MENGKE WU

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An HCI/UX researcher with design expertise, focused on human-AI teaming and creativity support. I explore how people perceive, collaborate with, and are impacted by intelligent systems. Using mixed methods and design-led inquiry, I bridge research and practice to shape human-centered digital systems that foster trust, usability, and meaningful engagement.

EDUCATION

University of Illinois Urbana-Champaign — 2022/08 - 2027/05 (expected), Champaign, IL
Ph.D., Informatics | Design, Technology, & Society Track | GPA: 4.0/4.0 | Advisor: Prof. Mike Yao

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

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

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

SELECTED RESEARCH PROJECTS

"Pragmatic Tools or Empowering Friends?" Discovering and Co-Designing Personality-Aligned AI Writing Companions

Research Lead | Participatory Design | Advisor: Prof. Jessie Chin, Prof. Mike Yao

A project that explores integrating personality-based preferences into AI writing companions through participatory design workshops, gathering user insights to inform the design space of such companions and create personality-specific prototypes for usability testing and iterative refinement. This work provides actionable design guidelines for personalized, user-centered AI writing supports that promote effective collaboration between human-AI teams.

Rethinking User Empowerment in AI Recommender Systems: Designing through Transparency and Control

Research Lead | Multi-Phase, Mixed-Method Study | Advisor: Prof. Mike Yao

A project that addresses limited user agency in recommender systems by proposing multiple mechanisms that integrate transparency with user controls over data collection and personalization. Through a multi-phase, mixed-method study, we evaluate user insights on such features and interface designs, and explore strategies to boost adoption and foster broader agency awareness. The findings contribute insights for designing user-centered recommender systems that empower individuals with greater control, understanding, and trust in algorithm-driven content.

PUBLICATIONS

Conference Proceedings & Presentations

[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. 2024. *International Communication Association (ICA) Conference [Non-Archival]*
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, Andrea 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' Perceptions and Behaviors**
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

[U4] **Rethinking User Empowerment in AI Recommender Systems: Designing through Transparency and Control**

Anonymous **(First Author)**. *In submission to ACM CHI Conference on Human Factors in Computing Systems*

[U3] **Towards LLMs as Colleagues: Multi-Agent System Improves Structured Professional Ideation**

Anonymous **(Second Author)**. *In submission to ACM CHI Conference on Human Factors in Computing Systems*

[U2] **"Pragmatic Tools or Empowering Friends?" Discovering and Co-Designing Personality-Aligned AI Writing Companions**

Anonymous **(First Author)**. *In submission to ACM CHI Conference on Human Factors in Computing Systems*

[U1] **Empowered XR through Generative AI: Balancing Superpowers and Risks**

Anonymous **(Second Author)**. *In submission to ACM CHI Conference on Human Factors in Computing Systems*

RESEARCH EXPERIENCE

UIUC Media Technology and Social Behavior Lab

2022/08 - 2023/05

Research Assistant | Advisor: Prof. Mike Yao, Prof. Ewa Maslowska

Champaign, IL

- Conducted literature review on HCI topics, including AI transparency, user agency, and recommender systems, to inform research design. Designed and deployed a multi-phase experiment, including Figma demos, webpages, surveys, and interviews. Data was evaluated using ANOVA and regression in R, as well as thematic analysis, to evaluate user perceptions and behavioral outcomes [C3, U4].
- Implemented a multi-phase choice-based conjoint study to examine how interface cues influence online consumer decision-making. Conjoint tasks were designed using specialized software (Sawtooth) and embedded in online surveys. Analyzed utility scores and importance indices from over 1,000 participants to identify cue combinations that support efficient information processing and product evaluation [J3].

MIT AgeLab

2022/03 - 2022/08

Research Assistant | Advisor: Dr. Shabnam FakhrHosseini

Cambridge, MA

Collaborated with the research team to refine the screening survey and experimental procedures. Created templates for interview records and data visualization (e.g., comparative diagrams) to standardize the collection and comparison of the experimental results. Conducted literature review on older adu-lts, dementia, and social robots, contributing to the paper writing for introduction, related work, and method sections [J2].

Nanjing Forestry University (NJFU)

2014/08 - 2015/05

Research Assistant | Advisor: Prof. Bing Qiu

Nanjing, China

Led a design research project focused on enhancing the preservation of food storage boxes. Designed and built models (3D & physical) for a vacuum-sealing mechanism with modular buttons to improve both airtightness and usability, with iterative testing conducted to evaluate performance [J1].

INDUSTRY EXPERIENCE

SiriusXM + Pandora

2021/06 - 08

Product Design Intern

Oakland, CA

- Led the design of the Voice Mode feature for the new Pandora app, delivering user research synthesis, competitor analysis, wireframes, navigation flows, and high-fidelity interface design options.
- Took charge of summarizing and documenting the Interaction Specification for Acceptance Criteria of the Voice Mode.
- Contributed to developing and organizing the Pandora design system library.
- Worked with Pandora's Listeners Team in an Agile framework for timely design handoffs and cross-functional communication.

HelloAva

2019/07 - 2020/08

User Experience Designer (part-time)

New York, NY

- Spearheaded the redesign of the UX/UI for the website and mobile responsive design of the Personalized Section, leading to a monthly increase of 25% in site visits and 20% in order quantities.
- Led the design of pop-up features for festival events, collaborating with the marketing teams to brainstorm the design options.
- Attended bi-weekly Sprint Planning with programming engineers to discuss design implementations and do quality assurance (QA).
- Led the design development of a new Livestream feature for facilitating new investments.

!melk landscape architecture and urban design

2017/08 - 2020/07

Project Designer

New York, NY

- Designed, coordinated, and managed high-end urban and landscape design projects worldwide, from concept to construction.
- Oversaw Chinese project bidding, documentation, and interdisciplinary coordination, managing successful project proposals.
- Managed a team of 4 to collaborate with clients in Nanjing and Shenzhen to conduct site research, iterate on designs, present project progress, and coordinate construction efforts.
- Involved in business operations in the Chinese market, mainly in project exploration and contract discussions with clients.
- Participated in international design competitions, structuring site analysis and contributing to final project handbooks.

SELECTED DESIGN PROJECTS

Each Mind: Ameliorating Depression through Continuous Digital Therapeutics Interventions 2021/07 - 10

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

Each Mind is a digital therapeutic platform developed by a team from MIT IDM and the MIT Media Lab to support individuals in their recovery from depression through continuous, personalized interventions. Designed with deep user research at its core (38 interviews), the platform uncovers 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 2020/09 - 12

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

The Benter Box is a modular, stylish, and portable litter box designed to elevate cat care while simplifying daily maintenance. It was developed through quantitative market research, shipping cost analysis, interviews with 20 cat owners, and direct observation of 5 cats. Its detachable, stackable walls allow for easy cleaning, compact storage, and cost-effective shipping, while maintaining a sleek aesthetic that fits seamlessly into modern homes.

Fooding: Reducing Food Waste by Encouraging Effective Food Management and Motivation 2019/09 - 11

Personal Project | Mentor: Xingyue Chen

Fooding is a mobile application designed to reduce food waste by encouraging effective household food management and motivating sustainable habits. Informed by background research, a competitor analysis of 4 existing apps, 10 exploratory interviews, and survey data from 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 2023/08 - present

Graduate Teaching Assistant Champaign, IL

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

Canopy Institute of Design 2017/11 - present

Design Project Instructor & Lecturer (online) Chinese Online Educational Institute

SKILLS

Research & Design Methods

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

Design & Prototyping Software

Figma, Protopie, Adobe XD, Sketch, InVision, Adobe Creative Suite (Photoshop, Illustrator, Indesign, After Effects, Premiere, Media Encoder, Lightroom), Auto CAD, Rhinoceros, SketchUp (V-Ray), Lumion, 3D Printing, CNC, Laser Cutting

Quantitative Analysis Methods

Regression Analysis, ANOVA, Chi-Square Test, Conjoint Analysis, Multivariate Analysis

Programming & Statistical Software

R, Python, SPSS, HTML/CSS

PATENTS

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