Tony W. Li

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Research Interests

Human-AI Interaction, Data Interpretability, Data Visualization

Education

2021–2023 (Anticipated) **M.S. in Human Centered Design and Engineering**, *University of Washington*, Seattle, Washington

HCDE 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

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

- (*In Submission: HRI*) **Tony W. Li**, Michael Murray, Zander Brumbaugh, Hanna Lee, Katelynn Oleson, Danielle Jo, Elin A. Björling. *Adolescent Self-Disclosure with an Online Robot* (anonymized). ACM/IEEE International Conference on Human-Robot Interaction.
- (*In Revision: CHI*) K. J. Kevin Feng, **Tony W. Li**, Amy X. Zhang. *UX Collaboration In Multiplayer Design Tools* (anonymized). ACM CHI Conference on Human Factors in Computing Systems.
- Raida Karim, Edgar Lopez, Karelynn 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. 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.

Research Experience

09/2022– Present **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)
- Evaluate and develop game designs for ethics and diversity education in data science

05/2022– Present **Graduate Research Assistant**, *University of Washington*, Seattle, Washington
Advised by Prof. Amy Zhang (Social Futures Lab)
- Analyze user experience (UX) collaboration in practice and recommend tooling design
- Build and evaluate crowdsourced video annotation tooling

09/2021– Present **Graduate Research Assistant**, *University of Washington*, Seattle, Washington
Advised by Dr. Elin Björling, Prof. Maya Cakmak (Project EMAR)
- Research and develop software-hardware integration for a social robot and an end-user programming platform for intervention and measurement of adolescent stress
- Evaluate online social robot interactions for adolescent mental health interventions

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 ○ Responsible for 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 visualizations and quantitative profiles of political data

Leadership and Teaching Experience

2021–Present	**President**, *University of Washington HCDE Graduate Student Association* Organize and coordinate social and professional events for nearly 300 graduate students
2018–2019	**Data Engineer**, *Facebook* Lectured on data visualization and SQL query optimization within the data engineering organization
2017	**Teaching Fellow**, *Harvard University Data Science Course (CS109b)* Held office hours and graded homework assignments
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)

Languages

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

Technical Skills

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