Usability Testing, Experimental Study Design, Design Prototyping (Figma, InDesign)

Languages

German	4 years at Fayetteville High School, 55 hours at Technische Universität Dortmund (Ruhr Fellowship)
Mandarin Chinese	2 semesters at Harvard University