MENGKE WU

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I'm an HCI/UX researcher with design expertise, focusing on user agency and creativity support in human-AI interaction. I study how people perceive, collaborate with, and are impacted by intelligent systems, and how system functions, interface designs, and communication strategies shape their sensemaking, decision-making, ownership, and trust. Using mixed methods and design-led inquiry, I bridge conceptual models with practical design interventions to enhance usability, trust, and meaningful behavior change, thereby supporting informed calibration and sustained engagement across human-AI ecosystems.

EDUCATION

University of Illinois Urbana-Champaign — 08/2022 – 05/2027 (expected), Champaign, IL
Ph.D., Informatics | Human-Computer Interaction & UX | GPA: 4.0/4.0 | Advisor: Prof. Mike Yao

Massachusetts Institute of Technology — 09/2020 – 05/2022, Cambridge, MA
M.S., Integrated Design & Management | GPA: 4.9/5.0 | Thesis Advisor: Prof. David Rand, Dr. Sheila Pontis

Columbia University — 06/2016 – 05/2017, New York, NY
M.S., Architecture and Urban Design | GPA: N/A (Pass/Fail System)

Nanjing Forestry University — 09/2012 – 05/2016, Nanjing, China
B.Eng., Landscape Architecture Design | GPA: 3.8/4.0 | Outstanding Graduates

SELECTED RESEARCH PROJECTS

Rethinking User Empowerment in AI Recommender Systems: Innovating Transparent and Controllable Interfaces [pdf]
Research & Design Lead | Multi-Phase, Mixed-Method Study | Advisor: Prof. Mike Yao

A project addressing limited user agency in recommender systems by developing multiple mechanisms that integrate transparency with user controls over data collection and personalization. Through a multi-phase, mixed-method study, we evaluated user feedback on the proposed features and interface designs, and explored strategies to boost feature adoption and agency awareness. The findings provide insights for designing user-centered recommender systems that empower individuals with greater control, understanding, and trust in AI-driven content delivery.

What Makes an AI Writing Companion a Good Fit? A Personality-Informed Co-Design Study [pdf]
Research & Design Lead | Multi Phase, Participatory Design | Advisor: Prof. Jessie Chin, Prof. Mike Yao

A project exploring the integration of personality-based preferences into AI writing companions through participatory design workshops. User insights informed the design space and guided the creation of personality-specific prototypes for usability testing and iterative refinement. This work provides actionable design guidelines for personalized, adaptive, and responsive AI supports that can enhance team collaboration, engagement, and productivity.

PUBLICATIONS

Conference Proceedings

[C10] **After the Interface: Relocating Human Agency in the Age of Conversational AI**
Mengke Wu, Mike Yao. 2026. *Provocations of the ACM Conversational User Interfaces Conference (CUI)*

[C9] **What Makes an AI Writing Companion a Good Fit? A Personality-Informed Co-Design Study**
Mengke Wu, Kexin Quan, Weizi Liu, Mike Yao, Jessie Chin. 2026. *ACM Creativity & Cognition Conference (C&C)*

[C8] **Designing for Understanding: How Interface-Level Designs Shape Attention and Understanding in Privacy Disclosures**
Wei Xiao, **Mengke Wu**, Yeeun Jo. 2026. *Extended Abstracts of the CHI Conference on Human Factors in Computing Systems*

[C7] **Rethinking User Empowerment in AI Recommender Systems: Innovating Transparent and Controllable Interfaces**
Mengke Wu, Weizi Liu, Yanyun Wang, Weiyu Ding, Mike Yao. 2026. *CHI Conference on Human Factors in Computing Systems*

[C6] **Towards LLMs as Colleagues: Multi-Agent System Improves Structured Professional Ideation**
Kexin Quan, **Mengke Wu***, Dina Albassam*, Zijian Ding, Jessie Chin. 2026. *CHI Conference on Human Factors in Computing Systems*

[C5] **Empowered XR through Generative AI: Balancing Superpowers and Risks**
Yiliu Tang, **Mengke Wu**, Jason Situ, Jingyi Liu, Yaoyun Cui, Yun Huang. 2026. *CHI Conference on Human Factors in Computing Systems*

[C4] **Incorporating Personality into AI Writing Companions: Mapping the Design Space**
Mengke Wu, Kexin Quan, Weizi Liu, Mike Yao, Jessie Chin. 2025. *Extended Abstracts of the CHI Conference on Human Factors in Computing Systems*

[C3] **Negotiating the Shared Agency between Humans & AI in the Recommender System**
Mengke Wu, Weizi Liu, Yanyun Wang, Mike Yao. 2025. *Extended Abstracts of the CHI Conference on Human Factors in Computing Systems*

[C2] **LLM Integration in Extended Reality: A Comprehensive Review of Current Trends, Challenges, and Future Perspectives**
Yiliu Tang, Jason Situ, Yaoyun Cui, **Mengke Wu**, Yun Huang. 2025. *CHI Conference on Human Factors in Computing Systems*

[C1] **Beyond Friends: Exploring the Effects of Unknown Users' Social Media Posts on Individuals' Perception and Behavior**
Mengke Wu, Jiyeon Chang, Ziv Epstein, David Rand. 2025. *Hawaii International Conference on System Sciences (HICSS)*

Journal Articles

[J3] **Is Popularity Everything? Understanding the Role of Interface Cues in Online Shopping Decision-Making**
Mengke Wu, Ewa Maslowska, Mike Yao. 2025. *International Journal of Human-Computer Interaction, 1–13.*

[J2] **Telepresence Robots in the Context of Dementia Caregiving: Caregivers' and Care Recipients' Perspectives**
Shabnam FakhrHosseini, Lauren Cerino, Lisa D'Ambrosio, Lexi Balmuth, Chaiwoo Lee, **Mengke Wu**, Joseph Coughlin. 2024. Robotics 13 (11), 160.

[J1] **Improved Design Research of Food Storage Box**
Mengke Wu, Liwu Yu. 2015. *Science and Technology Innovation Herald, ISSN 1674-098X, 12(7), 101–10.*

Under Review Papers

[U2] **YT-Pilot: Structured Pathways and Context-Aware Support for Informal YouTube Learning**
Anonymous **(Co-Second Author)**. In submission to *ACM Symposium on User Interface Software and Technology (UIST)*

[U1] **Skipping, Skimming, or Understanding: An Eye-Tracking Study of Privacy Policy Interface Design in Social Media**
Anonymous **(Second Author)**. In submission to *Privacy Enhancing Technologies Symposium (PETS)*

RESEARCH EXPERIENCE

UIUC Media Technology and Social Behavior Lab
08/2022 - present
Champaign, IL

HCI/UX Researcher & Designer | Advisor: Prof. Mike Yao

- Reviewed literature on HCI topics (e.g., AI transparency, user agency, personalized AI writing, human-AI teaming, creativity support, ideation processes, decision making, interface cues, recommender systems) to inform the research design.
- Designed and implemented multi-phase, mixed-method studies for user research and prototype evaluation, including Figma demos, interactive webpages, surveys, interviews, participatory workshops, feature prioritization tasks, and usability testing [C3, C4, C7, C9].
- Analyzed quantitative data from 200+ participants using ANOVA and regression in R [C3], and qualitative data from 50+ in-depth interviews using thematic analysis to extract actionable design insights [C4, C7, C9].
- Conducted choice-based conjoint analysis with 1000+ participants to model how interface cues impact online shopping decision-making [J3].

MIT AgeLab
03/2022 – 08/2022
Cambridge, MA

Research Assistant | Advisor: Dr. Shabnam FakhrHosseini

- Reviewed literature on Human-Robot Interaction (HRI) and caregiving topics (e.g., older adults, dementia, social robots) to inform research context.
- Led the development and writing of the introduction, related work, and method sections for an HRI publication [J2].
- Collaborated with the research team to refine screening surveys and experimental procedures.
- Developed standardized templates for interview documentation and comparative data visualizations to streamline the study process and data synthesis.

Nanjing Forestry University
08/2014 – 05/2015
Nanjing, China

Research Assistant | Advisor: Prof. Bing Qiu

- Led a design research project to enhance the preservation of food storage boxes, creating 3D and physical prototypes with a modular vacuum-sealing mechanism to improve both airtightness and usability, followed by iterative performance testing and documentation [J1].
- Achieved a China Utility Model Patent and received the Outstanding Award in "College Student Technology and Innovation Project" in Jiangsu, China.

INDUSTRY EXPERIENCE

IBM
05/2026 – 08/2026
Lowell, MA

Designer Intern | Supervisor: Julia Simmons

- Work for the IBM Bob (AI-powered development partner) that evolve from IBM watsonx Code Assistant. The potential tasks include research synthesis, concept development, prototyping, and usability evaluation for AI systems.

SiriusXM + Pandora
06/2021 – 08/2021
Oakland, CA

Product Design Intern | Supervisor: Mitch Ozer

- Led the design of the Voice Mode feature for the new Pandora app, including synthesizing user research to identify user needs and design challenges, conducting competitor analysis, developing design concepts, and creating wireframes, navigation flows, and high-fidelity interface options.
- Designed voice-enabled onboarding and personalized interaction flows that increased discoverability, ease of entry, and self-serve support.
- Summarized and documented the Interaction Specification and Acceptance Criteria of the Voice Mode feature as future implementation assets.
- Updated and organized the Pandora design system library.
- Worked with Pandora's Listeners Team within an Agile framework to ensure timely design handoffs and effective cross-functional communication.

HelloAva

07/2019 – 08/2020
New York, NY

UX Designer | Supervisor: Siqi Mou

- Spearheaded the UX/UI redesign of the Personalized Section across web and mobile platforms by analyzing user challenges and existing usability issues. The redesigned experience increased adoption of key digital features through clarity and reduced frictions, leading to a 25% monthly increase in site visits and a 20% increase in order quantities.
- Collaborated with PMs and engineers in bi-weekly sprints to ensure quality assurance (QA) and alignment between design and implementation.
- Led the design of pop-up features for festival events in collaboration with the marketing team to generate engaging and effective design options.
- Led the design and development of a new Livestream feature aimed at facilitating new investments.

melk landscape architecture and urban design

08/2017 – 07/2020
New York, NY

Project Designer

- Contributed to 12 international design competitions and 9 built projects (7 landscape, 2 urban design) throughout the product lifecycle, spanning site research, user research, experiment design development (conceptual designs, 3D modeling, rendering, project handbooks), and construction drawings.
- Managed a team of four to deliver 3 end-to-end projects, collaborating closely with clients on multi-stage reports from site research to final deliverables.
- Supervised bidding, contract documentation, and interdisciplinary coordination for 8 projects in China to ensure successful project delivery.
- Supported business operations in the Chinese market, mainly including project exploration and plan discussions with clients.

SELECTED DESIGN PROJECTS

Each Mind: Ameliorating Depression through Continuous Digital Therapeutics Interventions

07/2021 – 10/2021

MIT Sandbox Entrepreneurial Project | MIT Integrated Design Lab + MIT Media Lab | Advisor: Prof. Rosalind Picard

Each Mind is a digital therapeutic platform developed by teams from MIT IDM and the MIT Media Lab to support individuals recovering from depression through continuous, personalized interventions. Grounded in deep user research at its core (38 interviews), the platform identifies real-life pain points, treatment barriers, and emotional needs to inform its design.

The Benter Box: A Detachable Litter Box for Improved Cat Care and Easy Maintenance

09/2020 – 12/2020

Sponsor: Thrasio Holdings, Inc. | MIT Integrated Design Lab | Advisor: Matt Kressy, Antonio Hu

The Benter Box is a modular, stylish, and portable litter box that elevates cat care and simplifies daily maintenance. Developed through market research, shipping cost analysis, interviews with 20 cat owners, and direct observation of 5 cats, it features detachable, stackable walls that ease cleaning and storage for users while cutting merchants' shipping costs by $14. Its modular design can be tailored to different cats' preferences and home styles.

Fooding: Reducing Food Waste by Encouraging Effective Food Management and Motivation

09/2019 – 11/2019

Personal Project | Mentor: Xingyue Chen

Fooding is a mobile application designed to reduce food waste by promoting effective household food management and sustainable habits. Informed by background research, a competitor analysis of 4 existing apps, 10 exploratory interviews, and a survey of 75 participants, the design addresses common challenges across food purchasing, consumption, and disposal. Fooding features a comprehensive architecture and high-fidelity interfaces, refined through multiple rounds of user testing to ensure usability and impact.

TEACHING EXPERIENCE

University of Illinois Urbana-Champaign

08/2023 – present
Champaign, IL

Course Instructor & Graduate Teaching Assistant

INFO333 User Experience in Action (FA23, SP24, FA24, SP25, FA25, SP26)

SKILLS

Research & Design Methods

Interview/Focus Group, Survey, Experiment (Lab/Online), Participatory Design, Field Study, Eye Tracking, Diary Study, Task Analysis, Thematic Analysis, Behavioral Analysis, Affinity Mapping, User Journey, Heuristic Evaluation, Usability Testing, A/B Testing, Information Architecture, Storyboarding, Wireframing, Prototyping, Low-to-High Fidelity Design, Video Storytelling

Research & Design Software

Figma, Adobe XD, Sketch, ProtoPie, InVision, Principal, Adobe Creative Suite (Photoshop, Illustrator, InDesign, After Effects, Premiere, Media Encoder, Lightroom), Qualtrics, Dovetail, Markdown, Auto CAD, Rhinoceros, Lumion, Microsoft Office

Quantitative Analysis Methods

Regression, ANOVA, Chi-Square Test, Multivariate Analyses (Principal Component Analysis, Factor Analysis), Structural Equation Modeling, Conjoint Analysis

Programming & Statistical Software

R, Python, SPSS, Sawtooth Software, SQL, HTML/CSS, Latex

PATENT

Mengke Wu. 2015. Vacuum Preservation Box. China Utility Model Patent (No. ZL 2013 2 0554268.0)