Xingyu Bruce Liu

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Education

2020 – now **University of California, Los Angeles**
Ph.D. Student, Electrical and Computer Engineering, UCLA HCI Lab
Advised by Professor Xiang 'Anthony' Chen

2020 – 2022 **University of California, Los Angeles**
M.S. Electrical and Computer Engineering, UCLA HCI Lab
Advised by Professor Xiang 'Anthony' Chen
Distinguished Master's Thesis Research Award, UCLA ECE
Human-AI Systems for Video Accessibility

2023 summer **The University of Tokyo**
Visiting Ph.D. Student, Computer Science, Igarashi Lab
Advised by Professor Takeo Igarashi

2016 – 2020 **Carnegie Mellon University**
B.S. Statistics and Machine Learning, Human-Computer Interaction
Minor in Computer Science
with University Honors

Publications

Peer-reviewed Publications

[1] **Xingyu Bruce Liu**, Jiahao Nick Li, David Kim, Xiang 'Anthony' Chen, and Ruofei Du. 2024. Human I/O: Towards a Unified Approach to Detecting Situational Impairments. In *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems* (CHI '24). ACM. DOI: 10.1145/3613904.3642065. **Best Paper Honorable Mention**.

[2] Ruofei Du, Na Li, Jing Jin, Michelle Carney, Scott Miles, Maria Kleiner, Xiuxiu Yuan, Yinda Zhang, Anuva Kulkarni, **Xingyu Bruce Liu**, Ahmed Sabie, Sergio Escolano, Abhishek Kar, Ping Yu, Ram Iyengar, Adarsh Kowdle, and Alex Olwal. 2023. Rapsai: Accelerating Machine Learning Prototyping of Multimedia Applications Through Visual Programming. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems* (CHI '23). ACM. DOI: 10.1145/3544548.3581338. **Best Paper Honorable Mention**.

[3] **Xingyu Bruce Liu**, Vladimir Kirilyuk, Xiuxiu Yuan, Alex Olwal, Peggy Chi, Xiang 'Anthony' Chen, and Ruofei Du. 2023. Visual Captions: Augmenting Verbal Communication With On-the-Fly Visuals. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems* (CHI '23). ACM. DOI: 10.1145/3544548.3581566.

[4] **Xingyu Bruce Liu***, Joanne Leong*, Yuanyang Teng*, Hanseul Jun, Sven Kratz, Yu Jiang Tham, Andrés Monroy-Hernández, Brian A. Smith, and Rajan Vaish. 2023. Social Wormholes: Exploring Preferences and Opportunities for Distributed and Physically-Grounded Social Connections. In *Proceedings of the 26th ACM Conference On Computer-Supported Cooperative Work And Social Computing* (CSCW '23). ACM.

[5] **Xingyu Bruce Liu**, Ruolin Wang, Dingzeyu Li, Xiang 'Anthony' Chen, and Amy Pavel. 2022. CrossA11y: Identifying Video Accessibility Issues via Cross-Modal Grounding. In *Proceedings of the 35th Annual ACM Symposium on User Interface Software and Technology* (UIST '22). ACM, Bend, OR, USA. DOI: 10.1145/3526113.3545703. **Best Paper Award**.

[6] **Xingyu Liu**, Patrick Carrington, Xiang 'Anthony' Chen, and Amy Pavel. 2021. What Makes Videos Accessible to Blind and Visually Impaired People? In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* (CHI '21). ACM, Yokohama, Japan. DOI: 10.1145/3411764.3445233.

[7] Cole Gleason, Amy Pavel, **Xingyu Liu**, Patrick Carrington, Lydia B. Chilton, and Jeffrey P. Bigham. 2019. Making Memes Accessible. In *The 21st International ACM SIGACCESS Conference on Computers and Accessibility* (ASSETS '19). ACM, Pittsburgh, PA, USA. DOI: 10.1145/3308561.3353792.

Late-Breaking Works, Posters, Demos

[8] **Xingyu Bruce Liu**, Vladimir Kirilyuk, Xiuxiu Yuan, Peggy Chi, Alex Olwal, Xiang 'Anthony' Chen, and Ruofei Du. 2023. Experiencing Visual Captions: Augmented Communication with Real-time Visuals using Large Language Models. In *Adjunct Proceedings of the 36th Annual ACM Symposium on User Interface Software and Technology* (UIST '23 Adjunct). ACM, New York, NY, USA. DOI: 10.1145/3586182.3615978.

[9] **Xingyu Bruce Liu**, Jun Zhang, Leonardo Ferrer, Susan Xu, Vikas Bahirwani, Boris Smus, Alex Olwal, and Ruofei Du. 2023. Modeling and Improving Text Stability in Live Captions. In *Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems* (CHI EA '23). ACM. DOI: 10.1145/3544549.3585609.

Patents

[10] Bing Liu and **Xingyu Liu**. 2020. Method, device and computer product for predicting disk failure. Patent No. US20200233587A1, CN111459692A. (July 2020).

[11] Bing Liu and **Xingyu Liu**. 2020. Method, device, and computer program product for facilitating prediction of disk failure. Patent No. US20200133758A1, CN111104293A. (April 2020).

Awards and Honors

2024 **Best Paper Honorable Mention** (top 5%), CHI 2024

2023 **Amazon Ph.D. Fellowship**, 2023

Best Paper Honorable Mention (top 5%), CHI 2023

ED Rice Outstanding Master Student Award, UCLA Engineering School

2022 **Best Paper Award** (top 3), UIST 2022

Distinguished Master's Thesis Research Award, UCLA ECE Department.

2020-2022 **Departmental Fellowship**, UCLA ECE Department, $65,000.

2018 **Best Social Impact Award**, TartanHacks (40+ teams).

2017 **First Place, Most Technical Award**, HackNY (20+ teams).

2016 **Mizuho Scholar**, Mizuho & Wing Hang Bank Scholarship and Charity Funds.

2016 – 2020 **Dean's List**, Carnegie Mellon University.

Professional Experience

2024 summer — **Meta Reality Labs,** Research Scientist Intern.
Novel human-LLM interaction paradigm.
Advised by Dr. Mark Parent and Dr. Ben Lafreniere.

2022 spring/summer — **Google,** Student Researcher.
Augmented language and contextual computing.
Four papers published at CHI and UIST.
Advised by Dr. Ruofei Du.

2021 summer — **Snap Research,** Research Intern.
AR-based physical connections for remote awareness between friends.
Paper published at CSCW.
Advised by Dr. Rajan Vaish and Dr. Brian A. Smith.

2019 – 2020 — **CMU Accessibility Lab,** Research Assistant.
Making social media content accessible.
Two papers published at ASSETS and CHI.
Advised by Prof. Amy Pavel, Prof. Jeffrey Bigham, and Prof. Patrick Carrington.

2018 summer — **Dell EMC,** Machine Learning Intern.
ML-based disk failure prediction with SMART and BMS log data.
Two US patents published.

Service

2020 – Now — **Program Committee**
CHI 2025

Video Presentation Chair
CHI 2025

Reviewer
CHI 2021-2025, UIST 2020-2024, CSCW 2020-2021, ICML 2023, IMWUT 2023

Special Recognitions as a Reviewer
CHI 2022, CHI 2023 x 2, CHI 2024, UIST 2024, IMWUT 2023