Dr. Meng XIA

Basic Information

Gender: female Birthday: 1993-5 Email: mengxia@andrew.cmu.edu Homepage: https://www.xiameng.org/

Research interest: Human-AI Interaction, Data Visualization, and Education Technology. I develop human-centered data-driven interfaces for providing personalized online learning.

Education Background and Research Experience

2022.1-present Carnegie Mellon University, Human Computer Interaction Institute, Postdoc

2021.1-2021.12 KAIST, Postdoctoral researcher, School of Computing, Postdoc

2020.9-2021.3 Hong Kong University of Science and Technology, CSE, Postdoc

2017.8-2020.8 Hong Kong University of Science and Technology, PhD of CSE

2019.6-2019.10 University of Toronto, Visiting student of CSE

2014.9-2017.3 Zhejiang University, State Key Laboratory of CAD&CG, Master of CSE

2009.9-2013.7 Hangzhou Dianzi University, Bachelor of Literature in English (second degree)

2009.9-2013.7 Hangzhou Dianzi University, Bachelor of CSE

Publications

- Robin Schmucker, **Meng Xia**, Amos Azaria, Tom Mitchell " Ruffle&Riley: Towards the Automated Induction of Conversational Tutoring Systems" in NeurIPS 2023 (workshop)
- Qian Zhu, Linping Yuan, Zian Xu, Leni Yang, **Meng Xia**, Zhuo Wang, Hai-Ning Liang, Xiaojuan Ma, "From Reader to Experiencer: Design and Evaluation of a VR Data Story for Promoting the Situation Awareness of Public Health Threats" in IJHCS 2023
- **Meng Xia**, Xinyi Zhao, Dong Sun, Yun Huang, Jonathan Seawall, Vincent Aleven, "Involving Teachers in the Data-driven Improvement of Intelligent Tutors: A Prototyping Study" in AIED 2023
- Conrad Borchers, Paulo F. Carvalho, **Meng Xia**, Pinyang Liu, Kenneth R. Koedinger and Vincent Aleven, "What Makes Problem-Solving Practice Effective? Comparing Paper and AI Tutoring" in ECTEL 2023
- Wai Tong, **Meng Xia**, Jason Wong, Ting-Chuen PONG, Huamin Qu, Yalong Yang, "Towards an Understanding of Asymmetric Collaborative Visualization on Problem-solving" In IEEE VR 2023
- Xian Xu, Wai Tong, Wei Zheng, **Meng Xia**, Lik-Hang Lee, Huamin Qu, "Cinematography in the Metaverse: Exploring the Lighting Education on a Soundstage" In IEEE VR 2023 (Poster)
- Yifan Cao, **Meng Xia**, Kento Shigyo, Furui Cheng, Qianhang Yu, Xingxing Yang, Hongkun Liu, Wei Zeng, Yang Wang, Huamin Qu, "NFTeller: Dual Centric Visual Analytics of NFT Transactions", In IEEE BigComp (Poster)
- **Meng Xia**, Yankun Zhao, Mehmet Hamza Erol, Jihyeong Hong, and Juho Kim. "Understanding Distributed Tutorship in Online Language Tutoring." In ACM LAK, 2022.
- **Meng Xia,** Yankun Zhao, Jihyeong Hong, Mehmet Hamza Erol, Taewook Kim, and Juho Kim. "RLens: A Computer-aided Visualization System for Supporting Reflection on Language Learning under Distributed Tutorship." In L@S, 2022.
- **Meng Xia,** Qian Zhu, Xingbo Wang, Fei Nie, Huamin Qu, Xiaojuan Ma. "Persua: A Visual Interactive System to Enhance the Persuasiveness of Arguments in Online Discussion." In ACM CSCW, 2022
- Qian Zhu, Leo Yu Ho Lo, **Meng Xia**, Zixin Chen, Xiaojuan Ma. "Bias-Aware Design for Informed Decisions: Raising Awareness of Self-Selection Bias in User Ratings and Reviews." In ACM CSCW, 2022
- Wai Tong, Zhutian Chen, **Meng Xia**, Leo Yu-Ho Lo, Linping Yuan, Benjamin Bach, Huamin Qu. "Exploring Interactions with Printed Data Visualizations in Augmented Reality. " In IEEE VIS, 2022, **Honorable Mention Award**
- Sean Tsung, Huan Wei, Haotian Li, **Meng Xia**, Yong Wang, Huamin Qu. "BlockLens: Visual Analytics of Student Coding Behaviors in Block-Based Programming Environments. " In ACM L@S, 2022 (Work In Progress)
- Mingzhe Li*, Franchesca Spector*, **Meng Xia***, Mina Oh*, Peter Cederberg, Yuqi Gong, Kristen Shinohara, Patrick Carrington. "It Feels Like Taking a Gamble": Exploring Perceptions, Practices, and Challenges of Using Makeup and

Cosmetics for People with Visual Impairments. "In ACM CHI, 2022

- Jeongyeon Kim, Yubin Choi, **Meng Xia**, Juho Kim. "Mobile-Friendly Content Design for MOOCs: Challenges, Requirements, and Design Opportunities. " In ACM CHI, 2022, **Best Paper Award**
- Kabdo Choi, Hyungyu Shin, **Meng Xia**, Juho Kim. "AlgoSolve: Supporting Subgoal Learning in Algorithmic Problem-Solving with Learnersourced Microtasks. " In ACM CHI, 2022
- Reshika Palaniyappan Velumani, **Meng Xia**, Jun Han, Chaoli Wang, Alexis Lau, Huamin Qu. "Explaining Air Quality Forecast for Verifying Domain Knowledge using Feature Importance Visualization. " In ACM IUI, 2022
- Mingfei Sun, Zhenhui Peng, **Meng Xia**, Xiaojuan Ma. "Investigating the Effects of Robot Engagement Communication on Learning from Demonstration. " In International Journal of Social Robotics, 2021
- **Meng Xia**, Reshika Palaniyappan Velumani, Yong Wang, Huamin Qu, Xiaojuan Ma. "QLens: Visual Analytics of Multi-step Problem-solving Behaviors for Improving Question Design. " In TVCG, 2021
- **Meng Xia**, Yuya Asano, Joseph Jay Williams, Huamin Qu, Xiaojuan Ma. "Using Information Visualization to Promote Students' Reflection on "Gaming the system" in Online Learning. " In ACM L@S, 2020
- **Meng Xia**, Min Xu, Chuan-en Lin, Ta-ying Cheng, Huamin Qu, Xiaojuan Ma. "SeqDynamics: Visual Analytics for Evaluating Online Problem-solving Dynamics. " In IEEE EuroVIS, 2020
- Huan Wei, Haotian Li, **Meng Xia**, Yong Wang, Huamin Qu. "Predicting Student Performance in Interactive Online Question Pools Using Mouse Interactions. " In ACM LAK, 2020
- **Meng Xia**, Huan Wei, Min Xu, Leo Yu Ho Lo, Yong Wang, Rong Zhang, Huamin Qu. "Visual Analytics of Student Learning Behaviors on K-12 Mathematics E-learning Platforms. " In IEEE VIS, 2019 (Poster), **Best Poster Award**
- **Meng Xia**, Mingfei Sun, Huan Wei, Qing Chen, Yong Wang, Lei Shi, Huamin Qu, Xiaojuan Ma. "PeerLens: Peer-inspired Interactive Learning Path Planning in Online Question Pool. " In ACM CHI, 2019
- **Meng Xia**, Rong Zhang, Ren Peng, Jinhui Yu. "Generation of Thangka Relief from Line Drawings." In SCIENTIA SINICA Informationis, 2018
- Ke Xu, **Meng Xia**, Xing Mu, Yun Wang, Nan Cao. "EnsembleLens: Ensemble-based Visual Exploration of Anomaly Detection Algorithms with Multidimensional Data." In TVCG, 2018
- Zhenhui Peng, Jeehoon Yoo, **Meng Xia**, Sunghun Kim, Xiaojuan Ma. "Exploring How Software Developers Work with Mention Bot in GitHub." In ACM Chinese CHI, 2018
- Mingfei Sun, Yiqing Mou, Hongwen Xie, **Meng Xia**, Michelle Wong, Xiaojuan Ma. "Estimating Emotional Intensity from Body Poses for Human-Robot Interaction." In IEEE SMC, 2018
- Yuanli Feng, **Meng Xia**, Penglei Ji, Xiao Zhou, Ming Zeng, Xinguo Liu. "Deep Spherical Panoramic Representation for 3D Shape Recognition." In IEEE Computer-Aided Design & Computer Graphics, 2017
- Yinglie Zhang, **Meng Xia**, Linqiang Chen. "Designing Kinect Game based on Video Tracking." In Computer Engineering and Applications, 2015

Scholarships and Prizes

Honorable Mention Award at IEEE VIS 2022

Best Paper Award at ACM CHI 2022

SENG TOP Research Program Graduate Award, 2018-2019

Best Poster Award at IEEE VIS, 2019

Overseas Research Award, 2018-2019

National Scholarship, 2015 & 2011

Chairman of Postgraduate Association of Computer Science Department, 2014-2015

Teaching Experience

Instructor at CMU for 05432/05832 Personalized Online Learning, Fall 2022

Teaching Assistant Coordinator at HKUST, Spring 2020

Teaching Assistant at HKUST for COMP 2611 Computer Organization, Spring 2018 & Fall 2018

Community Service

Program Chair of Learning @ Scale 2024

Youth Editor for the Journal of Visual Informatics

Area Chair for CHI 2023, 2024; CHI (Late Breaking Work) 2022

Program committee member for IEEE VIS 2021, 2022; IUI 2022; CSCW 2023

Reviewer of CHI 2019, 2020, 2021, 2022, 2023, 2024; VIS 2020, 2021, 2022, 2023; CSCW 2021, 2022, 2023; ChinaVis 2019, 2020, 2021, 2022; LAK 2022

Personal skills

English	Fluent
Programming	JavaScript, Python, C/C++, C#, PHP, NoSQL (MongoDB)
Personality	Optimistic, curious about new things, and hardworking
Specialty	Project management and teamwork