# 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

- 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

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** | IELTS 7.0, fluent |
| **Programming** | JavaScript, Python, C/C++, C#, PHP, NoSQL (MongoDB) |
| **Personality** | Optimistic, curious about new things, and hardworking |
| **Specialty** | Project management and teamwork |