

Wenxuan Liu

Los Angeles, California

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Education

- 2021-23 **Harvard University** - Cambridge, MA
M.Ed. in Learning Design, Innovation and Technology
Advisor: Professors [Karen Brennan](#), & [Bertrand Schneider](#)
- 2016-17 **University of Southern California** - Los Angeles, CA
M.S. in Computer Science
- 2013-16 **The University of Manchester** - Manchester, UK
B.Sc. in Computer Science with Business and Management

Research Experience

- 2024 **Research Fellow**
[Innovation Science for Education Analytics Program](#) - University of Washington
Mentored by Dr. Min Sun
- Conducted exploratory data analysis from teachers' ratings and modifications to AI-generated lesson plans and categorized user behaviors into groups for further fine-tuning.
 - Extracted meaningful modifications using a large language model(LLM) and conducted topic modeling, identified key areas for improvement of inclusivity and quality.
 - Fine-tuned the LLM based on the research insights to support generating high-quality, inclusivity lesson plans for K-12 teachers.
- 2022-23 **Research Assistant**
[Learning, Innovation and Technology Lab](#) - Harvard University
Mentored by Dr. Gahyun Callie Sung
- Organized and coded qualitative data on students' reported sense of belonging after providing gpt3-generated feedback, aligning with motivation goals.
 - Analyzed process data from an online textbook used in an introductory data science and statistics course at Universities in Los Angeles to recognize at-risk students.
 - Prototyped an interactive dashboard using R to visualize learning trends and provide technical assistance to enhance understanding of student engagement.
- 2021-22 **Research Assistant**
[Creative Computing Lab](#) - Harvard University
Mentored by Dr. Paulina Haduong and Dr. Karen Brennan
- Utilized qualitative research methods to analyze diverse data sets from learning experiences and educational outcomes in PK-12 computing education.
 - Conducted extensive literature reviews, analyzing numerous research papers to provide historically significant and relevant context for the study.

Work Experience

- 2024- **Product Designer (Part-time)**, Tangible Interaction and Robot
CubyFun, Remote
- Advise the learning experience design for an interactive children's board game system.

- Localize the content and materials for the North American market.
 - Collaborate with the developer teams to prototype the embodied AI companion and the interactions with application for children.
- 2023- **Curriculum Developer (Part-time)**, Computer Science and Robotics
Future Sphere Corporation, Remote
- Work with other content experts to develop high-quality, engaging, and level-appropriate content for students, ensure content aligns with pedagogical best practices.
 - Develop lesson objectives, exercises, instructional materials, assessments, projects, and lesson plans for each unit.
- 2018-20 **Project Manager**, K-12 STEM Education Robots
DJI Technology
- Directed the launch of a curriculum for **programmable drone** and **wheeled robots** and developed AI, Programming, and Robotics education solutions for 30+ schools.
 - Conducted focus groups, usability testing, surveys, and interviews to identify and solve learning experience issues.
 - Consulted regularly with colleagues, hosted client meetings to pivot and iterate on the product and implemented live-streaming professional development sessions to improve clients' engagement rate.
 - Managed the grants to Universities and the awards to outstanding engineering students.
 - Designed the programming card tools for younger learners to interact with robots.
 - Utilized advanced multitasking skills to coordinate project activities and simultaneously delivered 11 interactive tutorials for learning to code with Python and Scratch, distributed in 8 languages.
- 2018 **Instructional Designer and Instructor**, Online K-12 Programming Course
TAL Education Group
- Designed a comprehensive C++ curriculum spanning 24 chapters, published as two textbooks for Grade 3-6 students.
 - Instructed four online K-12 programming classes and trained six instructors and the teaching assistant team to support the progress of more than 800 students.

Selected Projects

- 2022 **Data Analysis Project:** Does Student Confidence in STEM Courses Lead to Better Performance?
Coursework for *Using Data in Organizations* at Harvard University
- 2022 **Qualitative Analysis of a Learning Experience:** A Motivational Learning Design for Robotics and AI
Coursework for *Motivation and Learning* at Harvard University
- 2022 **Quantitative Analysis Project:** Comparing ML Models for Predicting Student Achievement in an Online Textbook
Coursework for *Intro to Statistical Computing and DS in Edu* at Harvard University
- 2021 **Machine Learning Project:** Soft Clustering Analysis of Human Movement Patterns Using PoseNet Data
Coursework for *Multi-Modal Learning Analytics* at Harvard University
- 2021 **Flexible Elastomeric Haptic Wearables Using Pneumatic Actuation and Soft Robotics**
Group Project for *Tangible Interfaces* at Massachusetts Institute of Technology

Leadership/Services

2020-21	STEM Curriculum Design Consultant <i>ID3 DREAM FLY</i> - Remote <ul style="list-style-type: none">Reviewed and provided consultancy for the STEM courses, supporting the organization to create and deliver community-engaged project-based learning.
2018-19	Lead Curriculum Designer <i>Coding Girls Club</i> - Beijing, China <ul style="list-style-type: none">Developed the programming and AI course for the non-profit learning groups.
2016	Lead Instructor of Web Technologies <i>Code First: Girl</i> - Manchester, UK <ul style="list-style-type: none">Prepared course materials for Web Technologies and led the instructor team to deliver the weekly workshop for historically underrepresented groups of learners.
2015	Lead Coordinator of China Area <i>Rails Girls</i> - China <ul style="list-style-type: none">Coordinated seven large-scale Ruby on Rails learning events across China, involving over 1,000 participants and promoting STEM education for women.

Certificates

2024	Innovation Science for Education Analytics , Certified by <i>Institute of Education Sciences</i>
2023	Data Scientist Associate , Certified by <i>DataCamp</i>
2021	Social and Behavioral Research Investigators , Certified by <i>CITI</i>

Skills

Technical	Python, R, C/C++, SQL, Java, HTML/CSS, JavaScript, MATLAB, Tableau, Jira, Git
Design	Articulate Storyline, Figma, PhotoShop, Illustrator, Unity, 3ds Max, Maya, Blender
Language	English - Native/Bilingual Chinese (Mandarin and Cantonese) - Native/Bilingual Japanese - Limited working proficiency

Last updated: July, 2024