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

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

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