

Houjiang Liu

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Education

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| Ph.D. Student | Information Studies, University of Texas at Austin, 2021 to present. |
| M.F.A. | Experience Design, Northeastern University, 2020 |
| B.S. | Applied Physics, Jilin University, 2015 |

Publications

Peer-reviewed Journals

Colombo, Sara, Estefania Ciliotta Chehade, Lucia Marengo, **Houjiang Liu**, Piero Molino, and Paolo Ciuccarelli. 2023. "Design for Emergency: How Digital Technologies Enabled an Open Design Platform to Respond to Covid-19." *Interacting with Computers*, iwad042.

Das, Anubrata, **Houjiang Liu**, Venelin Kovatchev, and Matthew Lease. 2023. "The State of Human-Centered NLP Technology for Fact-Checking." *Information Processing & Management (IP&M)* 60 (2).

Peer-reviewed Conference Proceedings

Liu, Houjiang, Miso Kim. 2023. "Is Gift a Token of Gratitude or An Imposition of Identity? Facilitating Positive Consequences of Gift-Giving with Receiver-centred Design." In *IASDR 2023: Life-Changing Design* (Accepted)

Li, Jiabao, **Houjiang Liu**, Jilie Zeng, Di Wu, Ying Ding, and Alec McGail. 2022. "Shifting Winds: Gendered Structures of Academic Mentorship." In *2022 IEEE VIS Arts Program (VISAP)*, 14–29. ieeexplore.

Das, Anubrata, **Houjiang Liu**, Venelin Kovatchev, and Matthew Lease. "The Need for Human-centered Design in Fact-checking Research." In *Proceedings of the 1st Information Processing & Management (IP&M) Conference*, 2022.

Liu, Houjiang, Miso Kim, Mingzhu Li, and Shruthi Lakshmi Narayan. 2022. "Technology, Autonomy, and Participation: Designing Community Games and Services to Enhance Older Adults' Technology Literacy." In *IASDR 2021: [] With Design: Reinventing Design Modes*, 1575–91. Springer Nature Singapore.

Liu, Houjiang, Ray Lc, Miso Kim, Concettina Cormio, and Meixin Yu. 2022. "Designing for Distance Nursing: Reconnecting Nursing Students with Senior Home Residents During COVID-19." In *IASDR 2021: [] With Design: Reinventing Design Modes*, 2571–82. Springer Nature Singapore.

Liu, Houjiang, Miso Kim, Canqun He, and Tia Thomson. 2021. "Autonomy as a Design Principle: Service Design for the Technology Literacy of Older Adults." In *Design Culture(s). Cumulus Conference Proceedings*, 1190–1207.

Preprints

Liu, Houjiang, Anubrata Das, Alexander Boltz, Didi Zhou, Daisy Pinaroc, Matthew Lease, Min Kyung Lee. "Human-Centered NLP Fact-Checking: Co-Designing with Fact-Checkers Using Matchmaking for AI." arXiv [cs.HC], 14 Aug. 2023, <http://arxiv.org/abs/2308.07213>. arXiv.

Posters

"An Exploration of Service Design Metrics", Research, Innovation, Scholarship, Entrepreneurship (RISE), Virtual EXPO, Northeastern University, 2021. (With Chehade, Estefania Ciliotta)

“Participatory Design for Senior Healthcare: Service Design to Improve Seniors’ Health Literacy and Autonomy”, Research, Innovation, Scholarship, Entrepreneurship (RISE), Northeastern University, 2020.

“Enriching Family Gifts: Reciprocity in Family Relationships” (Abstract), North American PhD by Design Symposium, New York University, 2020.

“How Food is Served in Early Care Center”, Northeastern University Visualization Consortium (NUVis), 2019 Demofest. (With Xu, Yingying and Xu, Anni)

Others

Deng, Zhifan, Yao, Guosheng, primary editors, He, Yaming., **Liu, Houjiang.**, co-editors. 2023.
中华千古名言辞典 (Chinese Motto Dictionary), Sinolingua Publishing.

Deng, Zhifan, Yao, Guosheng, primary editors, He, Yaming., **Liu, Houjiang.**, co-editors. 2014.
中华联语语典 (Chinese Couplet Language Dictionary), ChongWen Publishing.

Design

AI Technology

1 Model selection

Choose claims

☒ select one from claim candidates
☐ input own claims

Please select which model you want to use

☐ Model A
☐ Model B
☒ Model C

2 Claim selection

Model description:

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. The overall accuracy of this model trained on our previous datasets is 0.695

A claim ready to check:

Tony Evers, "Wisconsin pays 50% more than Minnesota for the same health care."

3.2 Example-based explanations

Search existing fact-checked claims:

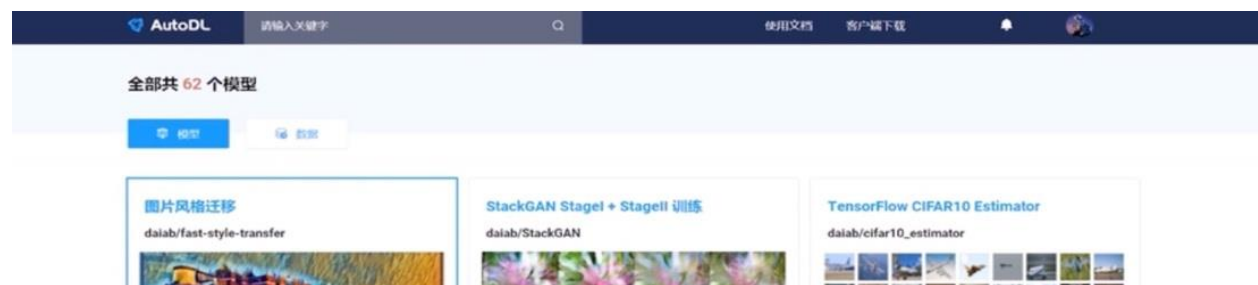
Tony Evers, "Wisconsin pays 50% more than Minnesota for the same health care."

| | claims | truth | similarity |
|---|--|-------|------------|
| 0 | Scott Walker, "Wisconsin is a Top 10 state for health care coverage." | True | 0.72 |
| 1 | Scott Walker, "Since I took office, Wisconsin now has the 2nd highest health care quality ranking in the country." | True | 0.67 |
| 2 | Tony Evers, Wisconsin is "49th out of 50 states in infrastructure." | False | 0.67 |

3.1 Feature-based keywords

Feature-based saliency Claim matching Adversarial triggers

An Explainable Claim Debunking AI Tool (ongoing), 2022

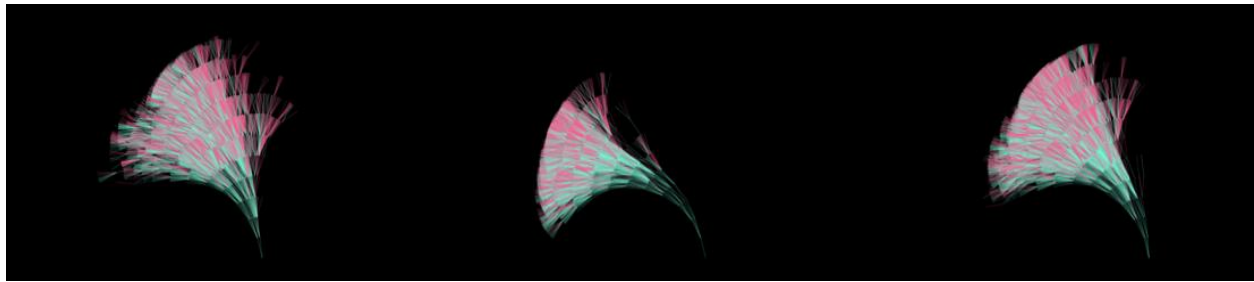


AutoDL, 2019, now updated to [CodewithGPU](#) (Chinese), [GPUHub](#) (International)

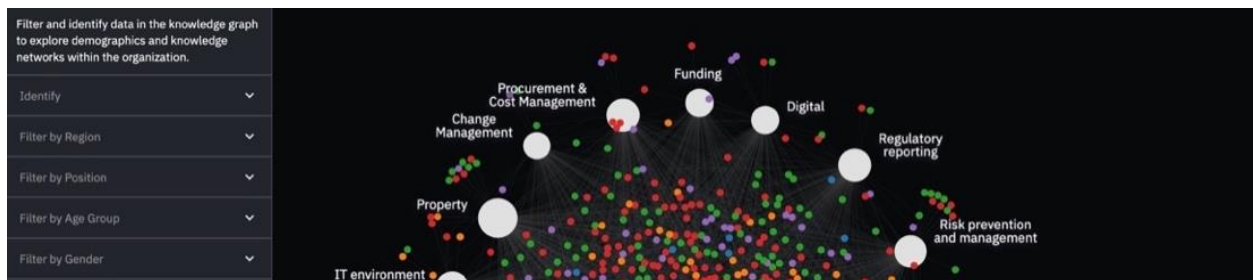


SeeTaaS (no longer functioning), 2018

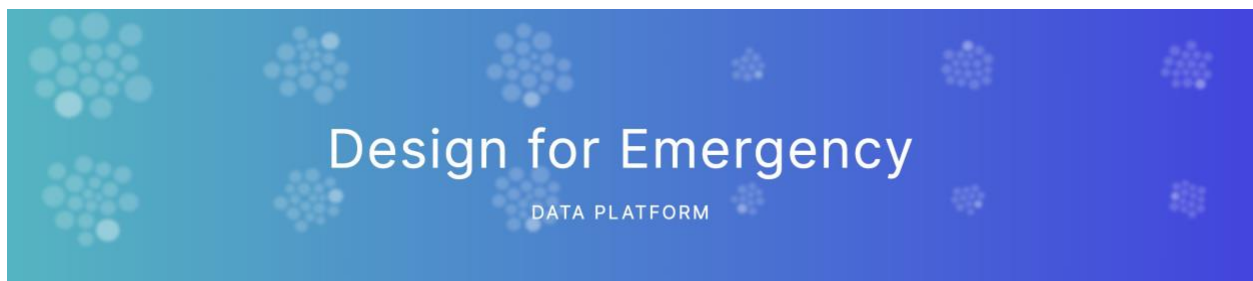
Information Visualization



Shifting Winds: Gendered Structures of Academic Mentorship, 2022



Data-viz for E-learning ([Application](#), [Proof-of-concept prototype](#)), 2021. Information is Beautiful Awards (Longlist)



Design for Emergency: [The Data Platform](#), 2021

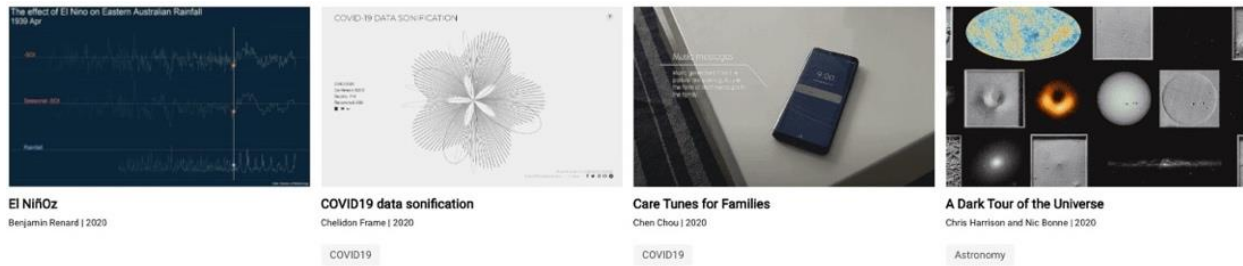


Visualizing Covidcookery, 2020



Giga-mapping – Food Provider Relationship in Boston Preschool, 2020

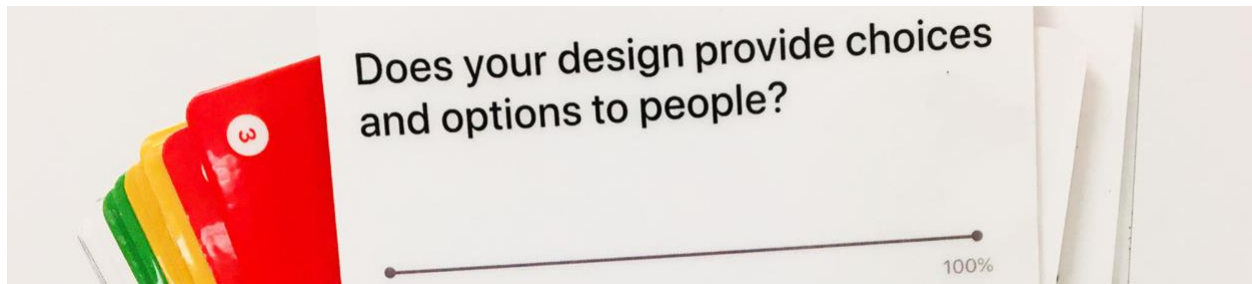
Experience Design



Data Sonification Archive, 2020



Card game – Enriching Gifts, 2020



Dignity Toolkits for Design, 2019



Selective work in JDC UX, From 2015 to 2017

Employment

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|--------------------|--|
| Research Assistant | Artificial Intelligence and Human-Centered Computing Lab, University of Texas at Austin, 2021 to present. |
| Design Researcher | Center for Design, Northeastern University, 2020 to 2021 |
| PT Lecturer | College of Arts, Media and Design, Northeastern University, 2019 to 2021 |
| Research Assistant | College of Arts, Media and Design, Northeastern University, 2019 to 2020 |
| UX Designer | SeetaTech (Beijing), 2017 to 2018 |

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|---------------|--|
| Design Intern | JD Design Center (Beijing), JD.com, 2015 to 2017 JD Design Center (Beijing), JD.com, 2015 Lenovo (Harbin), 2013 Midea Group (Guangdong), 2012 |
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Teaching Experience

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| Teaching Fellow | College of Arts, Media and Design, Northeastern University ARTG2400 Interaction Design, Spring 2021 ARTG2401 Interaction Design Tools, Fall 2019, Spring 2020 |
| Teaching Assistant | College of Arts, Media and Design, Northeastern University ARTG6330 Info Design Mapping Strategies, Fall 2020 ARTG6900 Design for Dignity, Fall 2019 |

Awards

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|-------------------|--|
| University Grants | Summer Research Grant, UT Austin, 2023 Grant for Research, Scholarship, and Creative Activity, NEU, 2020 Graduate Student Scholarship, NEU, 2018 Individual Undergrad Grant, JLU, 2015 Second-class Undergrad Grant, JLU, 2012, 2013 Second-class Award of Math Modeling, JLU, 2012 |
| Design Awards | Information is Beautiful Awards (Longlist), 2022 First Design Award, Health x Design Challenge, Mad*Pow, 2019 Innovative Design Award, Reinventing Tencent Map, Tencent, 2014 |

Skills

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|--------------------|---|
| Design | Adobe Creative Suite (Illustrator, InDesign, Photoshop, and XD), Sketch, InVision, Axure, Figma |
| Data Analysis | R, Python, SPSS, MATLAB, ArcGIS |
| Data Visualization | JavaScript (D3, jQuery), HTML and CSS, C, Processing |