

MAHMOOD JASIM

 people.cs.umass.edu/mjasim

 mjasim@cs.umass.edu

 scholar.google.com/mjasim

RESEARCH INTEREST

Research Areas. Human Computer Interaction, Digital Civics, Information Visualization, Applied Machine Learning, Natural Language Processing, and Social Computing

Research Goals and Interests. My research goal is to design, develop, and evaluate decision-support systems to enable informed data-driven decision-making to address complex socio-technical problems and make more confident personal decisions. I closely work with stakeholders including community members and government officials to explore two major thrusts of research — (1) facilitating sense-making of public-generated data to support informed decision-making and (2) empowering inclusivity in the public engagement process. To that end, I innovate on techniques and methodologies across Human-Computer Interactions (HCI), Information Visualization, Applied Machine Learning, and Social Computing to build decision-support systems to enable informed data-driven decision-making.

EDUCATION

University of Massachusetts Amherst

2017 - Present

Ph.D. in Computer Science

2023 (Expected)

- Advisor: Narges Mahyar
- Thesis: Data-Driven Decision-Support Systems in Digital Civics

Master's in Computer Science

2017 - 2021

- Advisor: Narges Mahyar
- Thesis: Visual Analytics for Sensemaking of Public Input

University of Dhaka

2007 - 2013

Master's in Computer Science and Engineering

2011 - 2013

- Advisor: Dr. Md. Hasanuzzaman
- Thesis: Hand Gesture Recognition for Bangla Sign Language

Bachelor's in Computer Science and Engineering

2007 - 2011

- Advisor: Dr. Mamunur Rashid
- Thesis: Security in Wireless Mesh Networks

AWARDS & ACCOLADES

Best Paper Award, Eurographics Working Group Conference on Data Visualization (EuroVis) - Top 1% out of 178 accepted papers. [C1]

2022

Computing for Common Good Fellowship, University of Massachusetts Amherst

2021

Best Paper Honorable Mention Award, Designing Interactive Systems (DIS). [C3]

2021

Best Paper Award, Computer Supported Cooperative Work and Social Computing (CSCW) - Top 1% out of 1000 papers. [J2]

2022

Professor Victor Lesser Graduate Scholarship in Artificial Intelligence, University of Massachusetts Amherst

2018

Bachelor of Science Examination Scholarship, University of Dhaka

2012

National Education Board Scholarship (High School Certificate), Bangladesh

2008

National Education Board Scholarship (Secondary School Certificate), Bangladesh

2006

Refereed Journal Publication

[J1] Zhiqiu Jiang, Mashrur Rashik, Kunjal Panchal, **Mahmood Jasim**, Ali Sarvghad, Pari Riahi, Erica Dewitt, Fay Thurber and Narges Mahyar, 2023. CommunityBots: Creating and Evaluating A Multi-Agent Chatbot Platform for Public Input Elicitation. *Proceedings of the ACM on Human-Computer Interaction* (CSCW), 30 pages. **(To appear)**.

[J2] **Mahmood Jasim**, Pooya Khaloo, Somin Wadhwa, Amy X. Zhang, Ali Sarvghad and Narges Mahyar, 2021. CommunityClick: Capturing and Reporting Community Feedback from Town Halls to Improve Inclusivity. *Proceedings of the ACM on Human-Computer Interaction*, 4 (CSCW3), pp.1-32. 🏆 [Best Paper Award]

[J3] Brandom Oubre, Jean-Francis Daneault, Katherine Boyer, Jae Hyun Kim, **Mahmood Jasim**, Paolo Bonato and Sunghoon Ivan Lee, 2020. A Simple Low-cost Wearable Sensor for Long-term Ambulatory Monitoring of Knee Joint Kinematics. *IEEE Transactions on Biomedical Engineering*, 67(12), pp.3483-3490.

[J4] **Mahmood Jasim**, Tao Zhang, and Md. Hasanuzzaman, 2014. A Real-time Computer Vision-based Static and Dynamic Hand Gesture Recognition System. *International Journal of Image and Graphics*, 14 (01n02), p.1450006.

Refereed Conference Publications

[C1] Eric. P. Baumer, **Mahmood Jasim**, Ali Sarvghad and Narges Mahyar, 2022. Of Course it's Political! A Critical Inquiry into Underemphasized Dimensions in Civic Text Visualization. *Computer Graphics Forum (EuroVIS)*, 41(3), pp. 1- 14. 🏆 [Best Paper Award]

[C2] **Mahmood Jasim**, Christopher Collins, Ali Sarvghad and Narges Mahyar, 2022. Supporting Serendipitous Discovery and Balanced Analysis of Online Product Reviews with Interaction-Driven Metrics and Bias-Mitigating Suggestions. In *CHI Conference on Human Factors in Computing Systems* (pp. 1-24).

[C3] **Mahmood Jasim**, Enamul Hoque, Ali Sarvghad and Narges Mahyar, 2021. CommunityPulse: Facilitating Community Input Analysis by Surfacing Hidden Insights, Reflections, and Priorities. In *Designing Interactive Systems Conference* (pp. 846-863). 🏆 [Best Paper Honorable Mention Award]

[C4] Carolina Aragón, **Mahmood Jasim** and Narges Mahyar, 2021. RisingEMOTIONS: Bridging Art and Technology to Visualize Public's Emotions about Climate Change. In *Creativity and Cognition* (pp. 1-10).

[C5] **Mahmood Jasim**, Ali Sarvghad, Enamul Hoque, and Narges Mahyar, 2020. Towards Understanding Desiderata for Large-Scale Civic Input Analysis. In *Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1-8).

Abstract, Workshop, Demo, and Other Publications

[O1] Narges Mahyar, **Mahmood Jasim** and Ali Sarvghad, 2020. Designing Technology for Socio-technical Problems: Challenges and Considerations. *IEEE Computer Graphics and Applications*, 40(06), pp.76-87.

[O2] **Mahmood Jasim**, Ali Sarvghad, Enamul Hoque and Narges Mahyar, 2020. Towards Understanding Desiderata for Large-Scale Civic Input Analysis. In *Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems*, (pp. 1-8).

[O3] Tamanna Motahar, **Mahmood Jasim**, Syed I. Ahmed and Narges Mahyar, 2020. Exploring how international graduate students in the US Seek support. *In Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1-8).

[O4] **Mahmood Jasim**, Amy X. Zhang, Ali Sarvghad and Narges Mahyar, 2020. Inclusivity in Town Halls: Challenges, Paradigm Shift, and Opportunities. *Civic Technologies Workshop, in conjunction with CSCW 2020*, (pp. 1-5).

Publications in Submission (The venue is omitted for anonymity)

[S1] Mashrur Rashik, **Mahmood Jasim**, Zhiqiu Jiang, Ali Sarvghad and Narges Mahyar, 2022. Mapping the Current State of Conversational Agent's Avatar Design. 22 pages.

[S2] Jeongheon Song, **Mahmood Jasim**, Dawn Roberts and Hee-Tae Jung, 2022. Exploring Competency and Engagement in Movement-Based Game Control Interface in Serious Games for Children with ADHD. 22 pages.

[S3] Sheshera Mysore, **Mahmood Jasim**, Haoru Song, Sarah Akbar, Andre Kenneth Chase Randall and Narges Mahyar, 2022. Exploring how Data Scientists Review Scholarly Literature. 24 pages.

RESEARCH EXPERIENCE

Research Assistant

2018 - Present

Human-Computer Interaction & Visualization (HCI-VIS) Lab, UMass Amherst

- Design and development of decision-support systems in Digital Civics
- Visual analysis and sensemaking of large-scale online public-generated data

Research Assistant

2017 - 2018

Advanced Human & Health Analytics (AHHA) Lab, UMass Amherst

- Handwriting recognition and reconstruction using wrist-worn sensor
- Long-term monitoring of knee joint angle for patients with osteoarthritis

Research Assistant

2011 - 2017

Robotics Laboratory (RoboLab), University of Dhaka

- Human activity recognition
- Gesture recognition for virtual object manipulation

Research Software Engineer

2011 - 2013

TigerIT Bangladesh Limited

- Face recognition
- Biometric signal detection and recognition

TEACHING EXPERIENCE

Instructor

2021

Manning College of Information and Computer Sciences, UMass Amherst

- COMPSI-325: Introduction to Human-Computer Interaction (100 students)

Teaching Faculty

2015 - 2017

Computer Science and Engineering, University of Dhaka

- CSE-3201: Operating Systems (60 - 70 students)
- CSE-4129: Parallel and Distributed Systems (70 - 80 students)

Teaching Faculty

2014 - 2015

Computer Science and Engineering, University of Liberal Arts Bangladesh

- CSE-1301: Data Structures (70 - 80 students)
- CSE-3203: Software Engineering (70 - 80 students)

Teaching Assistant

2018 - Present

Manning College of Information and Computer Sciences, UMass Amherst

- COMPSCI-690A: Advanced Methods in Human-Computer Interaction (30 - 40 students)
- COMPSCI-325: Introduction to Human-Computer Interaction (80 - 100 students)
- COMPSCI-190F: Frontiers of Data Science (40 students)

ADVISING & MENTORING EXPERIENCE

Graduate Student Mentoring

- **Oscar Youngquist.** Working on improving *SuDoCu* — a system for extractive document summarization by example. 2021 - Present
- **Julian Killingback.** Worked on building early prototypes for *Kokoro* — a social media platform that visualizes real-time user connections. 2020 - 2021
- **Somin Wadhwa.** Worked on the implementation of the feedback-weighted summarization module for *CommunityClick* [J2]. 2019 - 2020
- **Aditya Narula.** Worked on early designs and prototypes for *CommunityPulse* [C3]. 2018 - 2019

Undergraduate Honors Thesis Supervision

- **Abigail Elliot.** Completed her thesis on *Community-Centered Data Collection and Analysis Platform for Public-Generated Data* under my co-supervision. 2021 - 2022
- **Preston Yee.** Completed his thesis on *Social Media Interfaces to Visualize Global Connections and Non-Binary Interactions* under my co-supervision. 2021 - 2022
- **Rinija Raja.** Completed her thesis on *Exploring Emotion-Color Associations for Communicating Information through Visualizations* under my co-supervision. 2021 - 2022

Undergraduate Student Mentoring

- **Ananya Talwar, Hallie Liu, Rachel Gupta.** This interdisciplinary team across computer science, economics, and psychology are Working on designing and developing an application for mental health support for people with autism. 2022
- **Angelika Ladia, Dylan Landman, Maanas Pari.** These computer science majors are investigating student engagements during virtual classroom to design systems for facilitating better communication between students and teachers. 2022
- **Jason Jermany.** Computer science major working on implementing the redesigned *SuDocu* interface to include accessibility and explanation features. 2022
- **Ria Chawla, Tiffany Wang, Yasmeen Mekky.** This interdisciplinary team of computer science, informatics, design, and psychology majors worked on designing and developing *CommunityClick-Virtual* — a community engagement platform. 2021 - 2022
- **Mumtaz Fatima.** Computer science major working on expanding *Serendyze* — a text analytics system for serendipitous discovery and analysis of product reviews — to social media discourse and study its potential in combating echo chambers. 2022
- **Arshnoor Chadha.** Computer science major working on an accessible augmented reality platform to facilitate engagement for underrepresented communities. 2022
- **Tahseen Rahman.** Worked on brainstorming and early concept designs for *Kokoro*. 2021
- **Rolando Franqui Nadal.** Worked on data analysis for *CommunityPulse* evaluation. 2020 - 2021

SERVICE EXPERIENCE

Program Committee Member

- IEEE VIS Short Paper *2022*

Student Voluntter Chair

- ACM Creativity & Cognition *2021*

Student Volunteer

- Computer Supported Cooperative Work and Social Computing (CSCW) *2022*
- Computer Supported Cooperative Work and Social Computing (CSCW) *2020*
- IEEE VIS *2020*

Paper Review

- Computer Supported Cooperative Work and Social Computing (CSCW) *2021 - 2023*
- IEEE VIS *2019 - 2020*
- ACM CHI Conference on Human Factors in Computing Systems (CHI) *2020 - 2022*
- ACM Creativity & Cognition *2019*