
Chuhan Shi

PhD in Computer Science and Engineering, HCI Lab HKUST

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Education

The Hong Kong University of Science and Technology | PhD

2019 - 2023

- Supervised by **Prof. Xiaojuan Ma** and **Prof. Qiong Luo**
- Research interests: Human-AI Collaboration, Data Visualization, Visual Analytics

Shandong University | Bachelor of Engineering

2015 - 2019

- Major in Software Engineering GPA: 92.31/100, Rank 1/294
- Second Major in Financial Mathematics

Publications

- [10] **Chuhan Shi**, Weiwei Cui, Chengzhong Liu, Chengbo Zheng, Haidong Zhang, Qiong Luo, Xiaojuan Ma. NL2Color: Refining Color Palettes for Charts with Natural Language. *IEEE Transactions on Visualization and Computer Graphics (Proceedings of VIS'23, oral)*. **CCFA / SCIE T1**
- [9] Qingyu Guo, **Chuhan Shi**, Zhuohao Yin, Chengzhong Liu, Xiaojuan Ma. Exploring the Effects of Event-induced Sudden Influx of Newcomers to Online Pop Music Fandom Communities: Content, Interaction, and Engagement. *Proceedings of the ACM on Human-Computer Interaction. CSCW (2023) (CSCW'23, oral)*. **CCFA**
- [8] **Chuhan Shi**, Yicheng Hu, Shenan Wang, Shuai Ma, Chengbo Zheng, Xiaojuan Ma, Qiong Luo. RetroLens: A Human-AI Collaborative System for Multi-step Retrosynthetic Route Planning. Accepted by *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI'23, oral)*. **CCFA**
- [7] Shuai Ma, Ying Lei, Xinru Wang, Chengbo Zheng, **Chuhan Shi**, Ming Yin, Xiaojuan Ma. Who Should I Trust: AI or Myself? Leveraging Human and AI Correctness Likelihood to Promote Appropriate Trust in AI-Assisted Decision-Making. Accepted by *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI'23, oral)*. **CCFA**
- [6] Chengbo Zheng, Yuheng Wu, **Chuhan Shi**, Shuai Ma, Jiehui Luo, Xiaojuan Ma. Competent but Rigid: Identifying the Gap in Empowering AI to Participate Equally in Group Decision-Making. Accepted by *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI'23, oral)*. **CCFA**
- [5] **Chuhan Shi**, Fei Nie, Yicheng Hu, Yige Xu, Lei Chen, Xiaojuan Ma, Qiong Luo. MedChemLens: An Interactive Visual Tool to Support Direction Selection in Interdisciplinary Experimental Research of Medicinal Chemistry. In *IEEE Transactions on Visualization and Computer Graphics (Proceedings of VIS'22, oral)*. **CCFA / SCIE T1**
- [4] **Chuhan Shi**, Zhihan Jiang, Xiaojuan Ma, Qiong Luo. A Personalized Visual Aid for Selections of Appearance Building Products with Long-term Effects. In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems (CHI'22, oral)*. **CCFA**
- [3] Wenjie Yang, Sitong Wang, Zhenhui Peng, **Chuhan Shi**, Xiaojuan Ma, Diyi Yang. Know it to

Defeat it: Exploring Health Rumor Characteristics and Debunking Efforts on Chinese Social Media During COVID-19 Crisis. In *Proceedings of the International AAAI Conference on Web and Social Media (ICWSM' 22)*. **CCF B**

- [2] Zhenhui Peng, **Chuhan Shi**, Xiaojuan Ma. Exploring User Experience and Design Opportunities of Desktop Social Virtual Reality for Group Learning Activities. In *The Ninth International Symposium of Chinese CHI (ChineseCHI' 21 Late-Breaking Work)*.
- [1] Zhida Sun, Sitong Wang, Wenjie Yang, Onur Yürüten, **Chuhan Shi**, and Xiaojuan Ma. “A Postcard from Your Food Journey in the Past”: Promoting Self-Reflection on Social Food Posting. In *Proceedings of the Designing Interactive Systems Conference (DIS' 20)*.

Internship Experience

Research Intern | DKI Group, **Microsoft Research Asia** 2022.10 – 2023.04

- Supervised by principal researcher **Weiwei Cui**.
- Conduct research on AI-powered data visualization generation and manipulation.

Software Developer | Industry Baseline Solution Development Center, Huawei 2018.07 - 2018.12

- Supervised by **Baocheng Chen**.
- Participated in the development and testing of smart park products.

Projects

AI-assisted Decision-making for Natural Science Research 2021.04 - Present

- Interdisciplinary Experimental Research Direction Selection Support System
 - Designed and implemented an interactive visual scientific literature analytic system.
 - Applied BERT model automatically extracting and integrating relevant research data based on molecular characteristics.
- Human-AI Collaboration for Synthetic Organic Chemistry Research
 - Developed a human-AI collaborative system to support multi-step research path planning.
 - Applied multi-criteria decision-making algorithms to help backtrack and locate potential problems in the multiple rounds of decision-making.
- Human evaluation proved the systems facilitated faster task completion, generated better outcomes, and lowered cognitive load (nearly HKD 500K fund).

Evaluation Model of Critical Dimensions for Brand Differentiation 2020.06 - 2020.12

- Designed and implemented computational models using machine learning algorithms to compare the visual styles of mobile user interfaces for different brands.
- Helped the company to identify the difference with the competitive products and guided the future design of the mobile user interfaces (over HKD 400K fund).

Awards

2019-Present	Postgraduate Scholarship (over HKD 200K annually), HKUST
2019	Outstanding Graduate in Shandong Province
2018	Excellent Student Second-Class Scholarship, Shandong University
2016-2017	National Scholarship, Ministry of Education of China (Twice)
2017	National Undergraduate Innovation and Entrepreneurship Training Program Fund
2017	Excellent Student of Shandong Province, the only one in Software College

2016-2017	Excellent Student First-Class Scholarship, Shandong University (Twice)
2016-2017	Second Prize in Province, Mathematic Competition of Chinese College (Twice)
2016-2017	Merit Student, Shandong University (Twice)
2016-2017	Excellent Student Cadre, Shandong University (Twice)
2016	First Prize in Province, National Mathematical Modeling Contest

Academic Engagement

Reviewer: ACM Conference on Human Factors in Computing Systems (CHI)	2022, 2023, 2024
Reviewer: ACM Conference on Computer Supported Cooperative Work (CSCW)	2022, 2023
Reviewer: Chinese CHI	2022
Reviewer: ACM CHI Late Breaking Works (CHI LBW)	2020

Teaching

Spring 2023	Teaching Assistant, Human-Computer Interaction, HKUST
Spring 2023	Teaching Assistant, Advanced Topics in Human-Computer Interaction, HKUST
Fall 2021	Teaching Assistant, Principles of Programming Languages, HKUST
Fall 2020	Teaching Assistant, Human-Computer Interaction, HKUST
Spring 2020	Teaching Assistant, Database Management Systems, HKUST