# Tony Wang Li

#### 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**

- o 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.
- o 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.
- o 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.
- o 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]
- o 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.
- o 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.
- o 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- Graduate Student Researcher, University of California, San Diego, La Jolla, California

Present • 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- Graduate Research Assistant, University of Washington, Seattle, Washington

06/2023 Advised by Prof. Amy Zhang (Social Futures Lab)

- Surveyed user experience (UX) collaboration in practice and recommended tooling design from qualitative coding
- o Built crowdsourced video annotation tooling and evaluated with usability studies

09/2021- Graduate Research Assistant, University of Washington, Seattle, Washington

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

#### Work Experience

08/2017- Data Engineer, Facebook, Menlo Park, California

09/2021 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
- o 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- Software Developer, Quorum Analytics, Cambridge, Massachusetts
- 08/2015 o 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

- 2025 **Teaching Assistant**, UC San Diego Cognitive Science
  - Startup Studio (COGS 122): Managed four instructional assistants to grade assignments and projects, created and led interactive studio sections, and organized attendance and assignments
- 2024 **Teaching Assistant**, *UC San Diego Computer Science and Engineering*Software Engineering (CSE 110): Created and led interactive lab sections for technical skills, created and hosted discussion sections for soft engineering skills, mentored project teams, held office hours, and graded assignments and projects
- 2024 Teaching Assistant, UC San Diego Halicioğlu 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  $\it erhu$  (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 2 semesters at Harvard University Chinese