XIA SU

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PROFILE

I am 4th year Ph.D. student in Computer Science at University of Washington. My research interest lies in Human Computer Interaction, with special focus on AI for creativity support and accessibility.

I'm currently pursuing two distinct but connected HCI+AI research directions:

First, I design, build, and evaluate new AI-assisted design tools, *e.g.* using generative model to assist AR sound effect creation and using depth estimation to help depth effect creation.

Second, I am building next-generation indoor mapping and accessibility assessment tools for people with disabilities using computer vision, RGB and depth data, and AI.

EDUCATION

University of Washington, Seattle, WA *Sep 2021 - May 2026*
PhD of Computer Science, in Human Computer Interaction. Instructed by Prof. Jon Froehlich

RWTH Aachen, Nordrhein-Westfalen, Germany *Oct 2016 - Feb 2017*
Exchange Study

Tsinghua University, Beijing, China *Sep 2014 - June 2021*
Bachelor and Master of Architecture

RECENT PUBLICATION

DepthScape: Authoring 2.5D Designs with Depth Estimation Xia Su, Cuong Nguyen, Matheus A. Gadelha, Yu Shen, Stefano Petrangeli, Jon E. Froehlich
CHI'25 In Submission

A Demo of DIAM: Drone-based Indoor Accessibility Mapping Xia Su, Ruiqi Chen, Weiye Zhang, Jingwei Ma, Jon E. Froehlich
UIST'24 Demo PDF

RAIS: Towards A Robotic Mapping and Assessment Tool for Indoor Accessibility Using Commodity Hardware Xia Su, Daniel Campos Zamora, Jon E. Froehlich
ASSETS'24 Poster PDF

SonifyAR: Context-aware Sound Generation in Augmented Reality Xia Su,Jon E. Froehlich, Eunyee Koh, Chang Xiao
UIST'24 PDF *CHI'24 LBW* DOI

RASSAR: Room Accessibility and Safety Scanning in Augmented Reality Xia Su, Kaiming Cheng, Han Zhang, Jaewook Lee, Wyatt Olson and Jon E. Froehlich
CHI'24 DOI *ASSETS2023 Poster*,Link

Kinergy: Creating 3D Printable Motion using Embedded Kinetic Energy Liang He, **Xia Su**, Huaishu Peng, Jeffrey I Lipton, and Jon E Froehlich
UIST'22 DOI

Interior Layout Generation Based on Scene Graph and Graph Generation Model Xia Su, Chenglin Wu, Wen Gao, and Weixin Huang
Design Computing and Cognition'20, Springer International Publishing, Cham, 267–282. DOI

Category, process, and recommendation of design in an interactive evolutionary computation interior design experiment: a data-driven study Weixin Huang, **Xia Su**, Mingbo Wu, and Lijing Yang
AI EDAM 34, 2 (May 2020), 233–247. DOI

EMPLOYMENT

UW CSE, Seattle, WA *September 2021 - Present*
Graduate Research Assistant/ Teaching Assistant
- Building next-generation indoor mapping and accessibility assessment tools for people with disabilities

Adobe Research, San Francisco, CA *June 2024 - September 2024*
Research Scientist Intern
- Designing and implementing image editing tools that help creation of 2.5D effects.

Adobe Research, San Jose, CA *June 2023 - September 2023*
Research Scientist Intern
- Designing and implementing AR authoring pipeline that generate context-aware AR sound in real time

Microsoft Research Asia, Beijing, China *June 2020 - March 2021*
Research Intern
- Designing and implementing automatic retrieval pipelines to refine PowerPoint slide layouts

VOLUNTEERING & SERVICE

- Reviewer for CHI 2025
- Reviewer for UIST 2024
- Reviewer for SUI 2024
- Reviewer for CHI 2024
- Reviewer for CHI 2024 LBW

SELECTED AWARDS & HONORS

- Huaxia Construction Science and Technology Award, First Prize, as team member.
- 2020 Design Future Award, Oppo Campus Renovators Global Emerging Artist Project, as team member.
- 2018 AEDAS Innovation Scholarship.
- Tsinghua University Academic Scholarship.

PRESS & INVITED TALKS

- **Using augmented reality to improve accessibility**, Oregon Public Broadcast, Link, *Nov 17, 2023*
- **RASSAR: Room Accessibility and Safety Scanning in Augmented Reality**, UW CSE Colloqium, *Nov 2, 2023*
- **AR for Accessibility and Creativity**, Talk at Brown HCI Lab, *Oct 26, 2023*
- **Q&A: Researchers aim to improve accessibility with augmented reality**, UW News, Link *October 17, 2023*
- **Evaluating Real-world Accessibility**, Talk at Igarashi Lab at UTokyo, *May 14, 2023*

MENTORING

- Ruiqi (Richard) Chen, Master Student, University of Washington, *May 2024 - Present*
- Weiye Zhang, Undergraduate, University of Washington, *March 2024 - Present*
- Qiaochu (Steve) Liu, Master Student, Tsinghua University, *December 2022 - May 2023*
- Jackson Ma, Unsergraduate, University of Washington, *October 2022 - February 2023*