

Yantong Liu

yliu226@connect.hkust-gz.edu.cn

EDUCATION

Hong Kong University of Science and Technology (Guangzhou)

MPhil in Computational Media and Arts

Advisors: Prof. Mingming Fan and Prof. Chen Liang

GPA: 3.78/4.3

Sep. 2025 - Present

Communication University of China

B.A. in Data Journalism

Top 17% in major, GPA: 3.81/4.0

Sep. 2021 - Jun. 2025

PUBLICATIONS

Published

- **“POReviewer: A Visualization System for Retrospective Public Opinion Analysis.”** Zeyu Li, Manlu Zhou, **Yantong Liu**, Changchang Ye, Xiaomeng Zhou & Jiawan Zhang. *Journal of Visualization*, 2026. DOI: 10.1007/s12650-026-01140-6.
- **“A Global Election Situation Awareness System.”** Zhongxin Shan, **Yantong Liu**, Yue Li, Shuqing Wang, Yibin Hou, Zeyu Li. Poster presented at *ChinaVis 2024*, Hong Kong.

Ongoing (*Equal contribution.)

- **“A Survey of Advances in Wake-Up Systems: Toward Context Awareness, Multimodality, and Personalization.”** Zihong He*, **Yantong Liu***, Yuhui Zheng*, Chun Yu, Chen Liang, Yuanchun Shi, and Hai-Ning Liang. Revised manuscript under review.
- **“ContextInk: Making Free-Form Annotations Reusable in AI-Supported Active Reading.”** **Yantong Liu***, Xinyu Gai*, Mingyuan Qin, and Mingming Fan. Under review.
- **“MindWeaver: Scaffolding Critical Thinking Through Structure-Mediated Human–AI Collaboration.”** Qing Shi, Yilin Zheng, **Yantong Liu**, Luyao Shen, Ran Li, Xuning Zhang, Yi-Lung Kuo, and Mingming Fan. Under review.
- **“Reflectant: Supporting Reflection on Multi-Source Information through Self-Representation in Multi-Agent Discussions.”** Zhiyuan Xia, Zhuoyang Jiang, **Yantong Liu**, Chao Liu, Zhuofan Ruan, and Mingming Fan. Under review.

RESEARCH EXPERIENCE

ContextInk: Making Free-Form Annotations Reusable in AI-Supported Active Reading

Supervisor: Prof. Mingming Fan | Feb. 2026 – Present

- Conducted retrospective interviews and annotation analysis (N=6), deriving design principles for AI reading interfaces that preserve personal expression and support annotations as reusable resources for evolving questions
- Developed an AI-supported reading system integrating geometric anchoring, vision-language recognition, and hybrid retrieval, enabling annotation reuse through editable, source-linked reading threads
- Compared free-form ink with highlighting and comments in a within-subjects study (N = 20); analysis of logs and 271 requests showed greater annotation variety with ink and more annotation-based AI requests during subsequent reading

Context-Aware, Multimodal, and Personalized Wake-Up Systems

Supervisor: Prof. Chen Liang | Oct. 2025 – Present

- Pretrained an edge CNN and cloud Transformer on MELD, AMI, and TTS-generated Taskmaster speech, jointly optimizing prediction and edge–cloud consistency losses to model user interaction intent
- Personalized the models using 54544 training samples generated through XTTS-v2 voice cloning, adapting speech representations to the target user’s voice for personalized interaction
- Co-developed a framework of continuous, intent-driven transitions between interaction states to synthesize 116 publications on wake-up systems; authored core survey sections on context awareness and personalization, organizing task-specific approaches into a hierarchical taxonomy and assessing its coverage and mutual exclusivity with co-authors

Analyzing the Evolution of Public Opinion in Social Media Comments through Hierarchical Visualization

Outstanding Graduation Project, Bachelor Thesis | Supervisor: Prof. Ying Lian | Nov. 2024 – Apr. 2025

- Reconstructed reply hierarchies for 58840 Weibo comments and applied DeepSeek-V3 to label topics and emotions, using a topic taxonomy informed by seven interviews and refined through manual screening and merging
- Developed an interactive D3.js visualization integrating inward radial layouts, topic and emotion encodings, and depth filtering to compare earlier and later discussion states and explore changes along reply chains
- Observed more negative sentiment in deeper replies and clusters of comments containing discriminatory expressions within the analyzed discussions, illustrating how preserving reply structure helps reveal shifts away from the original issue

PROJECT EXPERIENCE

Understanding Human Collaboration with a Soft Floating Robot during Indoor Inspection Tasks

MPhil Thesis Project | Supervisors: Prof. Mingming Fan and Chen Liang | Sep. 2025 – Present

- Examining coordination mechanisms involving interdependent task roles, human awareness of robot task progress, robot sensing of human task progress, and complementary capabilities enabled by their respective spatial positions
- Defined the research scope, led sensing-system development, and co-developed the balloon robot’s embodiment and mechanical structure. Designed the field deployment protocol; currently preparing the user study
- Responsible for coordinating work in multiple aspects including flight control, data analysis, appearance and interaction design in an interdisciplinary project team and formulating workflow

Field Research on Elderly Friendly Renovations for Beijing Residents

First Prize, National Market Research Competition (Beijing) | Group Leader | Feb. 2024 – May 2024

- Developed and validated a survey measurement model using 696 responses, conducting exploratory and confirmatory factor analyses and assessing internal consistency, convergent validity, and discriminant validity in SPSS and AMOS
- Built structural equation and binary logistic regression models to examine renovation intentions and adoption; refined model specifications through factor-loading and fit diagnostics, identifying social support as the strongest correlate of intentions in the SEM (standardized $\beta = 0.499$)

PROFESSIONAL EXPERIENCE

State Key Laboratory of Media Convergence and Communication

Research Intern | Supervisor: Hao Shen | Jan. 2024 – Jun. 2025

- Co-produced public opinion reports for the Beijing Municipal Government, designing an automated reporting workflow and data visualizations to support analysis

Caixin Media Company Ltd. VisLab

Data Reporting Intern | Aug. 2023 – Nov. 2023

- Published 9 data journalism reports, including 4 independently, using data analysis and interactive visualization; one ranked second on Caixin’s Digital News board

CONFERENCE PRESENTATIONS AND SERVICE

Session Moderator, *AI Support for Learning, Recall & Performance*, GBA HCI Pre-CHI 2026

Presenter, fast-forward talk and poster, ChinaVis 2024, Hong Kong, Jul. 2024

SELECTED HONORS AND AWARDS

Outstanding Graduation Project, Communication University of China	2025
First Prize, National Market Research Competition (Beijing Division)	2024
Outstanding Student (three consecutive academic years), Communication University of China	2022 – 2025
Outstanding Reporter, New Media Center, Communication University of China	2022

SKILLS

- **Language:** Mandarin (Native), English (IELTS 7.0)
- **Programming and Engineering:** Python, Java, Basic Embedded Development (Arduino series)
- **Qualitative & Quantitative Methods:** Interviews, survey design, SEM, logistic regression
- **Design & Visual Analytics:** Figma, Adobe Creative Suite (Ps, Ai); D3.js, ECharts, UI/UX Architecture