

# 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– **Software Developer**, *Quorum Analytics*, Cambridge, Massachusetts  
08/2015
  - 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 - 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

- 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