Wengxi Li

CONTACT INFORMATION

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RESEARCH INTERESTS

Human-AI Interaction, Natural Language Processing, Information Space, Data Visualization

EDUCATION

University of Michigan, Ann Arbor, MI
Master of Science in *Electrical & Computer Engineering*, GPA: 4.00/4.00 — April 2023

University College London, London, United Kingdom
Master of Science with **Distinction** in *Medical Image Computing* — August 2021

Beijing Normal University, Beijing, China
Bachelor of Science in *Physics*, GPA: 3.60/4.00 — June 2020

RESEARCH EXPERIENCE

City University of Hong Kong, Hong Kong, China — 2024 - present
Research Assistant (Advisor: Dr. Can Liu) [Paper]

I research how GenAI and speech interfaces support human ***cognitive processes***. I conducted focus group studies and longitudinal diary studies (n=12) to analyze how people use speech for ideation and writing. Through ***mixed-methods analysis*** of interview transcripts and interaction logs, I identified patterns in how users leverage AI to assist them in creative writing with speech. Based on these findings, I am ***developing an organic interface*** that helps users explore ideas through natural dictation, with AI-powered suggestions that respond to their thinking process.

Stanford University, Stanford, CA, USA — 2023-2024
Research Assistant (Advisor: Dr. Hariharan Subramonyam) [Paper]

I investigate human-AI collaboration in the creation of ***personalized educational environments***. I created an ***intelligent tutor system*** that combines large language models with human input to extract and structure knowledge from video content. The system includes an interactive interface where instructors can refine AI-generated content organization through ***modular adjustments***, and introduced a Bayesian model to build a student model to provide ***adaptive content generation***.

University of Michigan, Ann Arbor, MI, USA — 2023
Course Project (Advisor: Dr. Anhong Guo) [Code]

I developed a human-AI collaborative system for ***ergonomic workplace assessment***. The system uses a ***fine-tuned vision-language model*** (BLIP) to analyze workplace images and identify potential ergonomic issues. I designed an interface that enables experts to review and correct AI predictions, with the feedback used to improve model performance. The system achieved 74% accuracy in identifying ergonomic risks after incorporating human feedback from 50 expert-reviewed cases.

University College London, London, UK — 2020-2021
Research Assistant (Advisors: Dr. Antonio Stanziola, Dr. Bradley Treeby) [Poster]

I created an ***adaptive ultrasonic neurostimulation system*** that combines geometric algorithms with deep learning. The system uses Time Reversal and Geometric Beamforming to track focal points during head motion, supported by a neural network that predicts phase adjustments. Through simulation studies, the system maintained targeting accuracy within 0.5mm during head movements up to 15 degrees.

PUBLICATIONS

1 **[arXiv] Wengxi Li**, Roy Pea, Nick Haber, Hari Subramonyam. Transforming Programming Videos into Personalized Tutoring Experiences: An LLM-Driven Cognitive Apprenticeship Approach. *Under Review of The 26th International Conference on Artificial Intelligence in Education*

2 **[CHI'25 EA]** Xuyu Yang*, **Wengxi Li***, Matthew G. Lee, Zhuoyang Li, J.D. Zamfirescu-Pereira, and Can Liu. Rambler in the Wild: A Diary Study of LLM-Assisted Writing With Speech. *Conditional Accept of Extended Abstracts of the 2025 Conference on Human Factors in Computing Systems*

SERVICE

Volunteer for: UIST'23 (**Win the T-shirt Design Contest!**)
Reviewer for: ChineseCHI'24
Interviewer for: Microscopic survey of China's real progress (Completed **150** household surveys)

SKILLS

- Large Language Model: expert in prompt engineering and start learning DeepSeek API
- Computer Science: AI & ML, Web Programming, Data Visualization
- Research: Qualitative & Quantitative Research, Human-Centered Design, Data Analysis
- Languages: Mandarin Chinese, English, Python, JavaScript, C/C++

HONORS AND AWARDS

The First-Class Fellowships (Top 5%) of Beijing Normal University	2019
The First-Class Competition Scholarship (Top 5%) of Beijing Normal University	2018
Meritorious Winner (Top 7%) of Mathematical Contest in Modeling	2018